

pregelatinized starch, red iron oxide, saccharin sodium, sodium carboxymethyl ether, sodium chloride, sodium citrate, sodium phosphate, strawberry flavor, synthetic black iron oxide, synthetic red iron oxide, titanium dioxide, and white wax.

Solid oral dosage forms may optionally be treated with coating systems (e.g. Opadry® fx film coating system, for example Opadry® blue (OY-LS-20921), Opadry® white (YS-2-7063), Opadry® white (YS-1-7040), and black ink (S-1-8106).

The agents either in their free form or as a salt can be combined with a polymer such as polylactic-glycolic acid (PLGA), poly-(D)-lactic-glycolic-tartaric acid (P(D)LGT) (WO 01/12233), polyglycolic acid (U.S. 3,773,919), polylactic acid (U.S. 4,767,628), poly( $\epsilon$ -caprolactone) and poly(alkylene oxide) (U.S. 20030068384) to create a sustained release formulation. Such formulations can be used to implants that release a peptide or another agent over a period of a few days, a few weeks or several months depending on the polymer, the particle size of the polymer, and the size of the implant (see, e.g., U.S. 6,620,422). Other sustained release formulations and polymers for use in are described in EP 0 467 389 A2, WO 93/24150, U.S. 5,612,052, WO 97/40085, WO 03/075887, WO 01/01964A2, U.S. 5,922,356, WO 94/155587, WO 02/074247A2, WO 98/25642, U.S. 5,968,895, U.S. 6,180,608, U.S. 20030171296, U.S. 20020176841, U.S. 5,672,659, U.S. 5,893,985, U.S. 5,134,122, U.S. 5,192,741, U.S. 5,192,741, U.S. 4,668,506, U.S. 4,713,244, U.S. 5,445,832 U.S. 4,931,279, U.S. 5,980,945, WO 02/058672, WO 9726015, WO 97/04744, and US20020019446. In such sustained release formulations microparticles (Delie and Blanco-Prieto 2005 Molecule 10:65-80) of peptide are combined with microparticles of polymer. One or more sustained release implants can be placed in the large intestine, the small intestine or both. U.S. 6,011,011 and WO 94/06452 describe a sustained release formulation providing either polyethylene glycols (i.e. PEG 300 and PEG 400) or triacetin. WO 03/053401 describes a formulation which may both enhance bioavailability and provide controlled release of the agent within the GI tract. Additional controlled release formulations are described in WO 02/38129, EP 326 151, U.S. 5,236,704, WO 02/30398, WO 98/13029; U.S. 20030064105, U.S. 20030138488A1, U.S. 20030216307A1, U.S. 6,667,060, WO 01/49249, WO 01/49311, WO 01/49249, WO 01/49311, and U.S. 5,877,224.

The agents can be administered, e.g., by intravenous injection, intramuscular injection, subcutaneous injection, intraperitoneal injection, topical, sublingual, intraarticular (in the joints), intradermal, buccal, ophthalmic (including intraocular), intranasal (including using a cannula), intraspinally, intrathecally, or by other routes. The agents can be administered orally, e.g., as a tablet or cachet containing a predetermined amount of the active ingredient, gel, pellet, paste, syrup, bolus, electuary, slurry, capsule, powder, lyophilized powder, granules, sachet, as a solution or a suspension in an aqueous liquid or a non-aqueous liquid, as an oil-in-water liquid emulsion or a water-in-oil liquid emulsion, via a micellar formulation (see, e.g. WO 97/11682) via a liposomal formulation (see, e.g., EP 736299, WO 99/59550 and WO 97/13500), via formulations described in WO 03/094886, via bilosome (bile-salt based vesicular system), via a dendrimer, or in some other form. Orally administered compositions can include binders, lubricants, inert diluents, lubricating, surface active or dispersing agents, flavoring agents, and humectants. Orally administered formulations such as tablets may optionally be coated or scored and may be formulated so as to provide sustained, delayed or controlled release of the active ingredient therein. The agents can also be administered transdermally (i.e. via reservoir-type or matrix-type patches, microneedles, thermal poration, hypodermic needles, iontophoresis, electroporation, ultrasound or other forms of sonophoresis, jet injection, or a combination of any of the preceding methods (Prausnitz et al. 2004, Nature Reviews Drug Discovery 3:115-124)). The agents can be administered using high-velocity transdermal particle injection techniques using the hydrogel particle formulation described in U.S. 20020061336. Additional particle formulations are described in WO 00/45792, WO 00/53160, and WO 02/19989. An example of a transdermal formulation containing plaster and the absorption promoter dimethylisobutylidene can be found in WO 89/04179. WO 96/11705 provides formulations suitable for transdermal administration. The agents can be administered in the form a suppository or by other vaginal or rectal means. The agents can be administered in a transmembrane formulation as described in WO 90/07923. The agents can be administered non-invasively via the dehydrated particles described in U.S. 6,485,706. The agent can be administered in an enteric-coated drug formulation as described in WO 02/49621. The agents can be administered intranasally using the formulation described in U.S. 5,179,079. Formulations suitable for parenteral injection are

described in WO 00/62759. The agents can be administered using the casein formulation described in U. S. 20030206939 and WO 00/06108. The agents can be administered using the particulate formulations described in U.S. 20020034536.

The agents, alone or in combination with other suitable components, can be administered by pulmonary route utilizing several techniques including but not limited to intratracheal instillation (delivery of solution into the lungs by syringe), intratracheal delivery of liposomes, insufflation (administration of powder formulation by syringe or any other similar device into the lungs) and aerosol inhalation. Aerosols (e.g., jet or ultrasonic nebulizers, metered-dose inhalers (MDIs), and dry-powder inhalers (DPIs)) can also be used in intranasal applications. Aerosol formulations are stable dispersions or suspensions of solid material and liquid droplets in a gaseous medium and can be placed into pressurized acceptable propellants, such as hydrofluoroalkanes (HFAs, i.e. HFA-134a and HFA-227, or a mixture thereof), dichlorodifluoromethane (or other chlorofluorocarbon propellants such as a mixture of Propellants 11, 12, and/or 114), propane, nitrogen, and the like. Pulmonary formulations may include permeation enhancers such as fatty acids, saccharides, chelating agents, enzyme inhibitors (e.g., protease inhibitors), adjuvants (e.g., glycocholate, surfactin, span 85, and nafamostat), preservatives (e.g., benzalkonium chloride or chlorobutanol), and ethanol (normally up to 5% but possibly up to 20%, by weight). Ethanol is commonly included in aerosol compositions as it can improve the function of the metering valve and in some cases also improve the stability of the dispersion. Pulmonary formulations may also include surfactants which include but are not limited to bile salts and those described in U.S. 6,524,557 and references therein. The surfactants described in U.S. 6,524,557, e.g., a C8-C16 fatty acid salt, a bile salt, a phospholipid, or alkyl saccaride are advantageous in that some of them also reportedly enhance absorption of the peptide in the formulation. Also suitable in the invention are dry powder formulations comprising a therapeutically effective amount of active compound blended with an appropriate carrier and adapted for use in connection with a dry-powder inhaler. Absorption enhancers which can be added to dry powder formulations of the present invention include those described in U.S. 6,632,456. WO 02/080884 describes new methods for the surface modification of powders. Aerosol formulations may include U.S. 5,230,884, U.S. 5,292,499, WO 017/8694,

WO 01/78696, U.S. 2003019437, U. S. 20030165436, and WO 96/40089 (which includes vegetable oil). Sustained release formulations suitable for inhalation are described in U.S. 20010036481A1, 20030232019A1, and U.S. 20040018243A1 as well as in WO 01/13891, WO 02/067902, WO 03/072080, and WO 03/079885. Pulmonary formulations containing microparticles are described in WO 03/015750, U.S. 20030008013, and WO 00/00176. Pulmonary formulations containing stable glassy state powder are described in U.S. 20020141945 and U.S. 6,309,671. Other aerosol formulations are described in EP 1338272A1 WO 90/09781, U. S. 5,348,730, U.S. 6,436,367, WO 91/04011, and U.S. 6,294,153 and U.S. 6,290,987 describes a liposomal based formulation that can be administered via aerosol or other means. Powder formulations for inhalation are described in U.S. 20030053960 and WO 01/60341. The agents can be administered intranasally as described in U.S. 20010038824. The agents can be incorporated into microemulsions, which generally are thermodynamically stable, isotropically clear dispersions of two immiscible liquids, such as oil and water, stabilized by an interfacial film of surfactant molecules (Encyclopedia of Pharmaceutical Technology (New York: Marcel Dekker, 1992), volume 9). For the preparation of microemulsions, surfactant (emulsifier), co-surfactant (co-emulsifier), an oil phase and a water phase are necessary. Suitable surfactants include any surfactants that are useful in the preparation of emulsions, e.g., emulsifiers that are typically used in the preparation of creams. The co-surfactant (or "co-emulsifier") is generally selected from the group of polyglycerol derivatives, glycerol derivatives and fatty alcohols. Preferred emulsifier/co-emulsifier combinations are generally although not necessarily selected from the group consisting of: glyceryl monostearate and polyoxyethylene stearate; polyethylene glycol and ethylene glycol palmitostearate; and caprylic and capric triglycerides and oleoyl macroglycerides. The water phase includes not only water but also, typically, buffers, glucose, propylene glycol, polyethylene glycols, preferably lower molecular weight polyethylene glycols (e.g., PEG 300 and PEG 400), and/or glycerol, and the like, while the oil phase will generally comprise, for example, fatty acid esters, modified vegetable oils, silicone oils, mixtures of mono- di- and triglycerides, mono- and di-esters of PEG (e.g., oleoyl macroglycerides), etc.

The agents of the invention can be incorporated into pharmaceutically-acceptable nanoparticle, nanosphere, and nanocapsule formulations (Delie and Blanco-Prieto 2005 *Molecule* 10:65-80). Nanocapsules can generally entrap compounds in a stable and reproducible way (Henry-Michelland et al., 1987; Quintanar-Guerrero et al., 1998; Douglas et al., 1987). To avoid side effects due to intracellular polymeric overloading, ultrafine particles (sized around 0.1  $\mu\text{m}$ ) can be designed using polymers able to be degraded in vivo (e.g. biodegradable polyalkyl-cyanoacrylate nanoparticles). Such particles are described in the prior art (Couvreux et al, 1980; 1988; zur Muhlen et al., 1998; Zambaux et al. 1998; Pinto-Alphandry et al., 1995 and U.S. Pat. No. 5,145,684).

The agents of the invention can be formulated with pH sensitive materials which may include those described in WO04041195 (including the seal and enteric coating described therein) and pH-sensitive coatings that achieve delivery in the colon including those described in US4910021 and WO9001329. US4910021 describes using a pH-sensitive material to coat a capsule. WO9001329 describes using pH-sensitive coatings on beads containing acid, where the acid in the bead core prolongs dissolution of the pH-sensitive coating. U. S. Patent No. 5,175, 003 discloses a dual mechanism polymer mixture composed of pH-sensitive enteric materials and film-forming plasticizers capable of conferring permeability to the enteric material, for use in drug-delivery systems; a matrix pellet composed of a dual mechanism polymer mixture permeated with a drug and sometimes covering a pharmaceutically neutral nucleus; a membrane-coated pellet comprising a matrix pellet coated with a dual mechanism polymer mixture envelope of the same or different composition; and a pharmaceutical dosage form containing matrix pellets. The matrix pellet releases acid-soluble drugs by diffusion in acid pH and by disintegration at pH levels of nominally about 5.0 or higher. The agents of the invention may be formulated in the pH triggered targeted control release systems described in WO04052339. The agents of the invention may be formulated according to the methodology described in any of WO03105812 (extruded hydratable polymers); WO0243767 (enzyme cleavable membrane translocators); WO03007913 and WO03086297 (mucoadhesive systems); WO02072075 (bilayer laminated formulation comprising pH lowering agent and absorption enhancer); WO04064769 (amidated peptides); WO05063156 (solid lipid suspension with pseudotropic and/or thixotropic

properties upon melting); WO03035029 and WO03035041 (erodible, gastric retentive dosage forms); US5007790 and US5972389 (sustained release dosage forms); WO04112711 (oral extended release compositions); WO05027878, WO02072033, and WO02072034 (delayed release compositions with natural or synthetic gum); WO05030182 (controlled release formulations with an ascending rate of release); WO05048998 (microencapsulation system); US Patent 5,952, 314 (biopolymer); US5108758 (glassy amylose matrix delivery); US 5840860 (modified starch based delivery). JP10324642 (delivery system comprising chitosan and gastric resistant material such as wheat gliadin or zein); US5866619 and US6368629 (saccharide containing polymer); US 6531152 (describes a drug delivery system containing a water soluble core (Ca pectinate or other water-insoluble polymers) and outer coat which bursts (eg hydrophobic polymer-Eudragit)); US 6234464; US 6403130 (coating with polymer containing casein and high methoxy pectin; WO0174175 (Maillard reaction product); WO05063206 (solubility increasing formulation); WO04019872 (transferring fusion proteins). The agents of the invention may be formulated using gastrointestinal retention system technology (GIRES; Merrion Pharmaceuticals). GIRES comprises a controlled-release dosage form inside an inflatable pouch, which is placed in a drug capsule for oral administration. Upon dissolution of the capsule, a gas-generating system inflates the pouch in the stomach where it is retained for 16-24 hours, all the time releasing agents of the invention.

The agents of the invention can be formulated in an osmotic device including the ones disclosed in US4503030, US5609590 and US5358502. US4503030 discloses an osmotic device for dispensing a drug to certain pH regions of the gastrointestinal tract. More particularly, the invention relates to an osmotic device comprising a wall formed of a semi-permeable pH sensitive composition that surrounds a compartment containing a drug, with a passageway through the wall connecting the exterior of the device with the compartment. The device delivers the drug at a controlled rate in the region of the gastrointestinal tract having a pH of less than 3.5, and the device self- destructs and releases all its drug in the region of the gastrointestinal tract having a pH greater than 3.5, thereby providing total availability for drug absorption. U. S. Patent Nos. 5,609, 590 and 5, 358,502 disclose an osmotic bursting device for dispensing a beneficial agent to an aqueous environment. The device comprises a beneficial agent and

osmagent surrounded at least in part by a semi-permeable membrane. The beneficial agent may also function as the osmagent. The semi-permeable membrane is permeable to water and substantially impermeable to the beneficial agent and osmagent. A trigger means is attached to the semi-permeable membrane (e. g. , joins two capsule halves). The trigger means is activated by a pH of from 3 to 9 and triggers the eventual, but sudden, delivery of the beneficial agent. These devices enable the pH-triggered release of the beneficial agent core as a bolus by osmotic bursting.

The agents of the invention may be formulated based on the invention described in U. S. Patent No. 5,316, 774 which discloses a composition for the controlled release of an active substance comprising a polymeric particle matrix, where each particle defines a network of internal pores. The active substance is entrapped within the pore network together with a blocking agent having physical and chemical characteristics selected to modify the release rate of the active substance from the internal pore network. In one embodiment, drugs may be selectively delivered to the intestines using an enteric material as the blocking agent. The enteric material remains intact in the stomach but degrades under the pH conditions of the intestines. In another embodiment, the sustained release formulation employs a blocking agent, which remains stable under the expected conditions of the environment to which the active substance is to be released. The use of pH-sensitive materials alone to achieve site-specific delivery is difficult because of leaking of the beneficial agent prior to the release site or desired delivery time and it is difficult to achieve long time lags before release of the active ingredient after exposure to high pH (because of rapid dissolution or degradation of the pH-sensitive materials).

The agents may also be formulated in a hybrid system which combines pH-sensitive materials and osmotic delivery systems. These hybrid devices provide delayed initiation of sustained-release of the beneficial agent. In one device a pH-sensitive matrix or coating dissolves releasing osmotic devices that provide sustained release of the beneficial agent see U. S. Patent Nos. 4,578, 075, 4,681, 583, and 4,851, 231. A second device consists of a semipermeable coating made of a polymer blend of an insoluble and a pH-sensitive material. As the pH increases, the permeability of the coating increases, increasing the rate of release of beneficial agent see U. S. Patent Nos. 4,096, 238,4, 503,030, 4, 522, 625, and 4,587, 117.

The agents of the invention may be formulated in terpolymers according to U. S. Patent No. 5,484, 610 which discloses terpolymers which are sensitive to pH and temperature which are useful carriers for conducting bioactive agents through the gastric juices of the stomach in a protected form. The terpolymers swell at the higher physiologic pH of the intestinal tract causing release of the bioactive agents into the intestine. The terpolymers are linear and are made up of 35 to 99 wt % of a temperature sensitive component, which imparts to the terpolymer LCST (lower critical solution temperature) properties below body temperatures, 1 to 30 wt % of a pH sensitive component having a pKa in the range of from 2 to 8 which functions through ionization or deionization of carboxylic acid groups to prevent the bioactive agent from being lost at low pH but allows bioactive agent release at physiological pH of about 7.4 and a hydrophobic component which stabilizes the LCST below body temperatures and compensates for bioactive agent effects on the terpolymers. The terpolymers provide for safe bioactive agent loading, a simple procedure for dosage form fabrication and the terpolymer functions as a protective carrier in the acidic environment of the stomach and also protects the bioactive agents from digestive enzymes until the bioactive agent is released in the intestinal tract.

The agents of the invention may be formulated in pH sensitive polymers according to those described in U. S. Patent No. 6,103, 865. U. S. Patent No. 6,103, 865 discloses pH-sensitive polymers containing sulfonamide groups, which can be changed in physical properties, such as swellability and solubility, depending on pH and which can be applied for a drug-delivery system, bio-material, sensor, and the like, and a preparation method therefore. The pH-sensitive polymers are prepared by introduction of sulfonamide groups, various in pKa, to hydrophilic groups of polymers either through coupling to the hydrophilic groups of polymers, such as acrylamide, N, N- dimethylacrylamide, acrylic acid, N-isopropylacrylamide and the like or copolymerization with other polymerizable monomers. These pH-sensitive polymers may have a structure of linear polymer, grafted copolymer, hydrogel or interpenetrating network polymer.

The agents of the invention may be formulated according U. S. Patent No. 5, 656, 292 which discloses a composition for pH dependent or pH regulated controlled release of active



ingredients especially drugs. The composition consists of a compactable mixture of the active ingredient and starch molecules substituted with acetate and dicarboxylate residues. The preferred dicarboxylate acid is succinate. The average substitution degree of the acetate residue is at least 1 and 0.2-1.2 for the dicarboxylate residue. The starch molecules can have the acetate and dicarboxylate residues attached to the same starch molecule backbone or attached to separate starch molecule backbones. The present invention also discloses methods for preparing said starch acetate dicarboxylates by transesterification or mixing of starch acetates and starch dicarboxylates respectively.

The agents of the invention may be formulated according to the methods described in U. S. Patent Nos. 5,554, 147,5, 788, 687, and 6,306, 422 which disclose a method for the controlled release of a biologically active agent wherein the agent is released from a hydrophobic, pH-sensitive polymer matrix. The polymer matrix swells when the environment reaches pH 8.5, releasing the active agent. A polymer of hydrophobic and weakly acidic comonomers is disclosed for use in the controlled release system. Also disclosed is a specific embodiment in which the controlled release system may be used. The pH-sensitive polymer is coated onto a latex catheter used in ureteral catheterization. A ureteral catheter coated with a pH-sensitive polymer having an antibiotic or urease inhibitor trapped within its matrix will release the active agent when exposed to high pH urine.

The agents of the invention may be formulated in/with bioadhesive polymers according to US Patent No. 6,365, 187. Bioadhesive polymers in the form of, or as a coating on, microcapsules containing drugs or bioactive substances which may serve for therapeutic, or diagnostic purposes in diseases of the gastrointestinal tract, are described in US6365187. The polymeric microspheres all have a bioadhesive force of at least  $11 \text{ mN/cm}^2$  ( $110 \text{ N/m}^2$ ) Techniques for the fabrication of bioadhesive microspheres, as well as a method for measuring bioadhesive forces between microspheres and selected segments of the gastrointestinal tract in vitro are also described. This quantitative method provides a means to establish a correlation between the chemical nature, the surface morphology and the dimensions of drug-loaded microspheres on one hand and bioadhesive forces on the other, allowing the screening of the most promising

materials from a relatively large group of natural and synthetic polymers which, from theoretical consideration, should be used for making bioadhesive microspheres. Solutions of medicament in buffered saline and similar vehicles are commonly employed to generate an aerosol in a nebulizer. Simple nebulizers operate on Bernoulli's principle and employ a stream of air or oxygen to generate the spray particles. More complex nebulizers employ ultrasound to create the spray particles. Both types are well known in the art and are described in standard textbooks of pharmacy such as Sprowls' American Pharmacy and Remington's The Science and Practice of Pharmacy. Other devices for generating aerosols employ compressed gases, usually hydrofluorocarbons and chlorofluorocarbons, which are mixed with the medicament and any necessary excipients in a pressurized container, these devices are likewise described in standard textbooks such as Sprowls and Remington.

The agents can be a free acid or base, or a pharmacologically acceptable salt thereof. Solids can be dissolved or dispersed immediately prior to administration or earlier. In some circumstances the preparations include a preservative to prevent the growth of microorganisms. The pharmaceutical forms suitable for injection can include sterile aqueous or organic solutions or dispersions which include, e.g., water, an alcohol, an organic solvent, an oil or other solvent or dispersant (e.g., glycerol, propylene glycol, polyethylene glycol, and vegetable oils). The formulations may contain antioxidants, buffers, bacteriostats, and solutes that render the formulation isotonic with the blood of the intended recipient, and aqueous and non-aqueous sterile suspensions that can include suspending agents, solubilizers, thickening agents, stabilizers, and preservatives. Pharmaceutical agents can be sterilized by filter sterilization or by other suitable means. The agent can be fused to immunoglobulins or albumin, or incorporated into a liposome to improve half-life. The agent can also be conjugated to polyethylene glycol (PEG) chains. Methods for pegylation and additional formulations containing PEG-conjugates (i.e. PEG-based hydrogels, PEG modified liposomes) can be found in Harris and Chess, Nature Reviews Drug Discovery 2: 214-221 and the references therein. Peptides can also be modified with alkyl groups (e.g., C1-C20 straight or branched alkyl groups); fatty acid radicals; and combinations of PEG, alkyl groups and fatty acid radicals (see U.S. Patent 6,309,633; Soltero et al., 2001 Innovations in Pharmaceutical Technology 106-110). The agent can be administered

via a nanococheate or cocheate delivery vehicle (BioDelivery Sciences International). The agents can be delivered transmucosally (i.e. across a mucosal surface such as the vagina, eye or nose) using formulations such as that described in U.S. 5,204,108. The agents can be formulated in microcapsules as described in WO 88/01165. The agent can be administered intra-orally using the formulations described in U.S. 20020055496, WO 00/47203, and U.S. 6,495,120. The agent can be delivered using nanoemulsion formulations described in WO 01/91728A2.

#### Controlled release formulations

In general, one can provide for controlled release of the agents described herein through the use of a wide variety of polymeric carriers and controlled release systems including erodible and non-erodible matrices, osmotic control devices, various reservoir devices, enteric coatings and multiparticulate control devices.

Matrix devices are a common device for controlling the release of various agents. In such devices, the agents described herein are generally present as a dispersion within the polymer matrix, and are typically formed by the compression of a polymer/drug mixture or by dissolution or melting. The dosage release properties of these devices may be dependent upon the solubility of the agent in the polymer matrix or, in the case of porous matrices, the solubility in the sink solution within the pore network, and the tortuosity of the network. In one instance, when utilizing an erodible polymeric matrix, the matrix imbibes water and forms an aqueous-swollen gel that entraps the agent. The matrix then gradually erodes, swells, disintegrates or dissolves in the GI tract, thereby controlling release of one or more of the agents described herein. In non-erodible devices, the agent is released by diffusion through an inert matrix.

Agents described herein can be incorporated into an erodible or non-erodible polymeric matrix controlled release device. By an erodible matrix is meant aqueous-erodible or water-swellaable or aqueous-soluble in the sense of being either erodible or swellaable or dissolvable in pure water or requiring the presence of an acid or base to ionize the polymeric matrix sufficiently to cause erosion or dissolution. When contacted with the aqueous environment of use, the erodible polymeric matrix imbibes water and forms an aqueous-swollen gel or matrix that entraps the

agent described herein. The aqueous-swollen matrix gradually erodes, swells, disintegrates or dissolves in the environment of use, thereby controlling the release of a compound described herein to the environment of use.

The erodible polymeric matrix into which an agent described herein can be incorporated may generally be described as a set of excipients that are mixed with the agent following its formation that, when contacted with the aqueous environment of use imbibes water and forms a water-swollen gel or matrix that entraps the drug form. Drug release may occur by a variety of mechanisms, for example, the matrix may disintegrate or dissolve from around particles or granules of the agent or the agent may dissolve in the imbibed aqueous solution and diffuse from the tablet, beads or granules of the device. One ingredient of this water-swollen matrix is the water-swallowable, erodible, or soluble polymer, which may generally be described as an osmopolymer, hydrogel or water-swallowable polymer. Such polymers may be linear, branched, or crosslinked. The polymers may be homopolymers or copolymers. In certain embodiments, they may be synthetic polymers derived from vinyl, acrylate, methacrylate, urethane, ester and oxide monomers. In other embodiments, they can be derivatives of naturally occurring polymers such as polysaccharides (e.g. chitin, chitosan, dextran and pullulan; gum agar, gum arabic, gum karaya, locust bean gum, gum tragacanth, carrageenans, gum ghatti, guar gum, xanthan gum and scleroglucan), starches (e.g. dextrin and maltodextrin), hydrophilic colloids (e.g. pectin), phosphatides (e.g. lecithin), alginates (e.g. ammonium alginate, sodium, potassium or calcium alginate, propylene glycol alginate), gelatin, collagen, and cellulose. Cellulose is a natural polymer that has been modified by reaction of at least a portion of the hydroxyl groups on the saccharide repeat units with a compound to form an ester-linked or an ether-linked substituent. For example, the cellulosic ethyl cellulose has an ether linked ethyl substituent attached to the saccharide repeat unit, while the cellulosic cellulose acetate has an ester linked acetate substituent. In certain embodiments, the cellulose for the erodible matrix comprises aqueous-soluble and aqueous-erodible cellulose. Cellulose derivatives can include, for example, ethyl cellulose (EC), methylethyl cellulose (MEC), carboxymethyl cellulose (CMC), CMEC, hydroxyethyl cellulose (HEC), hydroxypropyl cellulose (HPC), cellulose acetate (CA), cellulose propionate (CP), cellulose butyrate (CB), cellulose acetate butyrate (CAB), CAP, CAT, hydroxypropyl methyl

cellulose (HPMC), HPMCP, HPMCAS, hydroxypropyl methyl cellulose acetate trimellitate (HPMCAT), and ethylhydroxy ethylcellulose (EHEC). In certain embodiments, the cellulose comprises various grades of low viscosity (MW less than or equal to 50,000 daltons, for example, the Dow Methocel™ series E5, E15LV, E50LV and K100LY) and high viscosity (MW greater than 50,000 daltons, for example, E4MCR, E10MCR, K4M, K15M and K100M and the Methocel™ K series) HPMC. Other commercially available types of HPMC include the Shin Etsu Metolose 90SH series.

The choice of matrix material can have a large effect on the maximum drug concentration attained by the device as well as the maintenance of a high drug concentration. The matrix material can be a concentration-enhancing polymer, for example, as described in WO05/011634.

Other materials useful as the erodible matrix material include, but are not limited to, pullulan, polyvinyl pyrrolidone, polyvinyl alcohol, polyvinyl acetate, glycerol fatty acid esters, polyacrylamide, polyacrylic acid, copolymers of ethacrylic acid or methacrylic acid (EUDRAGIT, Rohm America, Inc., Piscataway, New Jersey) and other acrylic acid derivatives such as homopolymers and copolymers of butylmethacrylate, methylmethacrylate, ethylmethacrylate, ethylacrylate, (2-dimethylaminoethyl) methacrylate, and (trimethylaminoethyl) methacrylate chloride.

The erodible matrix polymer may contain a wide variety of the same types of additives and excipients known in the pharmaceutical arts, including osmopolymers, osmagens, solubility-enhancing or-retarding agents and excipients that promote stability or processing of the device. Alternatively, the agents of the present invention may be administered by or incorporated into a non-erodible matrix device. In such devices, an agent described herein is distributed in an inert matrix. The agent is released by diffusion through the inert matrix. Examples of materials suitable for the inert matrix include insoluble plastics (e.g. methyl acrylate-methyl methacrylate copolymers, polyvinyl chloride, polyethylene), hydrophilic polymers (e.g. ethyl cellulose, cellulose acetate, crosslinked polyvinylpyrrolidone (also known as crospovidone)), and fatty compounds (e.g. carnauba wax, microcrystalline wax, and triglycerides). Such devices are described further in Remington: The Science and Practice of Pharmacy, 20th edition (2000).

Matrix controlled release devices may be prepared by blending an agent described herein and other excipients together, and then forming the blend into a tablet, caplet, pill, or other device formed by compressive forces. Such compressed devices may be formed using any of a wide variety of presses used in the fabrication of pharmaceutical devices. Examples include single-punch presses, rotary tablet presses, and multilayer rotary tablet presses, all well known in the art. See for example, Remington: The Science and Practice of Pharmacy, 20th Edition, 2000. The compressed device may be of any shape, including round, oval, oblong, cylindrical, or triangular. The upper and lower surfaces of the compressed device may be flat, round, concave, or convex.

In certain embodiments, when formed by compression, the device has a strength of at least 5 Kiloponds (Kp)/cm<sup>2</sup> (for example, at least 7 Kp/cm<sup>2</sup>). Strength is the fracture force, also known as the tablet hardness required to fracture a tablet formed from the materials, divided by the maximum cross-sectional area of the tablet normal to that force. The fracture force may be measured using a Schleuniger Tablet Hardness Tester, Model 6D. The compression force required to achieve this strength will depend on the size of the tablet, but generally will be greater than about 5 kP/cm<sup>2</sup>. Friability is a well-known measure of a device's resistance to surface abrasion that measures weight loss in percentage after subjecting the device to a standardized agitation procedure. Friability values of from 0.8 to 1.0% are regarded as constituting the upper limit of acceptability. Devices having a strength of greater than 5 kP/cm<sup>2</sup> generally are very robust, having a friability of less than 0.5%. Other methods for forming matrix controlled-release devices are well known in the pharmaceutical arts. See for example, Remington: The Science and Practice of Pharmacy, 20th Edition, 2000.

As noted above, the agents described herein may also be incorporated into an osmotic control device. Such devices generally include a core containing one or more agents as described herein and a water permeable, non-dissolving and non-eroding coating surrounding the core which controls the influx of water into the core from an aqueous environment of use so as to cause drug release by extrusion of some or all of the core to the environment of use. In certain embodiments, the coating is polymeric, aqueous-permeable, and has at least one delivery port. The core of the osmotic device optionally includes an osmotic agent which acts to imbibe water

from the surrounding environment via such a semi-permeable membrane. The osmotic agent contained in the core of this device may be an aqueous-swellaible hydrophilic polymer or it may be an osmogen, also known as an osmagent. Pressure is generated within the device which forces the agent(s) out of the device via an orifice (of a size designed to minimize solute diffusion while preventing the build-up of a hydrostatic pressure head).

Osmotic agents create a driving force for transport of water from the environment of use into the core of the device. Osmotic agents include but are not limited to water-swellaible hydrophilic polymers, and osmogens (or osmagens). Thus, the core may include water-swellaible hydrophilic polymers, both ionic and nonionic, often referred to as osmopolymers and hydrogels. The amount of water-swellaible hydrophilic polymers present in the core may range from about 5 to about 80 wt% (including for example, 10 to 50 wt%). Nonlimiting examples of core materials include hydrophilic vinyl and acrylic polymers, polysaccharides such as calcium alginate, polyethylene oxide (PEO), polyethylene glycol (PEG), polypropylene glycol (PPG), poly (2-hydroxyethyl methacrylate), poly (acrylic) acid, poly (methacrylic) acid, polyvinylpyrrolidone (PVP) and crosslinked PVP, polyvinyl alcohol (PVA), PVA/PVP copolymers and PVA/PVP copolymers with hydrophobic monomers such as methyl methacrylate, vinyl acetate, and the like, hydrophilic polyurethanes containing large PEO blocks, sodium croscarmellose, carrageenan, hydroxyethyl cellulose (HEC), hydroxypropyl cellulose (HPC), hydroxypropyl methyl cellulose (HPMC), carboxymethyl cellulose (CMC) and carboxyethyl cellulose (CEC), sodium alginate, polycarbophil, gelatin, xanthan gum, and sodium starch glycolat. Other materials include hydrogels comprising interpenetrating networks of polymers that may be formed by addition or by condensation polymerization, the components of which may comprise hydrophilic and hydrophobic monomers such as those just mentioned. Water-swellaible hydrophilic polymers include but are not limited to PEO, PEG, PVP, sodium croscarmellose, HPMC, sodium starch glycolate, polyacrylic acid and crosslinked versions or mixtures thereof.

The core may also include an osmogen (or osmagent). The amount of osmogen present in the core may range from about 2 to about 70 wt% (including, for example, from 10 to 50 wt%). Typical classes of suitable osmogens are water-soluble organic acids, salts and sugars that are capable of imbibing water to thereby effect an osmotic pressure gradient across the barrier of the

surrounding coating. Typical useful osmogens include but are not limited to magnesium sulfate, magnesium chloride, calcium chloride, sodium chloride, lithium chloride, potassium sulfate, sodium carbonate, sodium sulfite, lithium sulfate, potassium chloride, sodium sulfate, mannitol, xylitol, urea, sorbitol, inositol, raffinose, sucrose, glucose, fructose, lactose, citric acid, succinic acid, tartaric acid, and mixtures thereof. In certain embodiments, the osmogen is glucose, lactose, sucrose, mannitol, xylitol, sodium chloride, including combinations thereof.

The core may include a wide variety of additives and excipients that enhance the performance of the dosage form or that promote stability, tableting or processing. Such additives and excipients include tableting aids, surfactants, water-soluble polymers, pH modifiers, fillers, binders, pigments, disintegrants, antioxidants, lubricants and flavorants. Nonlimiting examples of additives and excipients include but are not limited to those described elsewhere herein as well as microcrystalline cellulose, metallic salts of acids (e.g. aluminum stearate, calcium stearate, magnesium stearate, sodium stearate, zinc stearate), pH control agents (e.g. buffers, organic acids, organic acid salts, organic and inorganic bases), fatty acids, hydrocarbons and fatty alcohols (e.g. stearic acid, palmitic acid, liquid paraffin, stearyl alcohol, and palmitol), fatty acid esters (e.g. glyceryl (mono- and di-) stearates, triglycerides, glyceryl (palmiticstearic) ester, sorbitan esters (e.g. sorbitan monostearate, saccharose monostearate, saccharose monopalmitate, sodium stearyl fumarate), polyoxyethylene sorbitan esters), surfactants (e.g. alkyl sulfates (e.g. sodium lauryl sulfate, magnesium lauryl sulfate), polymers (e.g. polyethylene glycols, polyoxyethylene glycols, polyoxyethylene, polyoxypropylene ethers, including copolymers thereof), polytetrafluoroethylene), and inorganic materials (e.g. talc, calcium phosphate), cyclodextrins, sugars (e.g. lactose, xylitol), sodium starch glycolate). Nonlimiting examples of disintegrants are sodium starch glycolate (e.g., Explotab<sup>TM</sup> CLV, (microcrystalline cellulose (e.g., Avicel<sup>TM</sup>), microcrystalline silicified cellulose (e.g., ProSolv<sup>TM</sup>), croscarmellose sodium (e.g., Ac-Di-Sol<sup>TM</sup>). When the agent described herein is a solid amorphous dispersion formed by a solvent process, such additives may be added directly to the spray-drying solution when forming an agent described herein/concentration-enhancing polymer dispersion such that the additive is dissolved or suspended in the solution as a slurry. Alternatively, such additives may be added following the spray-drying process to aid in forming the final controlled release device.



A nonlimiting example of an osmotic device consists of one or more drug layers containing an agent described herein, such as a solid amorphous drug/polymer dispersion, and a sweller layer that comprises a water-swellaable polymer, with a coating surrounding the drug layer and sweller layer. Each layer may contain other excipients such as tableting aids, osmagents, surfactants, water-soluble polymers and water-swellaable polymers.

Such osmotic delivery devices may be fabricated in various geometries including bilayer (wherein the core comprises a drug layer and a sweller layer adjacent to each other), trilayer (wherein the core comprises a sweller layer sandwiched between two drug layers) and concentric (wherein the core comprises a central sweller agent surrounded by the drug layer). The coating of such a tablet comprises a membrane permeable to water but substantially impermeable to drug and excipients contained within. The coating contains one or more exit passageways or ports in communication with the drug-containing layer(s) for delivering the drug agent. The drug-containing layer(s) of the core contains the drug agent (including optional osmagents and hydrophilic water-soluble polymers), while the sweller layer consists of an expandable hydrogel, with or without additional osmotic agents.

When placed in an aqueous medium, the tablet imbibes water through the membrane, causing the agent to form a dispensable aqueous agent, and causing the hydrogel layer to expand and push against the drug-containing agent, forcing the agent out of the exit passageway. The agent can swell, aiding in forcing the drug out of the passageway. Drug can be delivered from this type of delivery system either dissolved or dispersed in the agent that is expelled from the exit passageway.

The rate of drug delivery is controlled by such factors as the permeability and thickness of the coating, the osmotic pressure of the drug-containing layer, the degree of hydrophilicity of the hydrogel layer, and the surface area of the device. Those skilled in the art will appreciate that increasing the thickness of the coating will reduce the release rate, while any of the following will increase the release rate: increasing the permeability of the coating; increasing the

hydrophilicity of the hydrogel layer; increasing the osmotic pressure of the drug-containing layer; or increasing the device's surface area.

Other materials useful in forming the drug-containing agent, in addition to the agent described herein itself, include HPMC, PEO and PVP and other pharmaceutically acceptable carriers. In addition, osmagents such as sugars or salts, including but not limited to sucrose, lactose, xylitol, mannitol, or sodium chloride, may be added. Materials which are useful for forming the hydrogel layer include sodium CMC, PEO (e.g. polymers having an average molecular weight from about 5,000,000 to about 7,500,000 daltons), poly (acrylic acid), sodium (polyacrylate), sodium croscarmellose, sodium starch glycolat, PVP, crosslinked PVP, and other high molecular weight hydrophilic materials.

In the case of a bilayer geometry, the delivery port(s) or exit passageway(s) may be located on the side of the tablet containing the drug agent or may be on both sides of the tablet or even on the edge of the tablet so as to connect both the drug layer and the sweller layer with the exterior of the device. The exit passageway(s) may be produced by mechanical means or by laser drilling, or by creating a difficult-to-coat region on the tablet by use of special tooling during tablet compression or by other means.

The osmotic device can also be made with a homogeneous core surrounded by a semipermeable membrane coating, as in US3845770. The agent described herein can be incorporated into a tablet core and a semipermeable membrane coating can be applied via conventional tablet-coating techniques such as using a pan coater. A drug delivery passageway can then be formed in this coating by drilling a hole in the coating, either by use of a laser or mechanical means. Alternatively, the passageway may be formed by rupturing a portion of the coating or by creating a region on the tablet that is difficult to coat, as described above. In one embodiment, an osmotic device comprises: (a) a single-layer compressed core comprising: (i) an agent described herein, (ii) a hydroxyethylcellulose, and (iii) an osmagent, wherein the hydroxyethylcellulose is present in the core from about 2.0% to about 35% by weight and the osmagent is present from about 15% to about 70% by weight; (b) a water-permeable layer surrounding the core; and (c) at least

one passageway within the water-permeable layer (b) for delivering the drug to a fluid environment surrounding the tablet. In certain embodiments, the device is shaped such that the surface area to volume ratio (of a water-swollen tablet) is greater than  $0.6 \text{ mm}^{-1}$  (including, for example, greater than  $1.0 \text{ mm}^{-1}$ ). The passageway connecting the core with the fluid environment can be situated along the tablet band area. In certain embodiments, the shape is an oblong shape where the ratio of the tablet tooling axes, i.e., the major and minor axes which define the shape of the tablet, are between 1.3 and 3 (including, for example, between 1.5 and 2.5). In one embodiment, the combination of the agent described herein and the osmagent have an average ductility from about 100 to about 200 Mpa, an average tensile strength from about 0.8 to about 2.0 Mpa, and an average brittle fracture index less than about 0.2. The single-layer core may optionally include a disintegrant, a bioavailability enhancing additive, and/or a pharmaceutically acceptable excipient, carrier or diluent.

In certain embodiments, entrainment of particles of agents described herein in the extruding fluid during operation of such osmotic device is desirable. For the particles to be well entrained, the agent drug form is dispersed in the fluid before the particles have an opportunity to settle in the tablet core. One means of accomplishing this is by adding a disintegrant that serves to break up the compressed core into its particulate components. Nonlimiting examples of standard disintegrants include materials such as sodium starch glycolate (e. g. , Explotab™ CLV), microcrystalline cellulose (e. g., Avicel™), microcrystalline silicified cellulose (e. g., ProSoIv™) and croscarmellose sodium (e. g., Ac-Di-Sol™), and other disintegrants known to those skilled in the art. Depending upon the particular formulation, some disintegrants work better than others. Several disintegrants tend to form gels as they swell with water, thus hindering drug delivery from the device. Non-gelling, non-swelling disintegrants provide a more rapid dispersion of the drug particles within the core as water enters the core. In certain embodiments, non-gelling, non-swelling disintegrants are resins, for example, ion-exchange resins. In one embodiment, the resin is Amberlite™ IRP 88 (available from Rohm and Haas, Philadelphia, PA). When used, the disintegrant is present in amounts ranging from about 50-74% of the core agent.

Water-soluble polymers are added to keep particles of the agent suspended inside the device before they can be delivered through the passageway(s) (e.g., an orifice). High viscosity polymers are useful in preventing settling. However, the polymer in combination with the agent is extruded through the passageway(s) under relatively low pressures. At a given extrusion pressure, the extrusion rate typically slows with increased viscosity. Certain polymers in combination with particles of the agent described herein form high viscosity solutions with water but are still capable of being extruded from the tablets with a relatively low force. In contrast, polymers having a low weight-average, molecular weight (< about 300,000) do not form sufficiently viscous solutions inside the tablet core to allow complete delivery due to particle settling. Settling of the particles is a problem when such devices are prepared with no polymer added, which leads to poor drug delivery unless the tablet is constantly agitated to keep the particles from settling inside the core. Settling is also problematic when the particles are large and/or of high density such that the rate of settling increases.

In certain embodiments, the water-soluble polymers for such osmotic devices do not interact with the drug. In certain embodiments the water-soluble polymer is a non-ionic polymer. A nonlimiting example of a non-ionic polymer forming solutions having a high viscosity yet still extrudable at low pressures is Natrosol™ 250H (high molecular weight hydroxyethylcellulose, available from Hercules Incorporated, Aqualon Division, Wilmington, DE; MW equal to about 1 million daltons and a degree of polymerization equal to about 3,700). Natrosol 250H™ provides effective drug delivery at concentrations as low as about 3% by weight of the core when combined with an osmagent. Natrosol 250H™ NF is a high-viscosity grade nonionic cellulose ether that is soluble in hot or cold water. The viscosity of a 1% solution of Natrosol 250H using a Brookfield LVT (30 rpm) at 25°C is between about 1, 500 and about 2,500 cps.

In certain embodiments, hydroxyethylcellulose polymers for use in these monolayer osmotic tablets have a weight-average, molecular weight from about 300,000 to about 1.5 million. The hydroxyethylcellulose polymer is typically present in the core in an amount from about 2.0% to about 35% by weight.

Another example of an osmotic device is an osmotic capsule. The capsule shell or portion of the capsule shell can be semipermeable. The capsule can be filled either by a powder or liquid consisting of an agent described herein, excipients that imbibe water to provide osmotic potential, and/or a water-swellaable polymer, or optionally solubilizing excipients. The capsule core can also be made such that it has a bilayer or multilayer agent analogous to the bilayer, trilayer or concentric geometries described above.

Another class of osmotic device useful in this invention comprises coated swellaable tablets, for example, as described in EP378404. Coated swellaable tablets comprise a tablet core comprising an agent described herein and a swelling material, preferably a hydrophilic polymer, coated with a membrane, which contains holes, or pores through which, in the aqueous use environment, the hydrophilic polymer can extrude and carry out the agent. Alternatively, the membrane may contain polymeric or low molecular weight water-soluble porosigens. Porosigens dissolve in the aqueous use environment, providing pores through which the hydrophilic polymer and agent may extrude. Examples of porosigens are water-soluble polymers such as HPMC, PEG, and low molecular weight compounds such as glycerol, sucrose, glucose, and sodium chloride. In addition, pores may be formed in the coating by drilling holes in the coating using a laser or other mechanical means. In this class of osmotic devices, the membrane material may comprise any film-forming polymer, including polymers which are water permeable or impermeable, providing that the membrane deposited on the tablet core is porous or contains water-soluble porosigens or possesses a macroscopic hole for water ingress and drug release. Embodiments of this class of sustained release devices may also be multilayered, as described, for example, in EP378404.

When an agent described herein is a liquid or oil, such as a lipid vehicle formulation, for example as described in WO05/011634, the osmotic controlled-release device may comprise a soft-gel or gelatin capsule formed with a composite wall and comprising the liquid formulation where the wall comprises a barrier layer formed over the external surface of the capsule, an expandable layer formed over the barrier layer, and a semipermeable layer formed over the expandable layer. A delivery port connects the liquid formulation with the aqueous use

environment. Such devices are described, for example, in US6419952, US6342249, US5324280, US4672850, US4627850, US4203440, and US3995631.

The osmotic controlled release devices of the present invention can also comprise a coating. In certain embodiments, the osmotic controlled release device coating exhibits one or more of the following features: is water-permeable, has at least one port for the delivery of drug, and is non-dissolving and non-eroding during release of the drug formulation, such that drug is substantially entirely delivered through the delivery port(s) or pores as opposed to delivery primarily via permeation through the coating material itself. Delivery ports include any passageway, opening or pore whether made mechanically, by laser drilling, by pore formation either during the coating process or *in situ* during use or by rupture during use. In certain embodiments, the coating is present in an amount ranging from about 5 to 30 wt% (including, for example, 10 to 20 wt%) relative to the core weight.

One form of coating is a semipermeable polymeric membrane that has the port(s) formed therein either prior to or during use. Thickness of such a polymeric membrane may vary between about 20 and 800  $\mu\text{m}$  (including, for example, between about 100 to 500  $\mu\text{m}$ ). The diameter of the delivery port (s) may generally range in size from 0.1 to 3000  $\mu\text{m}$  or greater (including, for example, from about 50 to 3000  $\mu\text{m}$  in diameter). Such port(s) may be formed post-coating by mechanical or laser drilling or may be formed *in situ* by rupture of the coatings; such rupture may be controlled by intentionally incorporating a relatively small weak portion into the coating. Delivery ports may also be formed *in situ* by erosion of a plug of water-soluble material or by rupture of a thinner portion of the coating over an indentation in the core. In addition, delivery ports may be formed during coating, as in the case of asymmetric membrane coatings of the type disclosed in US5612059 and US5698220. The delivery port may be formed *in situ* by rupture of the coating, for example, when a collection of beads that may be of essentially identical or of a variable agent are used. Drug is primarily released from such beads following rupture of the coating and, following rupture, such release may be gradual or relatively sudden. When the collection of beads has a variable agent, the agent may be chosen such that the beads rupture at various times following administration, resulting in the overall release of drug being sustained for a desired duration.

Coatings may be dense, microporous or asymmetric, having a denser region supported by a thick porous region such as those disclosed in US5612059 and US5698220. When the coating is dense the coating can be composed of a water-permeable material. When the coating is porous, it may be composed of either a water-permeable or a water-impermeable material. When the coating is composed of a porous water-impermeable material, water permeates through the pores of the coating as either a liquid or a vapor. Nonlimiting examples of osmotic devices that utilize dense coatings include US3995631 and US3845770. Such dense coatings are permeable to the external fluid such as water and may be composed of any of the materials mentioned in these patents as well as other water-permeable polymers known in the art.

The membranes may also be porous as disclosed, for example, in US5654005 and US5458887 or even be formed from water-resistant polymers. US5120548 describes another suitable process for forming coatings from a mixture of a water-insoluble polymer and a leachable water-soluble additive. The porous membranes may also be formed by the addition of pore-formers as disclosed in US4612008. In addition, vapor-permeable coatings may even be formed from extremely hydrophobic materials such as polyethylene or polyvinylidene difluoride that, when dense, are essentially water-impermeable, as long as such coatings are porous. Materials useful in forming the coating include but are not limited to various grades of acrylic, vinyls, ethers, polyamides, polyesters and cellulosic derivatives that are water-permeable and water-insoluble at physiologically relevant pHs, or are susceptible to being rendered water-insoluble by chemical alteration such as by crosslinking. Nonlimiting examples of suitable polymers (or crosslinked versions) useful in forming the coating include plasticized, unplasticized and reinforced cellulose acetate (CA), cellulose diacetate, cellulose triacetate, CA propionate, cellulose nitrate, cellulose acetate butyrate (CAB), CA ethyl carbamate, CAP, CA methyl carbamate, CA succinate, cellulose acetate trimellitate (CAT), CA dimethylaminoacetate, CA ethyl carbonate, CA chloroacetate, CA ethyl oxalate, CA methyl sulfonate, CA butyl sulfonate, CA p-toluene sulfonate, agar acetate, amylose triacetate, beta glucan acetate, beta glucan triacetate, acetaldehyde dimethyl acetate, triacetate of locust bean gum, hydroxylated ethylene-vinylacetate, EC, PEG, PPG, PEG/PPG copolymers, PVP, HEC, HPC, CMC, CMEC, HPMC, HPMCP, HPMCAS, HPMCAT, poly (acrylic) acids and esters and poly- (methacrylic) acids and esters

and copolymers thereof, starch, dextran, dextrin, chitosan, collagen, gelatin, polyalkenes, polyethers, polysulfones, polyethersulfones, polystyrenes, polyvinyl halides, polyvinyl esters and ethers, natural waxes and synthetic waxes. In various embodiments, the coating agent comprises a cellulosic polymer, in particular cellulose ethers, cellulose esters and cellulose ester-ethers, i.e., cellulosic derivatives having a mixture of ester and ether substituents, the coating materials are made or derived from poly (acrylic) acids and esters, poly (methacrylic) acids and esters, and copolymers thereof, the coating agent comprises cellulose acetate, the coating comprises a cellulosic polymer and PEG, the coating comprises cellulose acetate and PEG.

Coating is conducted in conventional fashion, typically by dissolving or suspending the coating material in a solvent and then coating by dipping, spray coating or by pan-coating. In certain embodiments, the coating solution contains 5 to 15 wt% polymer. Typical solvents useful with the cellulosic polymers mentioned above include but are not limited to acetone, methyl acetate, ethyl acetate, isopropyl acetate, n-butyl acetate, methyl isobutyl ketone, methyl propyl ketone, ethylene glycol monoethyl ether, ethylene glycol monoethyl acetate, methylene dichloride, ethylene dichloride, propylene dichloride, nitroethane, nitropropane, tetrachloroethane, 1,4-dioxane, tetrahydrofuran, diglyme, water, and mixtures thereof. Pore-formers and non-solvents (such as water, glycerol and ethanol) or plasticizers (such as diethyl phthalate) may also be added in any amount as long as the polymer remains soluble at the spray temperature. Pore-formers and their use in fabricating coatings are described, for example, in US5612059. Coatings may also be hydrophobic microporous layers wherein the pores are substantially filled with a gas and are not wetted by the aqueous medium but are permeable to water vapor, as disclosed, for example, in US5798119. Such hydrophobic but water-vapor permeable coatings are typically composed of hydrophobic polymers such as polyalkenes, polyacrylic acid derivatives, polyethers, polysulfones, polyethersulfones, polystyrenes, polyvinyl halides, polyvinyl esters and ethers, natural waxes and synthetic waxes. Hydrophobic microporous coating materials include but are not limited to polystyrene, polysulfones, polyethersulfones, polyethylene, polypropylene, polyvinyl chloride, polyvinylidene fluoride and polytetrafluoroethylene. Such hydrophobic coatings can be made by known phase inversion methods using any of vapor-quench, liquid quench, thermal processes, leaching soluble material from the coating or by sintering coating



particles. In thermal processes, a solution of polymer in a latent solvent is brought to liquid-liquid phase separation in a cooling step. When evaporation of the solvent is not prevented, the resulting membrane will typically be porous. Such coating processes may be conducted by the processes disclosed, for example, in US4247498, US4490431 and US4744906. Osmotic controlled-release devices may be prepared using procedures known in the pharmaceutical arts. See for example, Remington: The Science and Practice of Pharmacy, 20th Edition, 2000.

As further noted above, the agents described herein may be provided in the form of microparticulates, generally ranging in size from about 10 $\mu$ m to about 2mm (including, for example, from about 100 $\mu$ m to 1mm in diameter). Such multiparticulates may be packaged, for example, in a capsule such as a gelatin capsule or a capsule formed from an aqueous-soluble polymer such as HPMCAS, HPMC or starch; dosed as a suspension or slurry in a liquid; or they may be formed into a tablet, caplet, or pill by compression or other processes known in the art. Such multiparticulates may be made by any known process, such as wet- and dry-granulation processes, extrusion/spheronization, roller-compaction, melt-congealing, or by spray-coating seed cores. For example, in wet-and dry- granulation processes, the agent described herein and optional excipients may be granulated to form multiparticulates of the desired size. Other excipients, such as a binder (e. g., microcrystalline cellulose), may be blended with the agent to aid in processing and forming the multiparticulates. In the case of wet granulation, a binder such as microcrystalline cellulose may be included in the granulation fluid to aid in forming a suitable multiparticulate. See, for example, Remington : The Science and Practice of Pharmacy, 20<sup>th</sup> Edition, 2000. In any case, the resulting particles may themselves constitute the therapeutic composition or they may be coated by various film-forming materials such as enteric polymers or water-swellaable or water-soluble polymers, or they may be combined with other excipients or vehicles to aid in dosing to patients.

Suitable pharmaceutical compositions in accordance with the invention will generally include an amount of the active compound(s) with an acceptable pharmaceutical diluent or excipient, such as a sterile aqueous solution, to give a range of final concentrations, depending on the intended use. The techniques of preparation are generally well known in the art, as exemplified by Remington's Pharmaceutical Sciences (18th Edition, Mack Publishing Company, 1995).

### Kits

The agents described herein and combination therapy agents can be packaged as a kit that includes single or multiple doses of two or more agents, each packaged or formulated individually, or single or multiple doses of two or more agents packaged or formulated in combination. Thus, one or more agents can be present in first container, and the kit can optionally include one or more agents in a second container. The container or containers are placed within a package, and the package can optionally include administration or dosage instructions. A kit can include additional components such as syringes or other means for administering the agents as well as diluents or other means for formulation.

Thus, the kits can comprise: a) a pharmaceutical composition comprising a compound described herein and a pharmaceutically acceptable carrier, vehicle or diluent; and b) a container or packaging. The kits may optionally comprise instructions describing a method of using the pharmaceutical compositions in one or more of the methods described herein (e.g. gastrointestinal motility disorders, chronic intestinal pseudo-obstruction, colonic pseudo-obstruction, Crohn's disease, duodenogastric reflux, dyspepsia, functional dyspepsia, nonulcer dyspepsia, a functional gastrointestinal disorder, functional heartburn, gastroesophageal reflux disease (GERD), gastroparesis, irritable bowel syndrome, post-operative ileus, ulcerative colitis, chronic constipation, and disorders and conditions associated with constipation (e.g. constipation associated with use of opiate pain killers, post-surgical constipation, and constipation associated with neuropathic disorders as well as other conditions and disorders described herein). The kit may optionally comprise a second pharmaceutical composition comprising one or more additional agents including but not limited to those including analgesic peptides and compounds, a phosphodiesterase inhibitor, an agent used to treat gastrointestinal and other disorders (including those described herein), an agent used to treat constipation, an antidiarrheal agent, an insulin or related compound (including those described herein), an anti-hypertensive agent, an agent useful in the treatment of respiratory and other disorders, an anti-obesity agent, an anti-diabetic agents, an agent that activates soluble guanylate cyclase and a pharmaceutically acceptable carrier, vehicle or diluent. The pharmaceutical composition comprising the

compound described herein and the second pharmaceutical composition contained in the kit may be optionally combined in the same pharmaceutical composition.

A kit includes a container or packaging for containing the pharmaceutical compositions and may also include divided containers such as a divided bottle or a divided foil packet. The container can be, for example a paper or cardboard box, a glass or plastic bottle or jar, a re-sealable bag (for example, to hold a "refill" of tablets for placement into a different container), or a blister pack with individual doses for pressing out of the pack according to a therapeutic schedule. It is feasible that more than one container can be used together in a single package to market a single dosage form. For example, tablets may be contained in a bottle which is in turn contained within a box.

An example of a kit is a so-called blister pack. Blister packs are well known in the packaging industry and are being widely used for the packaging of pharmaceutical unit dosage forms (tablets, capsules, and the like). Blister packs generally consist of a sheet of relatively stiff material covered with a foil of a preferably transparent plastic material. During the packaging process, recesses are formed in the plastic foil. The recesses have the size and shape of individual tablets or capsules to be packed or may have the size and shape to accommodate multiple tablets and/or capsules to be packed. Next, the tablets or capsules are placed in the recesses accordingly and the sheet of relatively stiff material is sealed against the plastic foil at the face of the foil which is opposite from the direction in which the recesses were formed. As a result, the tablets or capsules are individually sealed or collectively sealed, as desired, in the recesses between the plastic foil and the sheet. Preferably the strength of the sheet is such that the tablets or capsules can be removed from the blister pack by manually applying pressure on the recesses whereby an opening is formed in the sheet at the place of the recess. The tablet or capsule can then be removed via said opening.

It maybe desirable to provide a written memory aid containing information and/or instructions for the physician, pharmacist or subject regarding when the medication is to be taken. A "daily dose" can be a single tablet or capsule or several tablets or capsules to be taken on a given day.

When the kit contains separate compositions, a daily dose of one or more compositions of the kit can consist of one tablet or capsule while a daily dose of another one or more compositions of the kit can consist of several tablets or capsules. A kit can take the form of a dispenser designed to dispense the daily doses one at a time in the order of their intended use. The dispenser can be equipped with a memory-aid, so as to further facilitate compliance with the regimen. An example of such a memory-aid is a mechanical counter which indicates the number of daily doses that have been dispensed. Another example of such a memory-aid is a battery-powered micro-chip memory coupled with a liquid crystal readout, or audible reminder signal which, for example, reads out the date that the last daily dose has been taken and/or reminds one when the next dose is to be taken.

Methods to increase chemical and/or physical stability of the agents the described herein are found in U.S. 6,541,606, U.S. 6,068,850, U.S. 6,124,261, U.S. 5,904,935, and WO 00/15224, U.S. 20030069182 (via the additon of nicotinamide), U.S. 20030175230A1, U.S. 20030175230A1, U.S. 20030175239A1, U.S. 20020045582, U.S. 20010031726, WO 02/26248, WO 03/014304, WO 98/00152A1, WO 98/00157A1, WO 90/12029, WO 00/04880, and WO 91/04743, WO 97/04796 and the references cited therein.

Methods to increase bioavailability of the agents described herein are found in U.S. 6,008,187, U.S. 5,424,289, U.S. 20030198619, WO 90/01329, WO 01/49268, WO 00/32172, and WO 02/064166. Glycyrrhizinate can also be used as an absorption enhancer (see, e.g., EP397447). WO 03/004062 discusses *Ulex europaeus* I (UEAI) and UEAI mimetics which may be used to target the agents of the invention to the GI tract. The bioavailability of the agents described herein can also be increased by addition of oral bioavailability-enhancing agents such as those described in U.S. 6,818,615 including but not limited to: cyclosporins (including cyclosporins A through Z as defined in Table 1 of U.S. 6,818,615), for example, cyclosporin A (cyclosporin), cyclosporin F, cyclosporin D, dihydro cyclosporin A, dihydro cyclosporin C, acetyl cyclosporin A, PSC-833, (Me-Ile-4)-cyclosporin (SDZ-NIM 811) (both from Sandoz Pharmaceutical Corp.), and related oligopeptides produced by species in the genus *Topycladium*); antifungals including but not limited to ketoconazole; cardiovascular drug including but not limited to MS-209

(BASF), amiodarone, nifedipine, reserpine, quinidine, nicardipine, ethacrynic acid, propafenone, reserpine, amiloride; anti-migraine natural products including but not limited to ergot alkaloids; antibiotics including but not limited to cefoperazone, tetracycline, chloroquine, fosfomycin; antiparasitics including but not limited to ivermectin; multi-drug resistance reversers including but not limited to VX-710 and VX-853 (Vertex Pharmaceutical Incorporated); tyrosine kinase inhibitors including but not limited to genistein and related isoflavonoids, quercetin; protein kinase C inhibitors including but not limited to calphostin; apoptosis inducers including but not limited to ceramides; and agents active against endorphin receptors including but not limited to morphine, morphine congeners, other opioids and opioid antagonists including (but not limited to) naloxone, naltrexone and nalmefene).

The agents described herein can be fused to a modified version of the blood serum protein transferrin. U.S. 20030221201, U.S. 20040023334, U.S. 20030226155, WO 04/020454, and WO 04/019872 discuss the manufacture and use of transferrin fusion proteins. Transferrin fusion proteins may improve circulatory half life and efficacy, decrease undesirable side effects and allow reduced dosage.

The peptides and agonists of the invention can be recombinantly expressed in bacteria. Bacteria expressing the peptide or agonists can be administered orally, rectally, mucosally or in via some other mode of administration including but not limited to those described herein. Bacterial hosts suitable for such administration include but are not limited to certain *Lactobacteria* (e.g. *Lactococcus lactis*, *Lactobacillus plantarum*, *Lact. rhamnosus* and *Lact. paracasei ssp. Paracasei* and other species found in normal human flora (Ahrne et al. Journal of Applied Microbiology 1998 85:88)), certain *Streptococcus sp.* (e.g. *S. gordonii*), and certain *B. subtilis* strains (including pSM539 described in Porzio et al. BMC Biotechnology 2004 4:27).

#### Dosage

The dose range for adult humans is generally from 0.005 mg to 10 g/day orally. Tablets or other forms of presentation provided in discrete units may conveniently contain an amount of

compound of the invention which is effective at such dosage or as a multiple of the same, for instance, units containing 5 mg to 500 mg, usually around 10 mg to 200 mg. The precise amount of compound administered to a patient will be the responsibility of the attendant physician. However, the dose employed will depend on a number of factors, including the age and sex of the patient, the precise disorder being treated, and its severity.

A dosage unit (e.g. an oral dosage unit) can include from, for example, 1 to 30  $\mu\text{g}$ , 1 to 40  $\mu\text{g}$ , 1 to 50  $\mu\text{g}$ , 1 to 100  $\mu\text{g}$ , 1 to 200  $\mu\text{g}$ , 1 to 300  $\mu\text{g}$ , 1 to 400  $\mu\text{g}$ , 1 to 500  $\mu\text{g}$ , 1 to 600  $\mu\text{g}$ , 1 to 700  $\mu\text{g}$ , 1 to 800  $\mu\text{g}$ , 1 to 900  $\mu\text{g}$ , 1 to 1000  $\mu\text{g}$ , 10 to 30  $\mu\text{g}$ , 10 to 40  $\mu\text{g}$ , 10 to 50  $\mu\text{g}$ , 10 to 100  $\mu\text{g}$ , 10 to 200  $\mu\text{g}$ , 10 to 300  $\mu\text{g}$ , 10 to 400  $\mu\text{g}$ , 10 to 500  $\mu\text{g}$ , 10 to 600  $\mu\text{g}$ , 10 to 700  $\mu\text{g}$ , 10 to 800  $\mu\text{g}$ , 10 to 900  $\mu\text{g}$ , 10 to 1000  $\mu\text{g}$ , 100 to 200  $\mu\text{g}$ , 100 to 300  $\mu\text{g}$ , 100 to 400  $\mu\text{g}$ , 100 to 500  $\mu\text{g}$ , 100 to 600  $\mu\text{g}$ , 100 to 700  $\mu\text{g}$ , 100 to 800  $\mu\text{g}$ , 100 to 900  $\mu\text{g}$ , 100 to 1000  $\mu\text{g}$ , 100 to 1250  $\mu\text{g}$ , 100 to 1500  $\mu\text{g}$ , 100 to 1750  $\mu\text{g}$ , 100 to 2000  $\mu\text{g}$ , 100 to 2250  $\mu\text{g}$ , 100 to 2500  $\mu\text{g}$ , 100 to 2750  $\mu\text{g}$ , 100 to 3000  $\mu\text{g}$ , 200 to 300  $\mu\text{g}$ , 200 to 400  $\mu\text{g}$ , 200 to 500  $\mu\text{g}$ , 200 to 600  $\mu\text{g}$ , 200 to 700  $\mu\text{g}$ , 200 to 800  $\mu\text{g}$ , 200 to 900  $\mu\text{g}$ , 200 to 1000  $\mu\text{g}$ , 200 to 1250  $\mu\text{g}$ , 200 to 1500  $\mu\text{g}$ , 200 to 1750  $\mu\text{g}$ , 200 to 2000  $\mu\text{g}$ , 200 to 2250  $\mu\text{g}$ , 200 to 2500  $\mu\text{g}$ , 200 to 2750  $\mu\text{g}$ , 200 to 3000  $\mu\text{g}$ , 300 to 400  $\mu\text{g}$ , 300 to 500  $\mu\text{g}$ , 300 to 600  $\mu\text{g}$ , 300 to 700  $\mu\text{g}$ , 300 to 800  $\mu\text{g}$ , 300 to 900  $\mu\text{g}$ , 300 to 1000  $\mu\text{g}$ , 300 to 1250  $\mu\text{g}$ , 300 to 1500  $\mu\text{g}$ , 300 to 1750  $\mu\text{g}$ , 300 to 2000  $\mu\text{g}$ , 300 to 2250  $\mu\text{g}$ , 300 to 2500  $\mu\text{g}$ , 300 to 2750  $\mu\text{g}$ , 300 to 3000  $\mu\text{g}$ , 400 to 500  $\mu\text{g}$ , 400 to 600  $\mu\text{g}$ , 400 to 700  $\mu\text{g}$ , 400 to 800  $\mu\text{g}$ , 400 to 900  $\mu\text{g}$ , 400 to 1000  $\mu\text{g}$ , 400 to 1250  $\mu\text{g}$ , 400 to 1500  $\mu\text{g}$ , 400 to 1750  $\mu\text{g}$ , 400 to 2000  $\mu\text{g}$ , 400 to 2250  $\mu\text{g}$ , 400 to 2500  $\mu\text{g}$ , 400 to 2750  $\mu\text{g}$ , 400 to 3000  $\mu\text{g}$ , 500 to 600  $\mu\text{g}$ , 500 to 700  $\mu\text{g}$ , 500 to 800  $\mu\text{g}$ , 500 to 900  $\mu\text{g}$ , 500 to 1000  $\mu\text{g}$ , 500 to 1250  $\mu\text{g}$ , 500 to 1500  $\mu\text{g}$ , 500 to 1750  $\mu\text{g}$ , 500 to 2000  $\mu\text{g}$ , 500 to 2250  $\mu\text{g}$ , 500 to 2500  $\mu\text{g}$ , 500 to 2750  $\mu\text{g}$ , 500 to 3000  $\mu\text{g}$ , 600 to 700  $\mu\text{g}$ , 600 to 800  $\mu\text{g}$ , 600 to 900  $\mu\text{g}$ , 600 to 1000  $\mu\text{g}$ , 600 to 1250  $\mu\text{g}$ , 600 to 1500  $\mu\text{g}$ , 600 to 1750  $\mu\text{g}$ , 600 to 2000  $\mu\text{g}$ , 600 to 2250  $\mu\text{g}$ , 600 to 2500  $\mu\text{g}$ , 600 to 2750  $\mu\text{g}$ , 600 to 3000  $\mu\text{g}$ , 700 to 800  $\mu\text{g}$ , 700 to 900  $\mu\text{g}$ , 700 to 1000  $\mu\text{g}$ , 700 to 1250  $\mu\text{g}$ , 700 to 1500  $\mu\text{g}$ , 700 to 1750  $\mu\text{g}$ , 700 to 2000  $\mu\text{g}$ , 700 to 2250  $\mu\text{g}$ , 700 to 2500  $\mu\text{g}$ , 700 to 2750  $\mu\text{g}$ , 700 to 3000  $\mu\text{g}$ , 800 to 900  $\mu\text{g}$ , 800 to 1000  $\mu\text{g}$ , 800 to 1250  $\mu\text{g}$ , 800 to 1500  $\mu\text{g}$ , 800 to 1750  $\mu\text{g}$ , 800 to 2000  $\mu\text{g}$ , 800 to 2250  $\mu\text{g}$ , 800 to 2500  $\mu\text{g}$ , 800 to 2750  $\mu\text{g}$ , 800 to 3000  $\mu\text{g}$ , 900 to 1000  $\mu\text{g}$ , 900 to 1250  $\mu\text{g}$ , 900 to 1500  $\mu\text{g}$ , 900 to 1750  $\mu\text{g}$ , 900 to 2000  $\mu\text{g}$ , 900 to 2250  $\mu\text{g}$ , 900 to 2500  $\mu\text{g}$ , 900 to 2750  $\mu\text{g}$ , 900 to 3000  $\mu\text{g}$ , 1000 to 1250

$\mu\text{g}$ , 1000 to 1500  $\mu\text{g}$ , 1000 to 1750  $\mu\text{g}$ , 1000 to 2000  $\mu\text{g}$ , 1000 to 2250  $\mu\text{g}$ , 1000 to 2500  $\mu\text{g}$ , 1000 to 2750  $\mu\text{g}$ , 1000 to 3000  $\mu\text{g}$ , 2 to 500  $\mu\text{g}$ , 50 to 500  $\mu\text{g}$ , 3 to 100  $\mu\text{g}$ , 5 to 20  $\mu\text{g}$ , 5 to 100  $\mu\text{g}$ , 50  $\mu\text{g}$ , 100  $\mu\text{g}$ , 150  $\mu\text{g}$ , 200  $\mu\text{g}$ , 250  $\mu\text{g}$ , 300  $\mu\text{g}$ , 350  $\mu\text{g}$ , 400  $\mu\text{g}$ , 450  $\mu\text{g}$ , 500  $\mu\text{g}$ , 550  $\mu\text{g}$ , 600  $\mu\text{g}$ , 650  $\mu\text{g}$ , 700  $\mu\text{g}$ , 750  $\mu\text{g}$ , 800  $\mu\text{g}$ , 850  $\mu\text{g}$ , 900  $\mu\text{g}$ , 950  $\mu\text{g}$ , 1000  $\mu\text{g}$ , 1050  $\mu\text{g}$ , 1100  $\mu\text{g}$ , 1150  $\mu\text{g}$ , 1200  $\mu\text{g}$ , 1250  $\mu\text{g}$ , 1300  $\mu\text{g}$ , 1350  $\mu\text{g}$ , 1400  $\mu\text{g}$ , 1450  $\mu\text{g}$ , 1500  $\mu\text{g}$ , 1550  $\mu\text{g}$ , 1600  $\mu\text{g}$ , 1650  $\mu\text{g}$ , 1700  $\mu\text{g}$ , 1750  $\mu\text{g}$ , 1800  $\mu\text{g}$ , 1850  $\mu\text{g}$ , 1900  $\mu\text{g}$ , 1950  $\mu\text{g}$ , 2000  $\mu\text{g}$ , 2050  $\mu\text{g}$ , 2100  $\mu\text{g}$ , 2150  $\mu\text{g}$ , 2200  $\mu\text{g}$ , 2250  $\mu\text{g}$ , 2300  $\mu\text{g}$ , 2350  $\mu\text{g}$ , 2400  $\mu\text{g}$ , 2450  $\mu\text{g}$ , 2500  $\mu\text{g}$ , 2550  $\mu\text{g}$ , 2600  $\mu\text{g}$ , 2650  $\mu\text{g}$ , 2700  $\mu\text{g}$ , 2750  $\mu\text{g}$ , 2800  $\mu\text{g}$ , 2850  $\mu\text{g}$ , 2900  $\mu\text{g}$ , 2950  $\mu\text{g}$ , 3000  $\mu\text{g}$ , 3250  $\mu\text{g}$ , 3500  $\mu\text{g}$ , 3750  $\mu\text{g}$ , 4000  $\mu\text{g}$ , 4250  $\mu\text{g}$ , 4500  $\mu\text{g}$ , 4750  $\mu\text{g}$ , 5000  $\mu\text{g}$  of a peptide or GC-C agonist described herein. In certain embodiments the dosage unit and daily dose are equivalent. In various embodiments, the dosage unit is administered with food at anytime of the day, without food at anytime of the day, with food after an overnight fast (e.g. with breakfast), at bedtime after a low fat snack. In various embodiments, the dosage unit is administered once a day, twice a day, three times a day, four times a day, five times a day, six times a day. The dosage unit can optionally comprise other agents.

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30  $\mu\text{g}$ , 1 to 40  $\mu\text{g}$ , 1 to 50  $\mu\text{g}$ , 1 to 100  $\mu\text{g}$ , 1 to 200  $\mu\text{g}$ , 1 to 300  $\mu\text{g}$ , 1 to 400  $\mu\text{g}$ , 1 to 500  $\mu\text{g}$ , 1 to 600  $\mu\text{g}$ , 1 to 700  $\mu\text{g}$ , 1 to 800  $\mu\text{g}$ , 1 to 900  $\mu\text{g}$ , 1 to 1000  $\mu\text{g}$ , 10 to 30  $\mu\text{g}$ , 10 to 40  $\mu\text{g}$ , 10 to 50  $\mu\text{g}$ , 10 to 100  $\mu\text{g}$ , 10 to 200  $\mu\text{g}$ , 10 to 300  $\mu\text{g}$ , 10 to 400  $\mu\text{g}$ , 10 to 500  $\mu\text{g}$ , 10 to 600  $\mu\text{g}$ , 10 to 700  $\mu\text{g}$ , 10 to 800  $\mu\text{g}$ , 10 to 900  $\mu\text{g}$ , 10 to 1000  $\mu\text{g}$ , 100 to 200  $\mu\text{g}$ , 100 to 300  $\mu\text{g}$ , 100 to 400  $\mu\text{g}$ , 100 to 500  $\mu\text{g}$ , 100 to 600  $\mu\text{g}$ , 100 to 700  $\mu\text{g}$ , 100 to 800  $\mu\text{g}$ , 100 to 900  $\mu\text{g}$ , 100 to 1000  $\mu\text{g}$ , 100 to 1250  $\mu\text{g}$ , 100 to 1500  $\mu\text{g}$ , 100 to 1750  $\mu\text{g}$ , 100 to 2000  $\mu\text{g}$ , 100 to 2250  $\mu\text{g}$ , 100 to 2500  $\mu\text{g}$ , 100 to 2750  $\mu\text{g}$ , 100 to 3000  $\mu\text{g}$ , 200 to 300  $\mu\text{g}$ , 200 to 400  $\mu\text{g}$ , 200 to 500  $\mu\text{g}$ , 200 to 600  $\mu\text{g}$ , 200 to 700  $\mu\text{g}$ , 200 to 800  $\mu\text{g}$ , 200 to 900  $\mu\text{g}$ , 200 to 1000  $\mu\text{g}$ , 200 to 1250  $\mu\text{g}$ , 200 to 1500  $\mu\text{g}$ , 200 to 1750  $\mu\text{g}$ , 200 to 2000  $\mu\text{g}$ , 200 to 2250  $\mu\text{g}$ , 200 to 2500  $\mu\text{g}$ , 200 to 2750  $\mu\text{g}$ , 200 to 3000  $\mu\text{g}$ , 300 to 400  $\mu\text{g}$ , 300 to 500  $\mu\text{g}$ , 300 to 600  $\mu\text{g}$ , 300 to 700  $\mu\text{g}$ , 300 to 800  $\mu\text{g}$ , 300 to 900  $\mu\text{g}$ , 300 to 1000  $\mu\text{g}$ , 300 to 1250  $\mu\text{g}$ , 300 to 1500  $\mu\text{g}$ , 300 to 1750  $\mu\text{g}$ , 300 to 2000  $\mu\text{g}$ , 300 to 2250  $\mu\text{g}$ , 300 to 2500  $\mu\text{g}$ , 300 to 2750  $\mu\text{g}$ , 300 to 3000  $\mu\text{g}$ , 400 to 500  $\mu\text{g}$ , 400 to 600  $\mu\text{g}$ , 400 to 700  $\mu\text{g}$ , 400 to 800  $\mu\text{g}$ , 400 to 900  $\mu\text{g}$ , 400 to 1000  $\mu\text{g}$ , 400 to 1250  $\mu\text{g}$ , 400 to 1500  $\mu\text{g}$ , 400 to 1750  $\mu\text{g}$ , 400 to 2000  $\mu\text{g}$ , 400 to 2250

$\mu\text{g}$ , 400 to 2500  $\mu\text{g}$ , 400 to 2750  $\mu\text{g}$ , 400 to 3000  $\mu\text{g}$ , 500 to 600  $\mu\text{g}$ , 500 to 700  $\mu\text{g}$ , 500 to 800  $\mu\text{g}$ , 500 to 900  $\mu\text{g}$ , 500 to 1000  $\mu\text{g}$ , 500 to 1250  $\mu\text{g}$ , 500 to 1500  $\mu\text{g}$ , 500 to 1750  $\mu\text{g}$ , 500 to 2000  $\mu\text{g}$ , 500 to 2250  $\mu\text{g}$ , 500 to 2500  $\mu\text{g}$ , 500 to 2750  $\mu\text{g}$ , 500 to 3000  $\mu\text{g}$ , 600 to 700  $\mu\text{g}$ , 600 to 800  $\mu\text{g}$ , 600 to 900  $\mu\text{g}$ , 600 to 1000  $\mu\text{g}$ , 600 to 1250  $\mu\text{g}$ , 600 to 1500  $\mu\text{g}$ , 600 to 1750  $\mu\text{g}$ , 600 to 2000  $\mu\text{g}$ , 600 to 2250  $\mu\text{g}$ , 600 to 2500  $\mu\text{g}$ , 600 to 2750  $\mu\text{g}$ , 600 to 3000  $\mu\text{g}$ , 700 to 800  $\mu\text{g}$ , 700 to 900  $\mu\text{g}$ , 700 to 1000  $\mu\text{g}$ , 700 to 1250  $\mu\text{g}$ , 700 to 1500  $\mu\text{g}$ , 700 to 1750  $\mu\text{g}$ , 700 to 2000  $\mu\text{g}$ , 700 to 2250  $\mu\text{g}$ , 700 to 2500  $\mu\text{g}$ , 700 to 2750  $\mu\text{g}$ , 700 to 3000  $\mu\text{g}$ , 800 to 900  $\mu\text{g}$ , 800 to 1000  $\mu\text{g}$ , 800 to 1250  $\mu\text{g}$ , 800 to 1500  $\mu\text{g}$ , 800 to 1750  $\mu\text{g}$ , 800 to 2000  $\mu\text{g}$ , 800 to 2250  $\mu\text{g}$ , 800 to 2500  $\mu\text{g}$ , 800 to 2750  $\mu\text{g}$ , 800 to 3000  $\mu\text{g}$ , 900 to 1000  $\mu\text{g}$ , 900 to 1250  $\mu\text{g}$ , 900 to 1500  $\mu\text{g}$ , 900 to 1750  $\mu\text{g}$ , 900 to 2000  $\mu\text{g}$ , 900 to 2250  $\mu\text{g}$ , 900 to 2500  $\mu\text{g}$ , 900 to 2750  $\mu\text{g}$ , 900 to 3000  $\mu\text{g}$ , 1000 to 1250  $\mu\text{g}$ , 1000 to 1500  $\mu\text{g}$ , 1000 to 1750  $\mu\text{g}$ , 1000 to 2000  $\mu\text{g}$ , 1000 to 2250  $\mu\text{g}$ , 1000 to 2500  $\mu\text{g}$ , 1000 to 2750  $\mu\text{g}$ , 1000 to 3000  $\mu\text{g}$ , 2 to 500  $\mu\text{g}$ , 50 to 500  $\mu\text{g}$ , 3 to 100  $\mu\text{g}$ , 5 to 20  $\mu\text{g}$ , 5 to 100  $\mu\text{g}$ , 50  $\mu\text{g}$ , 100  $\mu\text{g}$ , 150  $\mu\text{g}$ , 200  $\mu\text{g}$ , 250  $\mu\text{g}$ , 300  $\mu\text{g}$ , 350  $\mu\text{g}$ , 400  $\mu\text{g}$ , 450  $\mu\text{g}$ , 500  $\mu\text{g}$ , 550  $\mu\text{g}$ , 600  $\mu\text{g}$ , 650  $\mu\text{g}$ , 700  $\mu\text{g}$ , 750  $\mu\text{g}$ , 800  $\mu\text{g}$ , 850  $\mu\text{g}$ , 900  $\mu\text{g}$ , 950  $\mu\text{g}$ , 1000  $\mu\text{g}$ , 1050  $\mu\text{g}$ , 1100  $\mu\text{g}$ , 1150  $\mu\text{g}$ , 1200  $\mu\text{g}$ , 1250  $\mu\text{g}$ , 1300  $\mu\text{g}$ , 1350  $\mu\text{g}$ , 1400  $\mu\text{g}$ , 1450  $\mu\text{g}$ , 1500  $\mu\text{g}$ , 1550  $\mu\text{g}$ , 1600  $\mu\text{g}$ , 1650  $\mu\text{g}$ , 1700  $\mu\text{g}$ , 1750  $\mu\text{g}$ , 1800  $\mu\text{g}$ , 1850  $\mu\text{g}$ , 1900  $\mu\text{g}$ , 1950  $\mu\text{g}$ , 2000  $\mu\text{g}$ , 2050  $\mu\text{g}$ , 2100  $\mu\text{g}$ , 2150  $\mu\text{g}$ , 2200  $\mu\text{g}$ , 2250  $\mu\text{g}$ , 2300  $\mu\text{g}$ , 2350  $\mu\text{g}$ , 2400  $\mu\text{g}$ , 2450  $\mu\text{g}$ , 2500  $\mu\text{g}$ , 2550  $\mu\text{g}$ , 2600  $\mu\text{g}$ , 2650  $\mu\text{g}$ , 2700  $\mu\text{g}$ , 2750  $\mu\text{g}$ , 2800  $\mu\text{g}$ , 2850  $\mu\text{g}$ , 2900  $\mu\text{g}$ , 2950  $\mu\text{g}$ , 3000  $\mu\text{g}$ , 3250  $\mu\text{g}$ , 3500  $\mu\text{g}$ , 3750  $\mu\text{g}$ , 4000  $\mu\text{g}$ , 4250  $\mu\text{g}$ , 4500  $\mu\text{g}$ , 4750  $\mu\text{g}$ , 5000  $\mu\text{g}$  of a peptide or agonist described herein and from 50 mg to 650 mg (e.g. 50 mg, 100 mg, 150 mg, 200 mg, 250 mg, 300 mg, 350 mg, 400 mg, 450 mg, 500 mg, 550 mg, 600 mg) of Modulon® (trimebutine maleate).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30  $\mu\text{g}$ , 1 to 40  $\mu\text{g}$ , 1 to 50  $\mu\text{g}$ , 1 to 100  $\mu\text{g}$ , 1 to 200  $\mu\text{g}$ , 1 to 300  $\mu\text{g}$ , 1 to 400  $\mu\text{g}$ , 1 to 500  $\mu\text{g}$ , 1 to 600  $\mu\text{g}$ , 1 to 700  $\mu\text{g}$ , 1 to 800  $\mu\text{g}$ , 1 to 900  $\mu\text{g}$ , 1 to 1000  $\mu\text{g}$ , 10 to 30  $\mu\text{g}$ , 10 to 40  $\mu\text{g}$ , 10 to 50  $\mu\text{g}$ , 10 to 100  $\mu\text{g}$ , 10 to 200  $\mu\text{g}$ , 10 to 300  $\mu\text{g}$ , 10 to 400  $\mu\text{g}$ , 10 to 500  $\mu\text{g}$ , 10 to 600  $\mu\text{g}$ , 10 to 700  $\mu\text{g}$ , 10 to 800  $\mu\text{g}$ , 10 to 900  $\mu\text{g}$ , 10 to 1000  $\mu\text{g}$ , 100 to 200  $\mu\text{g}$ , 100 to 300  $\mu\text{g}$ , 100 to 400  $\mu\text{g}$ , 100 to 500  $\mu\text{g}$ , 100 to 600  $\mu\text{g}$ , 100 to 700  $\mu\text{g}$ , 100 to 800  $\mu\text{g}$ , 100 to 900  $\mu\text{g}$ , 100 to 1000  $\mu\text{g}$ , 100 to 1250  $\mu\text{g}$ , 100 to 1500  $\mu\text{g}$ , 100 to 1750  $\mu\text{g}$ , 100 to 2000  $\mu\text{g}$ , 100 to 2250  $\mu\text{g}$ , 100 to 2500  $\mu\text{g}$ , 100 to 2750  $\mu\text{g}$ , 100 to 3000  $\mu\text{g}$ , 200 to 300  $\mu\text{g}$ , 200 to 400  $\mu\text{g}$ , 200 to 500  $\mu\text{g}$ , 200 to 600  $\mu\text{g}$ , 200 to 700  $\mu\text{g}$ , 200 to 800



μg, 200 to 900 μg, 200 to 1000 μg, 200 to 1250 μg, 200 to 1500 μg, 200 to 1750 μg, 200 to 2000 μg, 200 to 2250 μg, 200 to 2500 μg, 200 to 2750 μg, 200 to 3000 μg, 300 to 400 μg, 300 to 500 μg, 300 to 600 μg, 300 to 700 μg, 300 to 800 μg, 300 to 900 μg, 300 to 1000 μg, 300 to 1250 μg, 300 to 1500 μg, 300 to 1750 μg, 300 to 2000 μg, 300 to 2250 μg, 300 to 2500 μg, 300 to 2750 μg, 300 to 3000 μg, 400 to 500 μg, 400 to 600 μg, 400 to 700 μg, 400 to 800 μg, 400 to 900 μg, 400 to 1000 μg, 400 to 1250 μg, 400 to 1500 μg, 400 to 1750 μg, 400 to 2000 μg, 400 to 2250 μg, 400 to 2500 μg, 400 to 2750 μg, 400 to 3000 μg, 500 to 600 μg, 500 to 700 μg, 500 to 800 μg, 500 to 900 μg, 500 to 1000 μg, 500 to 1250 μg, 500 to 1500 μg, 500 to 1750 μg, 500 to 2000 μg, 500 to 2250 μg, 500 to 2500 μg, 500 to 2750 μg, 500 to 3000 μg, 600 to 700 μg, 600 to 800 μg, 600 to 900 μg, 600 to 1000 μg, 600 to 1250 μg, 600 to 1500 μg, 600 to 1750 μg, 600 to 2000 μg, 600 to 2250 μg, 600 to 2500 μg, 600 to 2750 μg, 600 to 3000 μg, 700 to 800 μg, 700 to 900 μg, 700 to 1000 μg, 700 to 1250 μg, 700 to 1500 μg, 700 to 1750 μg, 700 to 2000 μg, 700 to 2250 μg, 700 to 2500 μg, 700 to 2750 μg, 700 to 3000 μg, 800 to 900 μg, 800 to 1000 μg, 800 to 1250 μg, 800 to 1500 μg, 800 to 1750 μg, 800 to 2000 μg, 800 to 2250 μg, 800 to 2500 μg, 800 to 2750 μg, 800 to 3000 μg, 900 to 1000 μg, 900 to 1250 μg, 900 to 1500 μg, 900 to 1750 μg, 900 to 2000 μg, 900 to 2250 μg, 900 to 2500 μg, 900 to 2750 μg, 900 to 3000 μg, 1000 to 1250 μg, 1000 to 1500 μg, 1000 to 1750 μg, 1000 to 2000 μg, 1000 to 2250 μg, 1000 to 2500 μg, 1000 to 2750 μg, 1000 to 3000 μg, 2 to 500 μg, 50 to 500 μg, 3 to 100 μg, 5 to 20 μg, 5 to 100 μg, 50 μg, 100 μg, 150 μg, 200 μg, 250 μg, 300 μg, 350 μg, 400 μg, 450 μg, 500 μg, 550 μg, 600 μg, 650 μg, 700 μg, 750 μg, 800 μg, 850 μg, 900 μg, 950 μg, 1000 μg, 1050 μg, 1100 μg, 1150 μg, 1200 μg, 1250 μg, 1300 μg, 1350 μg, 1400 μg, 1450 μg, 1500 μg, 1550 μg, 1600 μg, 1650 μg, 1700 μg, 1750 μg, 1800 μg, 1850 μg, 1900 μg, 1950 μg, 2000 μg, 2050 μg, 2100 μg, 2150 μg, 2200 μg, 2250 μg, 2300 μg, 2350 μg, 2400 μg, 2450 μg, 2500 μg, 2550 μg, 2600 μg, 2650 μg, 2700 μg, 2750 μg, 2800 μg, 2850 μg, 2900 μg, 2950 μg, 3000 μg, 3250 μg, 3500 μg, 3750 μg, 4000 μg, 4250 μg, 4500 μg, 4750 μg, 5000 μg of a peptide or agonist described herein and from 1 mg to 80 mg (e.g. 1 mg, 5 mg, 10 mg, 15 mg, 20 mg, 25 mg, 30 mg, 35 mg, 40 mg, 45 mg, 50 mg, 55 mg, 60 mg, 65 mg, 70 mg, 75 mg, 80 mg) of Propulsid® (cisapride).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30 μg, 1 to 40 μg, 1 to 50 μg, 1 to 100 μg, 1 to 200 μg, 1 to 300 μg, 1 to 400 μg, 1 to 500 μg, 1 to 600 μg, 1 to 700

μg, 1 to 800 μg, 1 to 900 μg, 1 to 1000 μg, 10 to 30 μg, 10 to 40 μg, 10 to 50 μg, 10 to 100 μg, 10 to 200 μg, 10 to 300 μg, 10 to 400 μg, 10 to 500 μg, 10 to 600 μg, 10 to 700 μg, 10 to 800 μg, 10 to 900 μg, 10 to 1000 μg, 100 to 200 μg, 100 to 300 μg, 100 to 400 μg, 100 to 500 μg, 100 to 600 μg, 100 to 700 μg, 100 to 800 μg, 100 to 900 μg, 100 to 1000 μg, 100 to 1250 μg, 100 to 1500 μg, 100 to 1750 μg, 100 to 2000 μg, 100 to 2250 μg, 100 to 2500 μg, 100 to 2750 μg, 100 to 3000 μg, 200 to 300 μg, 200 to 400 μg, 200 to 500 μg, 200 to 600 μg, 200 to 700 μg, 200 to 800 μg, 200 to 900 μg, 200 to 1000 μg, 200 to 1250 μg, 200 to 1500 μg, 200 to 1750 μg, 200 to 2000 μg, 200 to 2250 μg, 200 to 2500 μg, 200 to 2750 μg, 200 to 3000 μg, 300 to 400 μg, 300 to 500 μg, 300 to 600 μg, 300 to 700 μg, 300 to 800 μg, 300 to 900 μg, 300 to 1000 μg, 300 to 1250 μg, 300 to 1500 μg, 300 to 1750 μg, 300 to 2000 μg, 300 to 2250 μg, 300 to 2500 μg, 300 to 2750 μg, 300 to 3000 μg, 400 to 500 μg, 400 to 600 μg, 400 to 700 μg, 400 to 800 μg, 400 to 900 μg, 400 to 1000 μg, 400 to 1250 μg, 400 to 1500 μg, 400 to 1750 μg, 400 to 2000 μg, 400 to 2250 μg, 400 to 2500 μg, 400 to 2750 μg, 400 to 3000 μg, 500 to 600 μg, 500 to 700 μg, 500 to 800 μg, 500 to 900 μg, 500 to 1000 μg, 500 to 1250 μg, 500 to 1500 μg, 500 to 1750 μg, 500 to 2000 μg, 500 to 2250 μg, 500 to 2500 μg, 500 to 2750 μg, 500 to 3000 μg, 600 to 700 μg, 600 to 800 μg, 600 to 900 μg, 600 to 1000 μg, 600 to 1250 μg, 600 to 1500 μg, 600 to 1750 μg, 600 to 2000 μg, 600 to 2250 μg, 600 to 2500 μg, 600 to 2750 μg, 600 to 3000 μg, 700 to 800 μg, 700 to 900 μg, 700 to 1000 μg, 700 to 1250 μg, 700 to 1500 μg, 700 to 1750 μg, 700 to 2000 μg, 700 to 2250 μg, 700 to 2500 μg, 700 to 2750 μg, 700 to 3000 μg, 800 to 900 μg, 800 to 1000 μg, 800 to 1250 μg, 800 to 1500 μg, 800 to 1750 μg, 800 to 2000 μg, 800 to 2250 μg, 800 to 2500 μg, 800 to 2750 μg, 800 to 3000 μg, 900 to 1000 μg, 900 to 1250 μg, 900 to 1500 μg, 900 to 1750 μg, 900 to 2000 μg, 900 to 2250 μg, 900 to 2500 μg, 900 to 2750 μg, 900 to 3000 μg, 1000 to 1250 μg, 1000 to 1500 μg, 1000 to 1750 μg, 1000 to 2000 μg, 1000 to 2250 μg, 1000 to 2500 μg, 1000 to 2750 μg, 1000 to 3000 μg, 2 to 500 μg, 50 to 500 μg, 3 to 100 μg, 5 to 20 μg, 5 to 100 μg, 50 μg, 100 μg, 150 μg, 200 μg, 250 μg, 300 μg, 350 μg, 400 μg, 450 μg, 500 μg, 550 μg, 600 μg, 650 μg, 700 μg, 750 μg, 800 μg, 850 μg, 900 μg, 950 μg, 1000 μg, 1050 μg, 1100 μg, 1150 μg, 1200 μg, 1250 μg, 1300 μg, 1350 μg, 1400 μg, 1450 μg, 1500 μg, 1550 μg, 1600 μg, 1650 μg, 1700 μg, 1750 μg, 1800 μg, 1850 μg, 1900 μg, 1950 μg, 2000 μg, 2050 μg, 2100 μg, 2150 μg, 2200 μg, 2250 μg, 2300 μg, 2350 μg, 2400 μg, 2450 μg, 2500 μg, 2550 μg, 2600 μg, 2650 μg, 2700 μg, 2750 μg, 2800 μg, 2850 μg, 2900 μg, 2950 μg, 3000 μg, 3250 μg, 3500 μg, 3750 μg,

4000 µg, 4250 µg, 4500 µg, 4750 µg, 5000 µg of a peptide or agonist described herein and from 10 mg to 600 mg (e.g. 10 mg, 20 mg, 30 mg, 40 mg, 50 mg, 60 mg, 70 mg, 80 mg, 90 mg, 100 mg, 110 mg, 120 mg, 130 mg, 140 mg, 150 mg, 160 mg, 200 mg, 250 mg, 300 mg, 350mg, 400 mg, 450 mg, 500 mg, 550 mg, 600 mg) of Bentyl®/Bentylol® (dicyclomine ).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30 µg, 1 to 40 µg, 1 to 50 µg, 1 to 100 µg, 1 to 200 µg, 1 to 300 µg, 1 to 400 µg, 1 to 500 µg, 1 to 600 µg, 1 to 700 µg, 1 to 800 µg, 1 to 900 µg, 1 to 1000 µg, 10 to 30 µg, 10 to 40 µg, 10 to 50 µg, 10 to 100 µg, 10 to 200 µg, 10 to 300 µg, 10 to 400 µg, 10 to 500 µg, 10 to 600 µg, 10 to 700 µg, 10 to 800 µg, 10 to 900 µg, 10 to 1000 µg, 100 to 200 µg, 100 to 300 µg, 100 to 400 µg, 100 to 500 µg, 100 to 600 µg, 100 to 700 µg, 100 to 800 µg, 100 to 900 µg, 100 to 1000 µg, 100 to 1250 µg, 100 to 1500 µg, 100 to 1750 µg, 100 to 2000 µg, 100 to 2250 µg, 100 to 2500 µg, 100 to 2750 µg, 100 to 3000 µg, 200 to 300 µg, 200 to 400 µg, 200 to 500 µg, 200 to 600 µg, 200 to 700 µg, 200 to 800 µg, 200 to 900 µg, 200 to 1000 µg, 200 to 1250 µg, 200 to 1500 µg, 200 to 1750 µg, 200 to 2000 µg, 200 to 2250 µg, 200 to 2500 µg, 200 to 2750 µg, 200 to 3000 µg, 300 to 400 µg, 300 to 500 µg, 300 to 600 µg, 300 to 700 µg, 300 to 800 µg, 300 to 900 µg, 300 to 1000 µg, 300 to 1250 µg, 300 to 1500 µg, 300 to 1750 µg, 300 to 2000 µg, 300 to 2250 µg, 300 to 2500 µg, 300 to 2750 µg, 300 to 3000 µg, 400 to 500 µg, 400 to 600 µg, 400 to 700 µg, 400 to 800 µg, 400 to 900 µg, 400 to 1000 µg, 400 to 1250 µg, 400 to 1500 µg, 400 to 1750 µg, 400 to 2000 µg, 400 to 2250 µg, 400 to 2500 µg, 400 to 2750 µg, 400 to 3000 µg, 500 to 600 µg, 500 to 700 µg, 500 to 800 µg, 500 to 900 µg, 500 to 1000 µg, 500 to 1250 µg, 500 to 1500 µg, 500 to 1750 µg, 500 to 2000 µg, 500 to 2250 µg, 500 to 2500 µg, 500 to 2750 µg, 500 to 3000 µg, 600 to 700 µg, 600 to 800 µg, 600 to 900 µg, 600 to 1000 µg, 600 to 1250 µg, 600 to 1500 µg, 600 to 1750 µg, 600 to 2000 µg, 600 to 2250 µg, 600 to 2500 µg, 600 to 2750 µg, 600 to 3000 µg, 700 to 800 µg, 700 to 900 µg, 700 to 1000 µg, 700 to 1250 µg, 700 to 1500 µg, 700 to 1750 µg, 700 to 2000 µg, 700 to 2250 µg, 700 to 2500 µg, 700 to 2750 µg, 700 to 3000 µg, 800 to 900 µg, 800 to 1000 µg, 800 to 1250 µg, 800 to 1500 µg, 800 to 1750 µg, 800 to 2000 µg, 800 to 2250 µg, 800 to 2500 µg, 800 to 2750 µg, 800 to 3000 µg, 900 to 1000 µg, 900 to 1250 µg, 900 to 1500 µg, 900 to 1750 µg, 900 to 2000 µg, 900 to 2250 µg, 900 to 2500 µg, 900 to 2750 µg, 900 to 3000 µg, 1000 to 1250 µg, 1000 to 1500 µg, 1000 to 1750 µg, 1000 to 2000 µg, 1000 to 2250 µg, 1000 to 2500 µg, 1000

to 2750 µg, 1000 to 3000 µg, 2 to 500 µg, 50 to 500 µg, 3 to 100 µg, 5 to 20 µg, 5 to 100 µg, 50 µg, 100 µg, 150 µg, 200 µg, 250 µg, 300 µg, 350 µg, 400 µg, 450 µg, 500 µg, 550 µg, 600 µg, 650 µg, 700 µg, 750 µg, 800 µg, 850 µg, 900 µg, 950 µg, 1000 µg, 1050 µg, 1100 µg, 1150 µg, 1200 µg, 1250 µg, 1300 µg, 1350 µg, 1400 µg, 1450 µg, 1500 µg, 1550 µg, 1600 µg, 1650 µg, 1700 µg, 1750 µg, 1800 µg, 1850 µg, 1900 µg, 1950 µg, 2000 µg, 2050 µg, 2100 µg, 2150 µg, 2200 µg, 2250 µg, 2300 µg, 2350 µg, 2400 µg, 2450 µg, 2500 µg, 2550 µg, 2600 µg, 2650 µg, 2700 µg, 2750 µg, 2800 µg, 2850 µg, 2900 µg, 2950 µg, 3000 µg, 3250 µg, 3500 µg, 3750 µg, 4000 µg, 4250 µg, 4500 µg, 4750 µg, 5000 µg of a peptide or agonist described herein and from 1 mg to 25 mg (e.g. 1 mg, 2 mg, 3 mg, 4 mg, 5 mg, 6 mg, 7 mg, 8 mg, 9 mg, 10 mg, 11 mg, 12 mg, 13 mg, 14 mg, 15 mg, 16 mg, 17 mg, 18 mg, 19 mg, 20 mg, 21 mg, 22 mg, 23 mg, 24 mg, 25 mg) of Questran® (cholestyramine).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30 µg, 1 to 40 µg, 1 to 50 µg, 1 to 100 µg, 1 to 200 µg, 1 to 300 µg, 1 to 400 µg, 1 to 500 µg, 1 to 600 µg, 1 to 700 µg, 1 to 800 µg, 1 to 900 µg, 1 to 1000 µg, 10 to 30 µg, 10 to 40 µg, 10 to 50 µg, 10 to 100 µg, 10 to 200 µg, 10 to 300 µg, 10 to 400 µg, 10 to 500 µg, 10 to 600 µg, 10 to 700 µg, 10 to 800 µg, 10 to 900 µg, 10 to 1000 µg, 100 to 200 µg, 100 to 300 µg, 100 to 400 µg, 100 to 500 µg, 100 to 600 µg, 100 to 700 µg, 100 to 800 µg, 100 to 900 µg, 100 to 1000 µg, 100 to 1250 µg, 100 to 1500 µg, 100 to 1750 µg, 100 to 2000 µg, 100 to 2250 µg, 100 to 2500 µg, 100 to 2750 µg, 100 to 3000 µg, 200 to 300 µg, 200 to 400 µg, 200 to 500 µg, 200 to 600 µg, 200 to 700 µg, 200 to 800 µg, 200 to 900 µg, 200 to 1000 µg, 200 to 1250 µg, 200 to 1500 µg, 200 to 1750 µg, 200 to 2000 µg, 200 to 2250 µg, 200 to 2500 µg, 200 to 2750 µg, 200 to 3000 µg, 300 to 400 µg, 300 to 500 µg, 300 to 600 µg, 300 to 700 µg, 300 to 800 µg, 300 to 900 µg, 300 to 1000 µg, 300 to 1250 µg, 300 to 1500 µg, 300 to 1750 µg, 300 to 2000 µg, 300 to 2250 µg, 300 to 2500 µg, 300 to 2750 µg, 300 to 3000 µg, 400 to 500 µg, 400 to 600 µg, 400 to 700 µg, 400 to 800 µg, 400 to 900 µg, 400 to 1000 µg, 400 to 1250 µg, 400 to 1500 µg, 400 to 1750 µg, 400 to 2000 µg, 400 to 2250 µg, 400 to 2500 µg, 400 to 2750 µg, 400 to 3000 µg, 500 to 600 µg, 500 to 700 µg, 500 to 800 µg, 500 to 900 µg, 500 to 1000 µg, 500 to 1250 µg, 500 to 1500 µg, 500 to 1750 µg, 500 to 2000 µg, 500 to 2250 µg, 500 to 2500 µg, 500 to 2750 µg, 500 to 3000 µg, 600 to 700 µg, 600 to 800 µg, 600 to 900 µg, 600 to 1000 µg, 600 to 1250 µg, 600 to 1500 µg, 600 to 1750 µg, 600 to 2000

μg, 600 to 2250 μg, 600 to 2500 μg, 600 to 2750 μg, 600 to 3000 μg, 700 to 800 μg, 700 to 900 μg, 700 to 1000 μg, 700 to 1250 μg, 700 to 1500 μg, 700 to 1750 μg, 700 to 2000 μg, 700 to 2250 μg, 700 to 2500 μg, 700 to 2750 μg, 700 to 3000 μg, 800 to 900 μg, 800 to 1000 μg, 800 to 1250 μg, 800 to 1500 μg, 800 to 1750 μg, 800 to 2000 μg, 800 to 2250 μg, 800 to 2500 μg, 800 to 2750 μg, 800 to 3000 μg, 900 to 1000 μg, 900 to 1250 μg, 900 to 1500 μg, 900 to 1750 μg, 900 to 2000 μg, 900 to 2250 μg, 900 to 2500 μg, 900 to 2750 μg, 900 to 3000 μg, 1000 to 1250 μg, 1000 to 1500 μg, 1000 to 1750 μg, 1000 to 2000 μg, 1000 to 2250 μg, 1000 to 2500 μg, 1000 to 2750 μg, 1000 to 3000 μg, 2 to 500 μg, 50 to 500 μg, 3 to 100 μg, 5 to 20 μg, 5 to 100 μg, 50 μg, 100 μg, 150 μg, 200 μg, 250 μg, 300 μg, 350 μg, 400 μg, 450 μg, 500 μg, 550 μg, 600 μg, 650 μg, 700 μg, 750 μg, 800 μg, 850 μg, 900 μg, 950 μg, 1000 μg, 1050 μg, 1100 μg, 1150 μg, 1200 μg, 1250 μg, 1300 μg, 1350 μg, 1400 μg, 1450 μg, 1500 μg, 1550 μg, 1600 μg, 1650 μg, 1700 μg, 1750 μg, 1800 μg, 1850 μg, 1900 μg, 1950 μg, 2000 μg, 2050 μg, 2100 μg, 2150 μg, 2200 μg, 2250 μg, 2300 μg, 2350 μg, 2400 μg, 2450 μg, 2500 μg, 2550 μg, 2600 μg, 2650 μg, 2700 μg, 2750 μg, 2800 μg, 2850 μg, 2900 μg, 2950 μg, 3000 μg, 3250 μg, 3500 μg, 3750 μg, 4000 μg, 4250 μg, 4500 μg, 4750 μg, 5000 μg of a peptide or agonist described herein and from 100 mg to 3000 mg (e.g. 100 mg, 200 mg, 300 mg, 400 mg, 500 mg, 600 mg, 625 mg, 700 mg, 800 mg, 900 mg, 1000 mg, 1250 mg, 1300 mg, 1400 mg, 1500 mg, 1600 mg, 1700 mg, 1800 mg, 1875 mg, 1900 mg, 2000 mg, 2100 mg, 2200 mg, 2300 mg, 2400 mg, 2500 mg,) of Equalactin®/Fibercon® (Calcium Polycarbophil).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30 μg, 1 to 40 μg, 1 to 50 μg, 1 to 100 μg, 1 to 200 μg, 1 to 300 μg, 1 to 400 μg, 1 to 500 μg, 1 to 600 μg, 1 to 700 μg, 1 to 800 μg, 1 to 900 μg, 1 to 1000 μg, 10 to 30 μg, 10 to 40 μg, 10 to 50 μg, 10 to 100 μg, 10 to 200 μg, 10 to 300 μg, 10 to 400 μg, 10 to 500 μg, 10 to 600 μg, 10 to 700 μg, 10 to 800 μg, 10 to 900 μg, 10 to 1000 μg, 100 to 200 μg, 100 to 300 μg, 100 to 400 μg, 100 to 500 μg, 100 to 600 μg, 100 to 700 μg, 100 to 800 μg, 100 to 900 μg, 100 to 1000 μg, 100 to 1250 μg, 100 to 1500 μg, 100 to 1750 μg, 100 to 2000 μg, 100 to 2250 μg, 100 to 2500 μg, 100 to 2750 μg, 100 to 3000 μg, 200 to 300 μg, 200 to 400 μg, 200 to 500 μg, 200 to 600 μg, 200 to 700 μg, 200 to 800 μg, 200 to 900 μg, 200 to 1000 μg, 200 to 1250 μg, 200 to 1500 μg, 200 to 1750 μg, 200 to 2000 μg, 200 to 2250 μg, 200 to 2500 μg, 200 to 2750 μg, 200 to 3000 μg, 300 to 400 μg, 300 to 500

$\mu\text{g}$ , 300 to 600  $\mu\text{g}$ , 300 to 700  $\mu\text{g}$ , 300 to 800  $\mu\text{g}$ , 300 to 900  $\mu\text{g}$ , 300 to 1000  $\mu\text{g}$ , 300 to 1250  $\mu\text{g}$ , 300 to 1500  $\mu\text{g}$ , 300 to 1750  $\mu\text{g}$ , 300 to 2000  $\mu\text{g}$ , 300 to 2250  $\mu\text{g}$ , 300 to 2500  $\mu\text{g}$ , 300 to 2750  $\mu\text{g}$ , 300 to 3000  $\mu\text{g}$ , 400 to 500  $\mu\text{g}$ , 400 to 600  $\mu\text{g}$ , 400 to 700  $\mu\text{g}$ , 400 to 800  $\mu\text{g}$ , 400 to 900  $\mu\text{g}$ , 400 to 1000  $\mu\text{g}$ , 400 to 1250  $\mu\text{g}$ , 400 to 1500  $\mu\text{g}$ , 400 to 1750  $\mu\text{g}$ , 400 to 2000  $\mu\text{g}$ , 400 to 2250  $\mu\text{g}$ , 400 to 2500  $\mu\text{g}$ , 400 to 2750  $\mu\text{g}$ , 400 to 3000  $\mu\text{g}$ , 500 to 600  $\mu\text{g}$ , 500 to 700  $\mu\text{g}$ , 500 to 800  $\mu\text{g}$ , 500 to 900  $\mu\text{g}$ , 500 to 1000  $\mu\text{g}$ , 500 to 1250  $\mu\text{g}$ , 500 to 1500  $\mu\text{g}$ , 500 to 1750  $\mu\text{g}$ , 500 to 2000  $\mu\text{g}$ , 500 to 2250  $\mu\text{g}$ , 500 to 2500  $\mu\text{g}$ , 500 to 2750  $\mu\text{g}$ , 500 to 3000  $\mu\text{g}$ , 600 to 700  $\mu\text{g}$ , 600 to 800  $\mu\text{g}$ , 600 to 900  $\mu\text{g}$ , 600 to 1000  $\mu\text{g}$ , 600 to 1250  $\mu\text{g}$ , 600 to 1500  $\mu\text{g}$ , 600 to 1750  $\mu\text{g}$ , 600 to 2000  $\mu\text{g}$ , 600 to 2250  $\mu\text{g}$ , 600 to 2500  $\mu\text{g}$ , 600 to 2750  $\mu\text{g}$ , 600 to 3000  $\mu\text{g}$ , 700 to 800  $\mu\text{g}$ , 700 to 900  $\mu\text{g}$ , 700 to 1000  $\mu\text{g}$ , 700 to 1250  $\mu\text{g}$ , 700 to 1500  $\mu\text{g}$ , 700 to 1750  $\mu\text{g}$ , 700 to 2000  $\mu\text{g}$ , 700 to 2250  $\mu\text{g}$ , 700 to 2500  $\mu\text{g}$ , 700 to 2750  $\mu\text{g}$ , 700 to 3000  $\mu\text{g}$ , 800 to 900  $\mu\text{g}$ , 800 to 1000  $\mu\text{g}$ , 800 to 1250  $\mu\text{g}$ , 800 to 1500  $\mu\text{g}$ , 800 to 1750  $\mu\text{g}$ , 800 to 2000  $\mu\text{g}$ , 800 to 2250  $\mu\text{g}$ , 800 to 2500  $\mu\text{g}$ , 800 to 2750  $\mu\text{g}$ , 800 to 3000  $\mu\text{g}$ , 900 to 1000  $\mu\text{g}$ , 900 to 1250  $\mu\text{g}$ , 900 to 1500  $\mu\text{g}$ , 900 to 1750  $\mu\text{g}$ , 900 to 2000  $\mu\text{g}$ , 900 to 2250  $\mu\text{g}$ , 900 to 2500  $\mu\text{g}$ , 900 to 2750  $\mu\text{g}$ , 900 to 3000  $\mu\text{g}$ , 1000 to 1250  $\mu\text{g}$ , 1000 to 1500  $\mu\text{g}$ , 1000 to 1750  $\mu\text{g}$ , 1000 to 2000  $\mu\text{g}$ , 1000 to 2250  $\mu\text{g}$ , 1000 to 2500  $\mu\text{g}$ , 1000 to 2750  $\mu\text{g}$ , 1000 to 3000  $\mu\text{g}$ , 2 to 500  $\mu\text{g}$ , 50 to 500  $\mu\text{g}$ , 3 to 100  $\mu\text{g}$ , 5 to 20  $\mu\text{g}$ , 5 to 100  $\mu\text{g}$ , 50  $\mu\text{g}$ , 100  $\mu\text{g}$ , 150  $\mu\text{g}$ , 200  $\mu\text{g}$ , 250  $\mu\text{g}$ , 300  $\mu\text{g}$ , 350  $\mu\text{g}$ , 400  $\mu\text{g}$ , 450  $\mu\text{g}$ , 500  $\mu\text{g}$ , 550  $\mu\text{g}$ , 600  $\mu\text{g}$ , 650  $\mu\text{g}$ , 700  $\mu\text{g}$ , 750  $\mu\text{g}$ , 800  $\mu\text{g}$ , 850  $\mu\text{g}$ , 900  $\mu\text{g}$ , 950  $\mu\text{g}$ , 1000  $\mu\text{g}$ , 1050  $\mu\text{g}$ , 1100  $\mu\text{g}$ , 1150  $\mu\text{g}$ , 1200  $\mu\text{g}$ , 1250  $\mu\text{g}$ , 1300  $\mu\text{g}$ , 1350  $\mu\text{g}$ , 1400  $\mu\text{g}$ , 1450  $\mu\text{g}$ , 1500  $\mu\text{g}$ , 1550  $\mu\text{g}$ , 1600  $\mu\text{g}$ , 1650  $\mu\text{g}$ , 1700  $\mu\text{g}$ , 1750  $\mu\text{g}$ , 1800  $\mu\text{g}$ , 1850  $\mu\text{g}$ , 1900  $\mu\text{g}$ , 1950  $\mu\text{g}$ , 2000  $\mu\text{g}$ , 2050  $\mu\text{g}$ , 2100  $\mu\text{g}$ , 2150  $\mu\text{g}$ , 2200  $\mu\text{g}$ , 2250  $\mu\text{g}$ , 2300  $\mu\text{g}$ , 2350  $\mu\text{g}$ , 2400  $\mu\text{g}$ , 2450  $\mu\text{g}$ , 2500  $\mu\text{g}$ , 2550  $\mu\text{g}$ , 2600  $\mu\text{g}$ , 2650  $\mu\text{g}$ , 2700  $\mu\text{g}$ , 2750  $\mu\text{g}$ , 2800  $\mu\text{g}$ , 2850  $\mu\text{g}$ , 2900  $\mu\text{g}$ , 2950  $\mu\text{g}$ , 3000  $\mu\text{g}$ , 3250  $\mu\text{g}$ , 3500  $\mu\text{g}$ , 3750  $\mu\text{g}$ , 4000  $\mu\text{g}$ , 4250  $\mu\text{g}$ , 4500  $\mu\text{g}$ , 4750  $\mu\text{g}$ , 5000  $\mu\text{g}$  of a peptide or agonist described herein and from 1 mg to 20 mg (e.g. 1 mg, 2 mg, 2.5 mg, 3 mg, 4 mg, 5 mg, 6 mg, 7 mg, 7.5 mg, 8 mg, 9 mg, 10 mg, 11 mg, 12 mg, 12.5 mg, 13 mg, 14 mg, 15 mg, 16 mg, 17.5 mg, 18 mg, 19 mg, 20 mg) of darifenacin (Enablex®).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30  $\mu\text{g}$ , 1 to 40  $\mu\text{g}$ , 1 to 50  $\mu\text{g}$ , 1 to 100  $\mu\text{g}$ , 1 to 200  $\mu\text{g}$ , 1 to 300  $\mu\text{g}$ , 1 to 400  $\mu\text{g}$ , 1 to 500  $\mu\text{g}$ , 1 to 600  $\mu\text{g}$ , 1 to 700  $\mu\text{g}$ , 1 to 800  $\mu\text{g}$ , 1 to 900  $\mu\text{g}$ , 1 to 1000  $\mu\text{g}$ , 10 to 30  $\mu\text{g}$ , 10 to 40  $\mu\text{g}$ , 10 to 50  $\mu\text{g}$ , 10 to 100  $\mu\text{g}$ , 10

to 200 µg, 10 to 300 µg, 10 to 400 µg, 10 to 500 µg, 10 to 600 µg, 10 to 700 µg, 10 to 800 µg, 10 to 900 µg, 10 to 1000 µg, 100 to 200 µg, 100 to 300 µg, 100 to 400 µg, 100 to 500 µg, 100 to 600 µg, 100 to 700 µg, 100 to 800 µg, 100 to 900 µg, 100 to 1000 µg, 100 to 1250 µg, 100 to 1500 µg, 100 to 1750 µg, 100 to 2000 µg, 100 to 2250 µg, 100 to 2500 µg, 100 to 2750 µg, 100 to 3000 µg, 200 to 300 µg, 200 to 400 µg, 200 to 500 µg, 200 to 600 µg, 200 to 700 µg, 200 to 800 µg, 200 to 900 µg, 200 to 1000 µg, 200 to 1250 µg, 200 to 1500 µg, 200 to 1750 µg, 200 to 2000 µg, 200 to 2250 µg, 200 to 2500 µg, 200 to 2750 µg, 200 to 3000 µg, 300 to 400 µg, 300 to 500 µg, 300 to 600 µg, 300 to 700 µg, 300 to 800 µg, 300 to 900 µg, 300 to 1000 µg, 300 to 1250 µg, 300 to 1500 µg, 300 to 1750 µg, 300 to 2000 µg, 300 to 2250 µg, 300 to 2500 µg, 300 to 2750 µg, 300 to 3000 µg, 400 to 500 µg, 400 to 600 µg, 400 to 700 µg, 400 to 800 µg, 400 to 900 µg, 400 to 1000 µg, 400 to 1250 µg, 400 to 1500 µg, 400 to 1750 µg, 400 to 2000 µg, 400 to 2250 µg, 400 to 2500 µg, 400 to 2750 µg, 400 to 3000 µg, 500 to 600 µg, 500 to 700 µg, 500 to 800 µg, 500 to 900 µg, 500 to 1000 µg, 500 to 1250 µg, 500 to 1500 µg, 500 to 1750 µg, 500 to 2000 µg, 500 to 2250 µg, 500 to 2500 µg, 500 to 2750 µg, 500 to 3000 µg, 600 to 700 µg, 600 to 800 µg, 600 to 900 µg, 600 to 1000 µg, 600 to 1250 µg, 600 to 1500 µg, 600 to 1750 µg, 600 to 2000 µg, 600 to 2250 µg, 600 to 2500 µg, 600 to 2750 µg, 600 to 3000 µg, 700 to 800 µg, 700 to 900 µg, 700 to 1000 µg, 700 to 1250 µg, 700 to 1500 µg, 700 to 1750 µg, 700 to 2000 µg, 700 to 2250 µg, 700 to 2500 µg, 700 to 2750 µg, 700 to 3000 µg, 800 to 900 µg, 800 to 1000 µg, 800 to 1250 µg, 800 to 1500 µg, 800 to 1750 µg, 800 to 2000 µg, 800 to 2250 µg, 800 to 2500 µg, 800 to 2750 µg, 800 to 3000 µg, 900 to 1000 µg, 900 to 1250 µg, 900 to 1500 µg, 900 to 1750 µg, 900 to 2000 µg, 900 to 2250 µg, 900 to 2500 µg, 900 to 2750 µg, 900 to 3000 µg, 1000 to 1250 µg, 1000 to 1500 µg, 1000 to 1750 µg, 1000 to 2000 µg, 1000 to 2250 µg, 1000 to 2500 µg, 1000 to 2750 µg, 1000 to 3000 µg, 2 to 500 µg, 50 to 500 µg, 3 to 100 µg, 5 to 20 µg, 5 to 100 µg, 50 µg, 100 µg, 150 µg, 200 µg, 250 µg, 300 µg, 350 µg, 400 µg, 450 µg, 500 µg, 550 µg, 600 µg, 650 µg, 700 µg, 750 µg, 800 µg, 850 µg, 900 µg, 950 µg, 1000 µg, 1050 µg, 1100 µg, 1150 µg, 1200 µg, 1250 µg, 1300 µg, 1350 µg, 1400 µg, 1450 µg, 1500 µg, 1550 µg, 1600 µg, 1650 µg, 1700 µg, 1750 µg, 1800 µg, 1850 µg, 1900 µg, 1950 µg, 2000 µg, 2050 µg, 2100 µg, 2150 µg, 2200 µg, 2250 µg, 2300 µg, 2350 µg, 2400 µg, 2450 µg, 2500 µg, 2550 µg, 2600 µg, 2650 µg, 2700 µg, 2750 µg, 2800 µg, 2850 µg, 2900 µg, 2950 µg, 3000 µg, 3250 µg, 3500 µg, 3750 µg, 4000 µg, 4250 µg, 4500 µg, 4750 µg, 5000 µg of a peptide or agonist described herein and from

1 mg to 250 mg (e.g. 1 mg, 2 mg, 3 mg, 4 mg, 5 mg, 6 mg, 7 mg, 8 mg, 9 mg, 10 mg, 20 mg, 30 mg, 40 mg, 50 mg, 60 mg, 70 mg, 80 mg, 90 mg, 100 mg, 110 mg, 120 mg, 130 mg, 140 mg, 150 mg, 160 mg, 170 mg, 180 mg, 190 mg, 200 mg, 210 mg, 220 mg, 230 mg, 240 mg, 250 mg) of Ondansetron HCl (Zofran®).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30 µg, 1 to 40 µg, 1 to 50 µg, 1 to 100 µg, 1 to 200 µg, 1 to 300 µg, 1 to 400 µg, 1 to 500 µg, 1 to 600 µg, 1 to 700 µg, 1 to 800 µg, 1 to 900 µg, 1 to 1000 µg, 10 to 30 µg, 10 to 40 µg, 10 to 50 µg, 10 to 100 µg, 10 to 200 µg, 10 to 300 µg, 10 to 400 µg, 10 to 500 µg, 10 to 600 µg, 10 to 700 µg, 10 to 800 µg, 10 to 900 µg, 10 to 1000 µg, 100 to 200 µg, 100 to 300 µg, 100 to 400 µg, 100 to 500 µg, 100 to 600 µg, 100 to 700 µg, 100 to 800 µg, 100 to 900 µg, 100 to 1000 µg, 100 to 1250 µg, 100 to 1500 µg, 100 to 1750 µg, 100 to 2000 µg, 100 to 2250 µg, 100 to 2500 µg, 100 to 2750 µg, 100 to 3000 µg, 200 to 300 µg, 200 to 400 µg, 200 to 500 µg, 200 to 600 µg, 200 to 700 µg, 200 to 800 µg, 200 to 900 µg, 200 to 1000 µg, 200 to 1250 µg, 200 to 1500 µg, 200 to 1750 µg, 200 to 2000 µg, 200 to 2250 µg, 200 to 2500 µg, 200 to 2750 µg, 200 to 3000 µg, 300 to 400 µg, 300 to 500 µg, 300 to 600 µg, 300 to 700 µg, 300 to 800 µg, 300 to 900 µg, 300 to 1000 µg, 300 to 1250 µg, 300 to 1500 µg, 300 to 1750 µg, 300 to 2000 µg, 300 to 2250 µg, 300 to 2500 µg, 300 to 2750 µg, 300 to 3000 µg, 400 to 500 µg, 400 to 600 µg, 400 to 700 µg, 400 to 800 µg, 400 to 900 µg, 400 to 1000 µg, 400 to 1250 µg, 400 to 1500 µg, 400 to 1750 µg, 400 to 2000 µg, 400 to 2250 µg, 400 to 2500 µg, 400 to 2750 µg, 400 to 3000 µg, 500 to 600 µg, 500 to 700 µg, 500 to 800 µg, 500 to 900 µg, 500 to 1000 µg, 500 to 1250 µg, 500 to 1500 µg, 500 to 1750 µg, 500 to 2000 µg, 500 to 2250 µg, 500 to 2500 µg, 500 to 2750 µg, 500 to 3000 µg, 600 to 700 µg, 600 to 800 µg, 600 to 900 µg, 600 to 1000 µg, 600 to 1250 µg, 600 to 1500 µg, 600 to 1750 µg, 600 to 2000 µg, 600 to 2250 µg, 600 to 2500 µg, 600 to 2750 µg, 600 to 3000 µg, 700 to 800 µg, 700 to 900 µg, 700 to 1000 µg, 700 to 1250 µg, 700 to 1500 µg, 700 to 1750 µg, 700 to 2000 µg, 700 to 2250 µg, 700 to 2500 µg, 700 to 2750 µg, 700 to 3000 µg, 800 to 900 µg, 800 to 1000 µg, 800 to 1250 µg, 800 to 1500 µg, 800 to 1750 µg, 800 to 2000 µg, 800 to 2250 µg, 800 to 2500 µg, 800 to 2750 µg, 800 to 3000 µg, 900 to 1000 µg, 900 to 1250 µg, 900 to 1500 µg, 900 to 1750 µg, 900 to 2000 µg, 900 to 2250 µg, 900 to 2500 µg, 900 to 2750 µg, 900 to 3000 µg, 1000 to 1250 µg, 1000 to 1500 µg, 1000 to 1750 µg, 1000 to 2000 µg, 1000 to 2250 µg, 1000 to 2500 µg, 1000



to 2750  $\mu\text{g}$ , 1000 to 3000  $\mu\text{g}$ , 2 to 500  $\mu\text{g}$ , 50 to 500  $\mu\text{g}$ , 3 to 100  $\mu\text{g}$ , 5 to 20  $\mu\text{g}$ , 5 to 100  $\mu\text{g}$ , 50  $\mu\text{g}$ , 100  $\mu\text{g}$ , 150  $\mu\text{g}$ , 200  $\mu\text{g}$ , 250  $\mu\text{g}$ , 300  $\mu\text{g}$ , 350  $\mu\text{g}$ , 400  $\mu\text{g}$ , 450  $\mu\text{g}$ , 500  $\mu\text{g}$ , 550  $\mu\text{g}$ , 600  $\mu\text{g}$ , 650  $\mu\text{g}$ , 700  $\mu\text{g}$ , 750  $\mu\text{g}$ , 800  $\mu\text{g}$ , 850  $\mu\text{g}$ , 900  $\mu\text{g}$ , 950  $\mu\text{g}$ , 1000  $\mu\text{g}$ , 1050  $\mu\text{g}$ , 1100  $\mu\text{g}$ , 1150  $\mu\text{g}$ , 1200  $\mu\text{g}$ , 1250  $\mu\text{g}$ , 1300  $\mu\text{g}$ , 1350  $\mu\text{g}$ , 1400  $\mu\text{g}$ , 1450  $\mu\text{g}$ , 1500  $\mu\text{g}$ , 1550  $\mu\text{g}$ , 1600  $\mu\text{g}$ , 1650  $\mu\text{g}$ , 1700  $\mu\text{g}$ , 1750  $\mu\text{g}$ , 1800  $\mu\text{g}$ , 1850  $\mu\text{g}$ , 1900  $\mu\text{g}$ , 1950  $\mu\text{g}$ , 2000  $\mu\text{g}$ , 2050  $\mu\text{g}$ , 2100  $\mu\text{g}$ , 2150  $\mu\text{g}$ , 2200  $\mu\text{g}$ , 2250  $\mu\text{g}$ , 2300  $\mu\text{g}$ , 2350  $\mu\text{g}$ , 2400  $\mu\text{g}$ , 2450  $\mu\text{g}$ , 2500  $\mu\text{g}$ , 2550  $\mu\text{g}$ , 2600  $\mu\text{g}$ , 2650  $\mu\text{g}$ , 2700  $\mu\text{g}$ , 2750  $\mu\text{g}$ , 2800  $\mu\text{g}$ , 2850  $\mu\text{g}$ , 2900  $\mu\text{g}$ , 2950  $\mu\text{g}$ , 3000  $\mu\text{g}$ , 3250  $\mu\text{g}$ , 3500  $\mu\text{g}$ , 3750  $\mu\text{g}$ , 4000  $\mu\text{g}$ , 4250  $\mu\text{g}$ , 4500  $\mu\text{g}$ , 4750  $\mu\text{g}$ , 5000  $\mu\text{g}$  of a peptide or agonist described herein and from 1 mg to 3000 mg (e.g. 1 mg, 2 mg, 3 mg, 4 mg, 5 mg, 6 mg, 7 mg, 8 mg, 9 mg, 10 mg, 20 mg, 30 mg, 40 mg, 50 mg, 60 mg, 70 mg, 80 mg, 90 mg, 100 mg, 200 mg, 250 mg, 300 mg, 350 mg, 400 mg, 450 mg, 500 mg, 750 mg, 1000 mg, 1250 mg, 1500 mg, 1750 mg, 2000 mg, 2250 mg, 2500 mg, 2750 mg, 3000 mg) of Cimetropium (Alginor®).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30  $\mu\text{g}$ , 1 to 40  $\mu\text{g}$ , 1 to 50  $\mu\text{g}$ , 1 to 100  $\mu\text{g}$ , 1 to 200  $\mu\text{g}$ , 1 to 300  $\mu\text{g}$ , 1 to 400  $\mu\text{g}$ , 1 to 500  $\mu\text{g}$ , 1 to 600  $\mu\text{g}$ , 1 to 700  $\mu\text{g}$ , 1 to 800  $\mu\text{g}$ , 1 to 900  $\mu\text{g}$ , 1 to 1000  $\mu\text{g}$ , 10 to 30  $\mu\text{g}$ , 10 to 40  $\mu\text{g}$ , 10 to 50  $\mu\text{g}$ , 10 to 100  $\mu\text{g}$ , 10 to 200  $\mu\text{g}$ , 10 to 300  $\mu\text{g}$ , 10 to 400  $\mu\text{g}$ , 10 to 500  $\mu\text{g}$ , 10 to 600  $\mu\text{g}$ , 10 to 700  $\mu\text{g}$ , 10 to 800  $\mu\text{g}$ , 10 to 900  $\mu\text{g}$ , 10 to 1000  $\mu\text{g}$ , 100 to 200  $\mu\text{g}$ , 100 to 300  $\mu\text{g}$ , 100 to 400  $\mu\text{g}$ , 100 to 500  $\mu\text{g}$ , 100 to 600  $\mu\text{g}$ , 100 to 700  $\mu\text{g}$ , 100 to 800  $\mu\text{g}$ , 100 to 900  $\mu\text{g}$ , 100 to 1000  $\mu\text{g}$ , 100 to 1250  $\mu\text{g}$ , 100 to 1500  $\mu\text{g}$ , 100 to 1750  $\mu\text{g}$ , 100 to 2000  $\mu\text{g}$ , 100 to 2250  $\mu\text{g}$ , 100 to 2500  $\mu\text{g}$ , 100 to 2750  $\mu\text{g}$ , 100 to 3000  $\mu\text{g}$ , 200 to 300  $\mu\text{g}$ , 200 to 400  $\mu\text{g}$ , 200 to 500  $\mu\text{g}$ , 200 to 600  $\mu\text{g}$ , 200 to 700  $\mu\text{g}$ , 200 to 800  $\mu\text{g}$ , 200 to 900  $\mu\text{g}$ , 200 to 1000  $\mu\text{g}$ , 200 to 1250  $\mu\text{g}$ , 200 to 1500  $\mu\text{g}$ , 200 to 1750  $\mu\text{g}$ , 200 to 2000  $\mu\text{g}$ , 200 to 2250  $\mu\text{g}$ , 200 to 2500  $\mu\text{g}$ , 200 to 2750  $\mu\text{g}$ , 200 to 3000  $\mu\text{g}$ , 300 to 400  $\mu\text{g}$ , 300 to 500  $\mu\text{g}$ , 300 to 600  $\mu\text{g}$ , 300 to 700  $\mu\text{g}$ , 300 to 800  $\mu\text{g}$ , 300 to 900  $\mu\text{g}$ , 300 to 1000  $\mu\text{g}$ , 300 to 1250  $\mu\text{g}$ , 300 to 1500  $\mu\text{g}$ , 300 to 1750  $\mu\text{g}$ , 300 to 2000  $\mu\text{g}$ , 300 to 2250  $\mu\text{g}$ , 300 to 2500  $\mu\text{g}$ , 300 to 2750  $\mu\text{g}$ , 300 to 3000  $\mu\text{g}$ , 400 to 500  $\mu\text{g}$ , 400 to 600  $\mu\text{g}$ , 400 to 700  $\mu\text{g}$ , 400 to 800  $\mu\text{g}$ , 400 to 900  $\mu\text{g}$ , 400 to 1000  $\mu\text{g}$ , 400 to 1250  $\mu\text{g}$ , 400 to 1500  $\mu\text{g}$ , 400 to 1750  $\mu\text{g}$ , 400 to 2000  $\mu\text{g}$ , 400 to 2250  $\mu\text{g}$ , 400 to 2500  $\mu\text{g}$ , 400 to 2750  $\mu\text{g}$ , 400 to 3000  $\mu\text{g}$ , 500 to 600  $\mu\text{g}$ , 500 to 700  $\mu\text{g}$ , 500 to 800  $\mu\text{g}$ , 500 to 900  $\mu\text{g}$ , 500 to 1000  $\mu\text{g}$ , 500 to 1250  $\mu\text{g}$ , 500 to 1500  $\mu\text{g}$ , 500 to 1750  $\mu\text{g}$ , 500 to 2000  $\mu\text{g}$ , 500 to 2250  $\mu\text{g}$ , 500 to 2500  $\mu\text{g}$ , 500 to 2750  $\mu\text{g}$ , 500 to 3000  $\mu\text{g}$ , 600 to 700  $\mu\text{g}$ , 600 to 800

$\mu\text{g}$ , 600 to 900  $\mu\text{g}$ , 600 to 1000  $\mu\text{g}$ , 600 to 1250  $\mu\text{g}$ , 600 to 1500  $\mu\text{g}$ , 600 to 1750  $\mu\text{g}$ , 600 to 2000  $\mu\text{g}$ , 600 to 2250  $\mu\text{g}$ , 600 to 2500  $\mu\text{g}$ , 600 to 2750  $\mu\text{g}$ , 600 to 3000  $\mu\text{g}$ , 700 to 800  $\mu\text{g}$ , 700 to 900  $\mu\text{g}$ , 700 to 1000  $\mu\text{g}$ , 700 to 1250  $\mu\text{g}$ , 700 to 1500  $\mu\text{g}$ , 700 to 1750  $\mu\text{g}$ , 700 to 2000  $\mu\text{g}$ , 700 to 2250  $\mu\text{g}$ , 700 to 2500  $\mu\text{g}$ , 700 to 2750  $\mu\text{g}$ , 700 to 3000  $\mu\text{g}$ , 800 to 900  $\mu\text{g}$ , 800 to 1000  $\mu\text{g}$ , 800 to 1250  $\mu\text{g}$ , 800 to 1500  $\mu\text{g}$ , 800 to 1750  $\mu\text{g}$ , 800 to 2000  $\mu\text{g}$ , 800 to 2250  $\mu\text{g}$ , 800 to 2500  $\mu\text{g}$ , 800 to 2750  $\mu\text{g}$ , 800 to 3000  $\mu\text{g}$ , 900 to 1000  $\mu\text{g}$ , 900 to 1250  $\mu\text{g}$ , 900 to 1500  $\mu\text{g}$ , 900 to 1750  $\mu\text{g}$ , 900 to 2000  $\mu\text{g}$ , 900 to 2250  $\mu\text{g}$ , 900 to 2500  $\mu\text{g}$ , 900 to 2750  $\mu\text{g}$ , 900 to 3000  $\mu\text{g}$ , 1000 to 1250  $\mu\text{g}$ , 1000 to 1500  $\mu\text{g}$ , 1000 to 1750  $\mu\text{g}$ , 1000 to 2000  $\mu\text{g}$ , 1000 to 2250  $\mu\text{g}$ , 1000 to 2500  $\mu\text{g}$ , 1000 to 2750  $\mu\text{g}$ , 1000 to 3000  $\mu\text{g}$ , 2 to 500  $\mu\text{g}$ , 50 to 500  $\mu\text{g}$ , 3 to 100  $\mu\text{g}$ , 5 to 20  $\mu\text{g}$ , 5 to 100  $\mu\text{g}$ , 50  $\mu\text{g}$ , 100  $\mu\text{g}$ , 150  $\mu\text{g}$ , 200  $\mu\text{g}$ , 250  $\mu\text{g}$ , 300  $\mu\text{g}$ , 350  $\mu\text{g}$ , 400  $\mu\text{g}$ , 450  $\mu\text{g}$ , 500  $\mu\text{g}$ , 550  $\mu\text{g}$ , 600  $\mu\text{g}$ , 650  $\mu\text{g}$ , 700  $\mu\text{g}$ , 750  $\mu\text{g}$ , 800  $\mu\text{g}$ , 850  $\mu\text{g}$ , 900  $\mu\text{g}$ , 950  $\mu\text{g}$ , 1000  $\mu\text{g}$ , 1050  $\mu\text{g}$ , 1100  $\mu\text{g}$ , 1150  $\mu\text{g}$ , 1200  $\mu\text{g}$ , 1250  $\mu\text{g}$ , 1300  $\mu\text{g}$ , 1350  $\mu\text{g}$ , 1400  $\mu\text{g}$ , 1450  $\mu\text{g}$ , 1500  $\mu\text{g}$ , 1550  $\mu\text{g}$ , 1600  $\mu\text{g}$ , 1650  $\mu\text{g}$ , 1700  $\mu\text{g}$ , 1750  $\mu\text{g}$ , 1800  $\mu\text{g}$ , 1850  $\mu\text{g}$ , 1900  $\mu\text{g}$ , 1950  $\mu\text{g}$ , 2000  $\mu\text{g}$ , 2050  $\mu\text{g}$ , 2100  $\mu\text{g}$ , 2150  $\mu\text{g}$ , 2200  $\mu\text{g}$ , 2250  $\mu\text{g}$ , 2300  $\mu\text{g}$ , 2350  $\mu\text{g}$ , 2400  $\mu\text{g}$ , 2450  $\mu\text{g}$ , 2500  $\mu\text{g}$ , 2550  $\mu\text{g}$ , 2600  $\mu\text{g}$ , 2650  $\mu\text{g}$ , 2700  $\mu\text{g}$ , 2750  $\mu\text{g}$ , 2800  $\mu\text{g}$ , 2850  $\mu\text{g}$ , 2900  $\mu\text{g}$ , 2950  $\mu\text{g}$ , 3000  $\mu\text{g}$ , 3250  $\mu\text{g}$ , 3500  $\mu\text{g}$ , 3750  $\mu\text{g}$ , 4000  $\mu\text{g}$ , 4250  $\mu\text{g}$ , 4500  $\mu\text{g}$ , 4750  $\mu\text{g}$ , 5000  $\mu\text{g}$  of a peptide or agonist described herein and from 1 mg to 1000 mg (e.g. 1 mg, 5 mg, 10 mg, 15 mg, 20 mg, 25 mg, 30 mg, 35 mg, 40 mg, 45 mg, 50 mg, 75 mg, 100 mg, 150 mg, 200 mg, 250 mg, 300 mg, 350 mg, 400 mg, 450 mg, 500 mg, 550 mg, 600 mg, 650 mg, 700 mg, 750 mg, 800 mg, 850 mg, 900 mg, 950 mg, 1000 mg) of Dolasetron (Anzemet®).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30  $\mu\text{g}$ , 1 to 40  $\mu\text{g}$ , 1 to 50  $\mu\text{g}$ , 1 to 100  $\mu\text{g}$ , 1 to 200  $\mu\text{g}$ , 1 to 300  $\mu\text{g}$ , 1 to 400  $\mu\text{g}$ , 1 to 500  $\mu\text{g}$ , 1 to 600  $\mu\text{g}$ , 1 to 700  $\mu\text{g}$ , 1 to 800  $\mu\text{g}$ , 1 to 900  $\mu\text{g}$ , 1 to 1000  $\mu\text{g}$ , 10 to 30  $\mu\text{g}$ , 10 to 40  $\mu\text{g}$ , 10 to 50  $\mu\text{g}$ , 10 to 100  $\mu\text{g}$ , 10 to 200  $\mu\text{g}$ , 10 to 300  $\mu\text{g}$ , 10 to 400  $\mu\text{g}$ , 10 to 500  $\mu\text{g}$ , 10 to 600  $\mu\text{g}$ , 10 to 700  $\mu\text{g}$ , 10 to 800  $\mu\text{g}$ , 10 to 900  $\mu\text{g}$ , 10 to 1000  $\mu\text{g}$ , 100 to 200  $\mu\text{g}$ , 100 to 300  $\mu\text{g}$ , 100 to 400  $\mu\text{g}$ , 100 to 500  $\mu\text{g}$ , 100 to 600  $\mu\text{g}$ , 100 to 700  $\mu\text{g}$ , 100 to 800  $\mu\text{g}$ , 100 to 900  $\mu\text{g}$ , 100 to 1000  $\mu\text{g}$ , 100 to 1250  $\mu\text{g}$ , 100 to 1500  $\mu\text{g}$ , 100 to 1750  $\mu\text{g}$ , 100 to 2000  $\mu\text{g}$ , 100 to 2250  $\mu\text{g}$ , 100 to 2500  $\mu\text{g}$ , 100 to 2750  $\mu\text{g}$ , 100 to 3000  $\mu\text{g}$ , 200 to 300  $\mu\text{g}$ , 200 to 400  $\mu\text{g}$ , 200 to 500  $\mu\text{g}$ , 200 to 600  $\mu\text{g}$ , 200 to 700  $\mu\text{g}$ , 200 to 800  $\mu\text{g}$ , 200 to 900  $\mu\text{g}$ , 200 to 1000  $\mu\text{g}$ , 200 to 1250  $\mu\text{g}$ , 200 to 1500  $\mu\text{g}$ , 200 to 1750  $\mu\text{g}$ , 200 to 2000

$\mu\text{g}$ , 200 to 2250  $\mu\text{g}$ , 200 to 2500  $\mu\text{g}$ , 200 to 2750  $\mu\text{g}$ , 200 to 3000  $\mu\text{g}$ , 300 to 400  $\mu\text{g}$ , 300 to 500  $\mu\text{g}$ , 300 to 600  $\mu\text{g}$ , 300 to 700  $\mu\text{g}$ , 300 to 800  $\mu\text{g}$ , 300 to 900  $\mu\text{g}$ , 300 to 1000  $\mu\text{g}$ , 300 to 1250  $\mu\text{g}$ , 300 to 1500  $\mu\text{g}$ , 300 to 1750  $\mu\text{g}$ , 300 to 2000  $\mu\text{g}$ , 300 to 2250  $\mu\text{g}$ , 300 to 2500  $\mu\text{g}$ , 300 to 2750  $\mu\text{g}$ , 300 to 3000  $\mu\text{g}$ , 400 to 500  $\mu\text{g}$ , 400 to 600  $\mu\text{g}$ , 400 to 700  $\mu\text{g}$ , 400 to 800  $\mu\text{g}$ , 400 to 900  $\mu\text{g}$ , 400 to 1000  $\mu\text{g}$ , 400 to 1250  $\mu\text{g}$ , 400 to 1500  $\mu\text{g}$ , 400 to 1750  $\mu\text{g}$ , 400 to 2000  $\mu\text{g}$ , 400 to 2250  $\mu\text{g}$ , 400 to 2500  $\mu\text{g}$ , 400 to 2750  $\mu\text{g}$ , 400 to 3000  $\mu\text{g}$ , 500 to 600  $\mu\text{g}$ , 500 to 700  $\mu\text{g}$ , 500 to 800  $\mu\text{g}$ , 500 to 900  $\mu\text{g}$ , 500 to 1000  $\mu\text{g}$ , 500 to 1250  $\mu\text{g}$ , 500 to 1500  $\mu\text{g}$ , 500 to 1750  $\mu\text{g}$ , 500 to 2000  $\mu\text{g}$ , 500 to 2250  $\mu\text{g}$ , 500 to 2500  $\mu\text{g}$ , 500 to 2750  $\mu\text{g}$ , 500 to 3000  $\mu\text{g}$ , 600 to 700  $\mu\text{g}$ , 600 to 800  $\mu\text{g}$ , 600 to 900  $\mu\text{g}$ , 600 to 1000  $\mu\text{g}$ , 600 to 1250  $\mu\text{g}$ , 600 to 1500  $\mu\text{g}$ , 600 to 1750  $\mu\text{g}$ , 600 to 2000  $\mu\text{g}$ , 600 to 2250  $\mu\text{g}$ , 600 to 2500  $\mu\text{g}$ , 600 to 2750  $\mu\text{g}$ , 600 to 3000  $\mu\text{g}$ , 700 to 800  $\mu\text{g}$ , 700 to 900  $\mu\text{g}$ , 700 to 1000  $\mu\text{g}$ , 700 to 1250  $\mu\text{g}$ , 700 to 1500  $\mu\text{g}$ , 700 to 1750  $\mu\text{g}$ , 700 to 2000  $\mu\text{g}$ , 700 to 2250  $\mu\text{g}$ , 700 to 2500  $\mu\text{g}$ , 700 to 2750  $\mu\text{g}$ , 700 to 3000  $\mu\text{g}$ , 800 to 900  $\mu\text{g}$ , 800 to 1000  $\mu\text{g}$ , 800 to 1250  $\mu\text{g}$ , 800 to 1500  $\mu\text{g}$ , 800 to 1750  $\mu\text{g}$ , 800 to 2000  $\mu\text{g}$ , 800 to 2250  $\mu\text{g}$ , 800 to 2500  $\mu\text{g}$ , 800 to 2750  $\mu\text{g}$ , 800 to 3000  $\mu\text{g}$ , 900 to 1000  $\mu\text{g}$ , 900 to 1250  $\mu\text{g}$ , 900 to 1500  $\mu\text{g}$ , 900 to 1750  $\mu\text{g}$ , 900 to 2000  $\mu\text{g}$ , 900 to 2250  $\mu\text{g}$ , 900 to 2500  $\mu\text{g}$ , 900 to 2750  $\mu\text{g}$ , 900 to 3000  $\mu\text{g}$ , 1000 to 1250  $\mu\text{g}$ , 1000 to 1500  $\mu\text{g}$ , 1000 to 1750  $\mu\text{g}$ , 1000 to 2000  $\mu\text{g}$ , 1000 to 2250  $\mu\text{g}$ , 1000 to 2500  $\mu\text{g}$ , 1000 to 2750  $\mu\text{g}$ , 1000 to 3000  $\mu\text{g}$ , 2 to 500  $\mu\text{g}$ , 50 to 500  $\mu\text{g}$ , 3 to 100  $\mu\text{g}$ , 5 to 20  $\mu\text{g}$ , 5 to 100  $\mu\text{g}$ , 50  $\mu\text{g}$ , 100  $\mu\text{g}$ , 150  $\mu\text{g}$ , 200  $\mu\text{g}$ , 250  $\mu\text{g}$ , 300  $\mu\text{g}$ , 350  $\mu\text{g}$ , 400  $\mu\text{g}$ , 450  $\mu\text{g}$ , 500  $\mu\text{g}$ , 550  $\mu\text{g}$ , 600  $\mu\text{g}$ , 650  $\mu\text{g}$ , 700  $\mu\text{g}$ , 750  $\mu\text{g}$ , 800  $\mu\text{g}$ , 850  $\mu\text{g}$ , 900  $\mu\text{g}$ , 950  $\mu\text{g}$ , 1000  $\mu\text{g}$ , 1050  $\mu\text{g}$ , 1100  $\mu\text{g}$ , 1150  $\mu\text{g}$ , 1200  $\mu\text{g}$ , 1250  $\mu\text{g}$ , 1300  $\mu\text{g}$ , 1350  $\mu\text{g}$ , 1400  $\mu\text{g}$ , 1450  $\mu\text{g}$ , 1500  $\mu\text{g}$ , 1550  $\mu\text{g}$ , 1600  $\mu\text{g}$ , 1650  $\mu\text{g}$ , 1700  $\mu\text{g}$ , 1750  $\mu\text{g}$ , 1800  $\mu\text{g}$ , 1850  $\mu\text{g}$ , 1900  $\mu\text{g}$ , 1950  $\mu\text{g}$ , 2000  $\mu\text{g}$ , 2050  $\mu\text{g}$ , 2100  $\mu\text{g}$ , 2150  $\mu\text{g}$ , 2200  $\mu\text{g}$ , 2250  $\mu\text{g}$ , 2300  $\mu\text{g}$ , 2350  $\mu\text{g}$ , 2400  $\mu\text{g}$ , 2450  $\mu\text{g}$ , 2500  $\mu\text{g}$ , 2550  $\mu\text{g}$ , 2600  $\mu\text{g}$ , 2650  $\mu\text{g}$ , 2700  $\mu\text{g}$ , 2750  $\mu\text{g}$ , 2800  $\mu\text{g}$ , 2850  $\mu\text{g}$ , 2900  $\mu\text{g}$ , 2950  $\mu\text{g}$ , 3000  $\mu\text{g}$ , 3250  $\mu\text{g}$ , 3500  $\mu\text{g}$ , 3750  $\mu\text{g}$ , 4000  $\mu\text{g}$ , 4250  $\mu\text{g}$ , 4500  $\mu\text{g}$ , 4750  $\mu\text{g}$ , 5000  $\mu\text{g}$  of a peptide or agonist described herein and from 1 mg to 180 mg (e.g. 1 mg, 2 mg, 3 mg, 4 mg, 5 mg, 6 mg, 7 mg, 8 mg, 9 mg, 10 mg, 20 mg, 30 mg, 40 mg, 50 mg, 60 mg, 70 mg, 80 mg, 90 mg, 100 mg, 110 mg, 120 mg, 130 mg, 140 mg, 150 mg, 160 mg, 170 mg, 180 mg) of Zelnorm® (tegaserod).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30  $\mu\text{g}$ , 1 to 40  $\mu\text{g}$ , 1 to 50  $\mu\text{g}$ , 1 to 100  $\mu\text{g}$ , 1 to 200  $\mu\text{g}$ , 1 to 300  $\mu\text{g}$ , 1 to 400  $\mu\text{g}$ , 1 to 500  $\mu\text{g}$ , 1 to 600  $\mu\text{g}$ , 1 to 700

μg, 1 to 800 μg, 1 to 900 μg, 1 to 1000 μg, 10 to 30 μg, 10 to 40 μg, 10 to 50 μg, 10 to 100 μg, 10 to 200 μg, 10 to 300 μg, 10 to 400 μg, 10 to 500 μg, 10 to 600 μg, 10 to 700 μg, 10 to 800 μg, 10 to 900 μg, 10 to 1000 μg, 100 to 200 μg, 100 to 300 μg, 100 to 400 μg, 100 to 500 μg, 100 to 600 μg, 100 to 700 μg, 100 to 800 μg, 100 to 900 μg, 100 to 1000 μg, 100 to 1250 μg, 100 to 1500 μg, 100 to 1750 μg, 100 to 2000 μg, 100 to 2250 μg, 100 to 2500 μg, 100 to 2750 μg, 100 to 3000 μg, 200 to 300 μg, 200 to 400 μg, 200 to 500 μg, 200 to 600 μg, 200 to 700 μg, 200 to 800 μg, 200 to 900 μg, 200 to 1000 μg, 200 to 1250 μg, 200 to 1500 μg, 200 to 1750 μg, 200 to 2000 μg, 200 to 2250 μg, 200 to 2500 μg, 200 to 2750 μg, 200 to 3000 μg, 300 to 400 μg, 300 to 500 μg, 300 to 600 μg, 300 to 700 μg, 300 to 800 μg, 300 to 900 μg, 300 to 1000 μg, 300 to 1250 μg, 300 to 1500 μg, 300 to 1750 μg, 300 to 2000 μg, 300 to 2250 μg, 300 to 2500 μg, 300 to 2750 μg, 300 to 3000 μg, 400 to 500 μg, 400 to 600 μg, 400 to 700 μg, 400 to 800 μg, 400 to 900 μg, 400 to 1000 μg, 400 to 1250 μg, 400 to 1500 μg, 400 to 1750 μg, 400 to 2000 μg, 400 to 2250 μg, 400 to 2500 μg, 400 to 2750 μg, 400 to 3000 μg, 500 to 600 μg, 500 to 700 μg, 500 to 800 μg, 500 to 900 μg, 500 to 1000 μg, 500 to 1250 μg, 500 to 1500 μg, 500 to 1750 μg, 500 to 2000 μg, 500 to 2250 μg, 500 to 2500 μg, 500 to 2750 μg, 500 to 3000 μg, 600 to 700 μg, 600 to 800 μg, 600 to 900 μg, 600 to 1000 μg, 600 to 1250 μg, 600 to 1500 μg, 600 to 1750 μg, 600 to 2000 μg, 600 to 2250 μg, 600 to 2500 μg, 600 to 2750 μg, 600 to 3000 μg, 700 to 800 μg, 700 to 900 μg, 700 to 1000 μg, 700 to 1250 μg, 700 to 1500 μg, 700 to 1750 μg, 700 to 2000 μg, 700 to 2250 μg, 700 to 2500 μg, 700 to 2750 μg, 700 to 3000 μg, 800 to 900 μg, 800 to 1000 μg, 800 to 1250 μg, 800 to 1500 μg, 800 to 1750 μg, 800 to 2000 μg, 800 to 2250 μg, 800 to 2500 μg, 800 to 2750 μg, 800 to 3000 μg, 900 to 1000 μg, 900 to 1250 μg, 900 to 1500 μg, 900 to 1750 μg, 900 to 2000 μg, 900 to 2250 μg, 900 to 2500 μg, 900 to 2750 μg, 900 to 3000 μg, 1000 to 1250 μg, 1000 to 1500 μg, 1000 to 1750 μg, 1000 to 2000 μg, 1000 to 2250 μg, 1000 to 2500 μg, 1000 to 2750 μg, 1000 to 3000 μg, 2 to 500 μg, 50 to 500 μg, 3 to 100 μg, 5 to 20 μg, 5 to 100 μg, 50 μg, 100 μg, 150 μg, 200 μg, 250 μg, 300 μg, 350 μg, 400 μg, 450 μg, 500 μg, 550 μg, 600 μg, 650 μg, 700 μg, 750 μg, 800 μg, 850 μg, 900 μg, 950 μg, 1000 μg, 1050 μg, 1100 μg, 1150 μg, 1200 μg, 1250 μg, 1300 μg, 1350 μg, 1400 μg, 1450 μg, 1500 μg, 1550 μg, 1600 μg, 1650 μg, 1700 μg, 1750 μg, 1800 μg, 1850 μg, 1900 μg, 1950 μg, 2000 μg, 2050 μg, 2100 μg, 2150 μg, 2200 μg, 2250 μg, 2300 μg, 2350 μg, 2400 μg, 2450 μg, 2500 μg, 2550 μg, 2600 μg, 2650 μg, 2700 μg, 2750 μg, 2800 μg, 2850 μg, 2900 μg, 2950 μg, 3000 μg, 3250 μg, 3500 μg, 3750 μg,

4000 µg, 4250 µg, 4500 µg, 4750 µg, 5000 µg of a peptide or agonist described herein and from 1 µg to 500 µg (e.g. 1 µg, 5 µg, 10 µg, 50 µg, 75 µg, 100 µg, 125 µg, 150 µg, 175 µg, 200 µg, 225 µg, 250 µg, 275 µg, 300 µg, 325 µg, 350 µg, 375 µg, 400 µg, 425 µg, 450 µg, 475 µg, 500 µg) of Levsin® (hyoscyamine sulfate).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30 µg, 1 to 40 µg, 1 to 50 µg, 1 to 100 µg, 1 to 200 µg, 1 to 300 µg, 1 to 400 µg, 1 to 500 µg, 1 to 600 µg, 1 to 700 µg, 1 to 800 µg, 1 to 900 µg, 1 to 1000 µg, 10 to 30 µg, 10 to 40 µg, 10 to 50 µg, 10 to 100 µg, 10 to 200 µg, 10 to 300 µg, 10 to 400 µg, 10 to 500 µg, 10 to 600 µg, 10 to 700 µg, 10 to 800 µg, 10 to 900 µg, 10 to 1000 µg, 100 to 200 µg, 100 to 300 µg, 100 to 400 µg, 100 to 500 µg, 100 to 600 µg, 100 to 700 µg, 100 to 800 µg, 100 to 900 µg, 100 to 1000 µg, 100 to 1250 µg, 100 to 1500 µg, 100 to 1750 µg, 100 to 2000 µg, 100 to 2250 µg, 100 to 2500 µg, 100 to 2750 µg, 100 to 3000 µg, 200 to 300 µg, 200 to 400 µg, 200 to 500 µg, 200 to 600 µg, 200 to 700 µg, 200 to 800 µg, 200 to 900 µg, 200 to 1000 µg, 200 to 1250 µg, 200 to 1500 µg, 200 to 1750 µg, 200 to 2000 µg, 200 to 2250 µg, 200 to 2500 µg, 200 to 2750 µg, 200 to 3000 µg, 300 to 400 µg, 300 to 500 µg, 300 to 600 µg, 300 to 700 µg, 300 to 800 µg, 300 to 900 µg, 300 to 1000 µg, 300 to 1250 µg, 300 to 1500 µg, 300 to 1750 µg, 300 to 2000 µg, 300 to 2250 µg, 300 to 2500 µg, 300 to 2750 µg, 300 to 3000 µg, 400 to 500 µg, 400 to 600 µg, 400 to 700 µg, 400 to 800 µg, 400 to 900 µg, 400 to 1000 µg, 400 to 1250 µg, 400 to 1500 µg, 400 to 1750 µg, 400 to 2000 µg, 400 to 2250 µg, 400 to 2500 µg, 400 to 2750 µg, 400 to 3000 µg, 500 to 600 µg, 500 to 700 µg, 500 to 800 µg, 500 to 900 µg, 500 to 1000 µg, 500 to 1250 µg, 500 to 1500 µg, 500 to 1750 µg, 500 to 2000 µg, 500 to 2250 µg, 500 to 2500 µg, 500 to 2750 µg, 500 to 3000 µg, 600 to 700 µg, 600 to 800 µg, 600 to 900 µg, 600 to 1000 µg, 600 to 1250 µg, 600 to 1500 µg, 600 to 1750 µg, 600 to 2000 µg, 600 to 2250 µg, 600 to 2500 µg, 600 to 2750 µg, 600 to 3000 µg, 700 to 800 µg, 700 to 900 µg, 700 to 1000 µg, 700 to 1250 µg, 700 to 1500 µg, 700 to 1750 µg, 700 to 2000 µg, 700 to 2250 µg, 700 to 2500 µg, 700 to 2750 µg, 700 to 3000 µg, 800 to 900 µg, 800 to 1000 µg, 800 to 1250 µg, 800 to 1500 µg, 800 to 1750 µg, 800 to 2000 µg, 800 to 2250 µg, 800 to 2500 µg, 800 to 2750 µg, 800 to 3000 µg, 900 to 1000 µg, 900 to 1250 µg, 900 to 1500 µg, 900 to 1750 µg, 900 to 2000 µg, 900 to 2250 µg, 900 to 2500 µg, 900 to 2750 µg, 900 to 3000 µg, 1000 to 1250 µg, 1000 to 1500 µg, 1000 to 1750 µg, 1000 to 2000 µg, 1000 to 2250 µg, 1000 to 2500 µg, 1000

to 2750 µg, 1000 to 3000 µg, 2 to 500 µg, 50 to 500 µg, 3 to 100 µg, 5 to 20 µg, 5 to 100 µg, 50 µg, 100 µg, 150 µg, 200 µg, 250 µg, 300 µg, 350 µg, 400 µg, 450 µg, 500 µg, 550 µg, 600 µg, 650 µg, 700 µg, 750 µg, 800 µg, 850 µg, 900 µg, 950 µg, 1000 µg, 1050 µg, 1100 µg, 1150 µg, 1200 µg, 1250 µg, 1300 µg, 1350 µg, 1400 µg, 1450 µg, 1500 µg, 1550 µg, 1600 µg, 1650 µg, 1700 µg, 1750 µg, 1800 µg, 1850 µg, 1900 µg, 1950 µg, 2000 µg, 2050 µg, 2100 µg, 2150 µg, 2200 µg, 2250 µg, 2300 µg, 2350 µg, 2400 µg, 2450 µg, 2500 µg, 2550 µg, 2600 µg, 2650 µg, 2700 µg, 2750 µg, 2800 µg, 2850 µg, 2900 µg, 2950 µg, 3000 µg, 3250 µg, 3500 µg, 3750 µg, 4000 µg, 4250 µg, 4500 µg, 4750 µg, 5000 µg of a peptide or agonist described herein and from 50 mg to 500 mg (e.g. 50 mg, 60 mg, 70 mg, 80 mg, 90 mg, 100 mg, 125 mg, 150 mg, 175 mg, 200 mg, 225 mg, 250 mg, 275 mg, 300 mg, 325 mg, 350 mg, 375 mg, 400 mg, 425 mg, 450 mg, 500 mg) of Dicletel® (pinaverium bromide).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30 µg, 1 to 40 µg, 1 to 50 µg, 1 to 100 µg, 1 to 200 µg, 1 to 300 µg, 1 to 400 µg, 1 to 500 µg, 1 to 600 µg, 1 to 700 µg, 1 to 800 µg, 1 to 900 µg, 1 to 1000 µg, 10 to 30 µg, 10 to 40 µg, 10 to 50 µg, 10 to 100 µg, 10 to 200 µg, 10 to 300 µg, 10 to 400 µg, 10 to 500 µg, 10 to 600 µg, 10 to 700 µg, 10 to 800 µg, 10 to 900 µg, 10 to 1000 µg, 100 to 200 µg, 100 to 300 µg, 100 to 400 µg, 100 to 500 µg, 100 to 600 µg, 100 to 700 µg, 100 to 800 µg, 100 to 900 µg, 100 to 1000 µg, 100 to 1250 µg, 100 to 1500 µg, 100 to 1750 µg, 100 to 2000 µg, 100 to 2250 µg, 100 to 2500 µg, 100 to 2750 µg, 100 to 3000 µg, 200 to 300 µg, 200 to 400 µg, 200 to 500 µg, 200 to 600 µg, 200 to 700 µg, 200 to 800 µg, 200 to 900 µg, 200 to 1000 µg, 200 to 1250 µg, 200 to 1500 µg, 200 to 1750 µg, 200 to 2000 µg, 200 to 2250 µg, 200 to 2500 µg, 200 to 2750 µg, 200 to 3000 µg, 300 to 400 µg, 300 to 500 µg, 300 to 600 µg, 300 to 700 µg, 300 to 800 µg, 300 to 900 µg, 300 to 1000 µg, 300 to 1250 µg, 300 to 1500 µg, 300 to 1750 µg, 300 to 2000 µg, 300 to 2250 µg, 300 to 2500 µg, 300 to 2750 µg, 300 to 3000 µg, 400 to 500 µg, 400 to 600 µg, 400 to 700 µg, 400 to 800 µg, 400 to 900 µg, 400 to 1000 µg, 400 to 1250 µg, 400 to 1500 µg, 400 to 1750 µg, 400 to 2000 µg, 400 to 2250 µg, 400 to 2500 µg, 400 to 2750 µg, 400 to 3000 µg, 500 to 600 µg, 500 to 700 µg, 500 to 800 µg, 500 to 900 µg, 500 to 1000 µg, 500 to 1250 µg, 500 to 1500 µg, 500 to 1750 µg, 500 to 2000 µg, 500 to 2250 µg, 500 to 2500 µg, 500 to 2750 µg, 500 to 3000 µg, 600 to 700 µg, 600 to 800 µg, 600 to 900 µg, 600 to 1000 µg, 600 to 1250 µg, 600 to 1500 µg, 600 to 1750 µg, 600 to 2000

$\mu\text{g}$ , 600 to 2250  $\mu\text{g}$ , 600 to 2500  $\mu\text{g}$ , 600 to 2750  $\mu\text{g}$ , 600 to 3000  $\mu\text{g}$ , 700 to 800  $\mu\text{g}$ , 700 to 900  $\mu\text{g}$ , 700 to 1000  $\mu\text{g}$ , 700 to 1250  $\mu\text{g}$ , 700 to 1500  $\mu\text{g}$ , 700 to 1750  $\mu\text{g}$ , 700 to 2000  $\mu\text{g}$ , 700 to 2250  $\mu\text{g}$ , 700 to 2500  $\mu\text{g}$ , 700 to 2750  $\mu\text{g}$ , 700 to 3000  $\mu\text{g}$ , 800 to 900  $\mu\text{g}$ , 800 to 1000  $\mu\text{g}$ , 800 to 1250  $\mu\text{g}$ , 800 to 1500  $\mu\text{g}$ , 800 to 1750  $\mu\text{g}$ , 800 to 2000  $\mu\text{g}$ , 800 to 2250  $\mu\text{g}$ , 800 to 2500  $\mu\text{g}$ , 800 to 2750  $\mu\text{g}$ , 800 to 3000  $\mu\text{g}$ , 900 to 1000  $\mu\text{g}$ , 900 to 1250  $\mu\text{g}$ , 900 to 1500  $\mu\text{g}$ , 900 to 1750  $\mu\text{g}$ , 900 to 2000  $\mu\text{g}$ , 900 to 2250  $\mu\text{g}$ , 900 to 2500  $\mu\text{g}$ , 900 to 2750  $\mu\text{g}$ , 900 to 3000  $\mu\text{g}$ , 1000 to 1250  $\mu\text{g}$ , 1000 to 1500  $\mu\text{g}$ , 1000 to 1750  $\mu\text{g}$ , 1000 to 2000  $\mu\text{g}$ , 1000 to 2250  $\mu\text{g}$ , 1000 to 2500  $\mu\text{g}$ , 1000 to 2750  $\mu\text{g}$ , 1000 to 3000  $\mu\text{g}$ , 2 to 500  $\mu\text{g}$ , 50 to 500  $\mu\text{g}$ , 3 to 100  $\mu\text{g}$ , 5 to 20  $\mu\text{g}$ , 5 to 100  $\mu\text{g}$ , 50  $\mu\text{g}$ , 100  $\mu\text{g}$ , 150  $\mu\text{g}$ , 200  $\mu\text{g}$ , 250  $\mu\text{g}$ , 300  $\mu\text{g}$ , 350  $\mu\text{g}$ , 400  $\mu\text{g}$ , 450  $\mu\text{g}$ , 500  $\mu\text{g}$ , 550  $\mu\text{g}$ , 600  $\mu\text{g}$ , 650  $\mu\text{g}$ , 700  $\mu\text{g}$ , 750  $\mu\text{g}$ , 800  $\mu\text{g}$ , 850  $\mu\text{g}$ , 900  $\mu\text{g}$ , 950  $\mu\text{g}$ , 1000  $\mu\text{g}$ , 1050  $\mu\text{g}$ , 1100  $\mu\text{g}$ , 1150  $\mu\text{g}$ , 1200  $\mu\text{g}$ , 1250  $\mu\text{g}$ , 1300  $\mu\text{g}$ , 1350  $\mu\text{g}$ , 1400  $\mu\text{g}$ , 1450  $\mu\text{g}$ , 1500  $\mu\text{g}$ , 1550  $\mu\text{g}$ , 1600  $\mu\text{g}$ , 1650  $\mu\text{g}$ , 1700  $\mu\text{g}$ , 1750  $\mu\text{g}$ , 1800  $\mu\text{g}$ , 1850  $\mu\text{g}$ , 1900  $\mu\text{g}$ , 1950  $\mu\text{g}$ , 2000  $\mu\text{g}$ , 2050  $\mu\text{g}$ , 2100  $\mu\text{g}$ , 2150  $\mu\text{g}$ , 2200  $\mu\text{g}$ , 2250  $\mu\text{g}$ , 2300  $\mu\text{g}$ , 2350  $\mu\text{g}$ , 2400  $\mu\text{g}$ , 2450  $\mu\text{g}$ , 2500  $\mu\text{g}$ , 2550  $\mu\text{g}$ , 2600  $\mu\text{g}$ , 2650  $\mu\text{g}$ , 2700  $\mu\text{g}$ , 2750  $\mu\text{g}$ , 2800  $\mu\text{g}$ , 2850  $\mu\text{g}$ , 2900  $\mu\text{g}$ , 2950  $\mu\text{g}$ , 3000  $\mu\text{g}$ , 3250  $\mu\text{g}$ , 3500  $\mu\text{g}$ , 3750  $\mu\text{g}$ , 4000  $\mu\text{g}$ , 4250  $\mu\text{g}$ , 4500  $\mu\text{g}$ , 4750  $\mu\text{g}$ , 5000  $\mu\text{g}$  of a peptide or agonist described herein and from 50 mg to 500 mg (e.g. 50 mg, 75 mg, 100 mg, 125 mg, 135 mg, 150 mg, 175 mg, 200 mg, 225 mg, 250 mg, 275 mg, 300 mg, 325 mg, 350 mg, 375 mg, 400 mg, 425 mg, 450 mg, 475 mg, 500 mg) of mebeverine (DUSPATAL®, DUSPATALIN®, COLOFAC MR®, COLOTAL®).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30  $\mu\text{g}$ , 1 to 40  $\mu\text{g}$ , 1 to 50  $\mu\text{g}$ , 1 to 100  $\mu\text{g}$ , 1 to 200  $\mu\text{g}$ , 1 to 300  $\mu\text{g}$ , 1 to 400  $\mu\text{g}$ , 1 to 500  $\mu\text{g}$ , 1 to 600  $\mu\text{g}$ , 1 to 700  $\mu\text{g}$ , 1 to 800  $\mu\text{g}$ , 1 to 900  $\mu\text{g}$ , 1 to 1000  $\mu\text{g}$ , 10 to 30  $\mu\text{g}$ , 10 to 40  $\mu\text{g}$ , 10 to 50  $\mu\text{g}$ , 10 to 100  $\mu\text{g}$ , 10 to 200  $\mu\text{g}$ , 10 to 300  $\mu\text{g}$ , 10 to 400  $\mu\text{g}$ , 10 to 500  $\mu\text{g}$ , 10 to 600  $\mu\text{g}$ , 10 to 700  $\mu\text{g}$ , 10 to 800  $\mu\text{g}$ , 10 to 900  $\mu\text{g}$ , 10 to 1000  $\mu\text{g}$ , 100 to 200  $\mu\text{g}$ , 100 to 300  $\mu\text{g}$ , 100 to 400  $\mu\text{g}$ , 100 to 500  $\mu\text{g}$ , 100 to 600  $\mu\text{g}$ , 100 to 700  $\mu\text{g}$ , 100 to 800  $\mu\text{g}$ , 100 to 900  $\mu\text{g}$ , 100 to 1000  $\mu\text{g}$ , 100 to 1250  $\mu\text{g}$ , 100 to 1500  $\mu\text{g}$ , 100 to 1750  $\mu\text{g}$ , 100 to 2000  $\mu\text{g}$ , 100 to 2250  $\mu\text{g}$ , 100 to 2500  $\mu\text{g}$ , 100 to 2750  $\mu\text{g}$ , 100 to 3000  $\mu\text{g}$ , 200 to 300  $\mu\text{g}$ , 200 to 400  $\mu\text{g}$ , 200 to 500  $\mu\text{g}$ , 200 to 600  $\mu\text{g}$ , 200 to 700  $\mu\text{g}$ , 200 to 800  $\mu\text{g}$ , 200 to 900  $\mu\text{g}$ , 200 to 1000  $\mu\text{g}$ , 200 to 1250  $\mu\text{g}$ , 200 to 1500  $\mu\text{g}$ , 200 to 1750  $\mu\text{g}$ , 200 to 2000  $\mu\text{g}$ , 200 to 2250  $\mu\text{g}$ , 200 to 2500  $\mu\text{g}$ , 200 to 2750  $\mu\text{g}$ , 200 to 3000  $\mu\text{g}$ , 300 to 400  $\mu\text{g}$ , 300 to 500  $\mu\text{g}$ , 300 to 600  $\mu\text{g}$ , 300 to 700  $\mu\text{g}$ , 300 to 800  $\mu\text{g}$ , 300 to 900  $\mu\text{g}$ , 300 to 1000  $\mu\text{g}$ , 300 to 1250  $\mu\text{g}$ ,

300 to 1500 µg, 300 to 1750 µg, 300 to 2000 µg, 300 to 2250 µg, 300 to 2500 µg, 300 to 2750 µg, 300 to 3000 µg, 400 to 500 µg, 400 to 600 µg, 400 to 700 µg, 400 to 800 µg, 400 to 900 µg, 400 to 1000 µg, 400 to 1250 µg, 400 to 1500 µg, 400 to 1750 µg, 400 to 2000 µg, 400 to 2250 µg, 400 to 2500 µg, 400 to 2750 µg, 400 to 3000 µg, 500 to 600 µg, 500 to 700 µg, 500 to 800 µg, 500 to 900 µg, 500 to 1000 µg, 500 to 1250 µg, 500 to 1500 µg, 500 to 1750 µg, 500 to 2000 µg, 500 to 2250 µg, 500 to 2500 µg, 500 to 2750 µg, 500 to 3000 µg, 600 to 700 µg, 600 to 800 µg, 600 to 900 µg, 600 to 1000 µg, 600 to 1250 µg, 600 to 1500 µg, 600 to 1750 µg, 600 to 2000 µg, 600 to 2250 µg, 600 to 2500 µg, 600 to 2750 µg, 600 to 3000 µg, 700 to 800 µg, 700 to 900 µg, 700 to 1000 µg, 700 to 1250 µg, 700 to 1500 µg, 700 to 1750 µg, 700 to 2000 µg, 700 to 2250 µg, 700 to 2500 µg, 700 to 2750 µg, 700 to 3000 µg, 800 to 900 µg, 800 to 1000 µg, 800 to 1250 µg, 800 to 1500 µg, 800 to 1750 µg, 800 to 2000 µg, 800 to 2250 µg, 800 to 2500 µg, 800 to 2750 µg, 800 to 3000 µg, 900 to 1000 µg, 900 to 1250 µg, 900 to 1500 µg, 900 to 1750 µg, 900 to 2000 µg, 900 to 2250 µg, 900 to 2500 µg, 900 to 2750 µg, 900 to 3000 µg, 1000 to 1250 µg, 1000 to 1500 µg, 1000 to 1750 µg, 1000 to 2000 µg, 1000 to 2250 µg, 1000 to 2500 µg, 1000 to 2750 µg, 1000 to 3000 µg, 2 to 500 µg, 50 to 500 µg, 3 to 100 µg, 5 to 20 µg, 5 to 100 µg, 50 µg, 100 µg, 150 µg, 200 µg, 250 µg, 300 µg, 350 µg, 400 µg, 450 µg, 500 µg, 550 µg, 600 µg, 650 µg, 700 µg, 750 µg, 800 µg, 850 µg, 900 µg, 950 µg, 1000 µg, 1050 µg, 1100 µg, 1150 µg, 1200 µg, 1250 µg, 1300 µg, 1350 µg, 1400 µg, 1450 µg, 1500 µg, 1550 µg, 1600 µg, 1650 µg, 1700 µg, 1750 µg, 1800 µg, 1850 µg, 1900 µg, 1950 µg, 2000 µg, 2050 µg, 2100 µg, 2150 µg, 2200 µg, 2250 µg, 2300 µg, 2350 µg, 2400 µg, 2450 µg, 2500 µg, 2550 µg, 2600 µg, 2650 µg, 2700 µg, 2750 µg, 2800 µg, 2850 µg, 2900 µg, 2950 µg, 3000 µg, 3250 µg, 3500 µg, 3750 µg, 4000 µg, 4250 µg, 4500 µg, 4750 µg, 5000 µg of a peptide or agonist described herein and from 1 mg to 120 mg (e.g. 1 mg, 2.5 mg, 5 mg, 7.5 mg, 10 mg, 12.5 mg, 15 mg, 20 mg, 25 mg, 30 mg, 40 mg, 50 mg, 60 mg, 70 mg, 80 mg, 90 mg, 100 mg, 110 mg, 120 mg) of Propanthiline bromide (Pro-Banthine®).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30 µg, 1 to 40 µg, 1 to 50 µg, 1 to 100 µg, 1 to 200 µg, 1 to 300 µg, 1 to 400 µg, 1 to 500 µg, 1 to 600 µg, 1 to 700 µg, 1 to 800 µg, 1 to 900 µg, 1 to 1000 µg, 10 to 30 µg, 10 to 40 µg, 10 to 50 µg, 10 to 100 µg, 10 to 200 µg, 10 to 300 µg, 10 to 400 µg, 10 to 500 µg, 10 to 600 µg, 10 to 700 µg, 10 to 800 µg, 10



to 900  $\mu\text{g}$ , 10 to 1000  $\mu\text{g}$ , 100 to 200  $\mu\text{g}$ , 100 to 300  $\mu\text{g}$ , 100 to 400  $\mu\text{g}$ , 100 to 500  $\mu\text{g}$ , 100 to 600  $\mu\text{g}$ , 100 to 700  $\mu\text{g}$ , 100 to 800  $\mu\text{g}$ , 100 to 900  $\mu\text{g}$ , 100 to 1000  $\mu\text{g}$ , 100 to 1250  $\mu\text{g}$ , 100 to 1500  $\mu\text{g}$ , 100 to 1750  $\mu\text{g}$ , 100 to 2000  $\mu\text{g}$ , 100 to 2250  $\mu\text{g}$ , 100 to 2500  $\mu\text{g}$ , 100 to 2750  $\mu\text{g}$ , 100 to 3000  $\mu\text{g}$ , 200 to 300  $\mu\text{g}$ , 200 to 400  $\mu\text{g}$ , 200 to 500  $\mu\text{g}$ , 200 to 600  $\mu\text{g}$ , 200 to 700  $\mu\text{g}$ , 200 to 800  $\mu\text{g}$ , 200 to 900  $\mu\text{g}$ , 200 to 1000  $\mu\text{g}$ , 200 to 1250  $\mu\text{g}$ , 200 to 1500  $\mu\text{g}$ , 200 to 1750  $\mu\text{g}$ , 200 to 2000  $\mu\text{g}$ , 200 to 2250  $\mu\text{g}$ , 200 to 2500  $\mu\text{g}$ , 200 to 2750  $\mu\text{g}$ , 200 to 3000  $\mu\text{g}$ , 300 to 400  $\mu\text{g}$ , 300 to 500  $\mu\text{g}$ , 300 to 600  $\mu\text{g}$ , 300 to 700  $\mu\text{g}$ , 300 to 800  $\mu\text{g}$ , 300 to 900  $\mu\text{g}$ , 300 to 1000  $\mu\text{g}$ , 300 to 1250  $\mu\text{g}$ , 300 to 1500  $\mu\text{g}$ , 300 to 1750  $\mu\text{g}$ , 300 to 2000  $\mu\text{g}$ , 300 to 2250  $\mu\text{g}$ , 300 to 2500  $\mu\text{g}$ , 300 to 2750  $\mu\text{g}$ , 300 to 3000  $\mu\text{g}$ , 400 to 500  $\mu\text{g}$ , 400 to 600  $\mu\text{g}$ , 400 to 700  $\mu\text{g}$ , 400 to 800  $\mu\text{g}$ , 400 to 900  $\mu\text{g}$ , 400 to 1000  $\mu\text{g}$ , 400 to 1250  $\mu\text{g}$ , 400 to 1500  $\mu\text{g}$ , 400 to 1750  $\mu\text{g}$ , 400 to 2000  $\mu\text{g}$ , 400 to 2250  $\mu\text{g}$ , 400 to 2500  $\mu\text{g}$ , 400 to 2750  $\mu\text{g}$ , 400 to 3000  $\mu\text{g}$ , 500 to 600  $\mu\text{g}$ , 500 to 700  $\mu\text{g}$ , 500 to 800  $\mu\text{g}$ , 500 to 900  $\mu\text{g}$ , 500 to 1000  $\mu\text{g}$ , 500 to 1250  $\mu\text{g}$ , 500 to 1500  $\mu\text{g}$ , 500 to 1750  $\mu\text{g}$ , 500 to 2000  $\mu\text{g}$ , 500 to 2250  $\mu\text{g}$ , 500 to 2500  $\mu\text{g}$ , 500 to 2750  $\mu\text{g}$ , 500 to 3000  $\mu\text{g}$ , 600 to 700  $\mu\text{g}$ , 600 to 800  $\mu\text{g}$ , 600 to 900  $\mu\text{g}$ , 600 to 1000  $\mu\text{g}$ , 600 to 1250  $\mu\text{g}$ , 600 to 1500  $\mu\text{g}$ , 600 to 1750  $\mu\text{g}$ , 600 to 2000  $\mu\text{g}$ , 600 to 2250  $\mu\text{g}$ , 600 to 2500  $\mu\text{g}$ , 600 to 2750  $\mu\text{g}$ , 600 to 3000  $\mu\text{g}$ , 700 to 800  $\mu\text{g}$ , 700 to 900  $\mu\text{g}$ , 700 to 1000  $\mu\text{g}$ , 700 to 1250  $\mu\text{g}$ , 700 to 1500  $\mu\text{g}$ , 700 to 1750  $\mu\text{g}$ , 700 to 2000  $\mu\text{g}$ , 700 to 2250  $\mu\text{g}$ , 700 to 2500  $\mu\text{g}$ , 700 to 2750  $\mu\text{g}$ , 700 to 3000  $\mu\text{g}$ , 800 to 900  $\mu\text{g}$ , 800 to 1000  $\mu\text{g}$ , 800 to 1250  $\mu\text{g}$ , 800 to 1500  $\mu\text{g}$ , 800 to 1750  $\mu\text{g}$ , 800 to 2000  $\mu\text{g}$ , 800 to 2250  $\mu\text{g}$ , 800 to 2500  $\mu\text{g}$ , 800 to 2750  $\mu\text{g}$ , 800 to 3000  $\mu\text{g}$ , 900 to 1000  $\mu\text{g}$ , 900 to 1250  $\mu\text{g}$ , 900 to 1500  $\mu\text{g}$ , 900 to 1750  $\mu\text{g}$ , 900 to 2000  $\mu\text{g}$ , 900 to 2250  $\mu\text{g}$ , 900 to 2500  $\mu\text{g}$ , 900 to 2750  $\mu\text{g}$ , 900 to 3000  $\mu\text{g}$ , 1000 to 1250  $\mu\text{g}$ , 1000 to 1500  $\mu\text{g}$ , 1000 to 1750  $\mu\text{g}$ , 1000 to 2000  $\mu\text{g}$ , 1000 to 2250  $\mu\text{g}$ , 1000 to 2500  $\mu\text{g}$ , 1000 to 2750  $\mu\text{g}$ , 1000 to 3000  $\mu\text{g}$ , 2 to 500  $\mu\text{g}$ , 50 to 500  $\mu\text{g}$ , 3 to 100  $\mu\text{g}$ , 5 to 20  $\mu\text{g}$ , 5 to 100  $\mu\text{g}$ , 50  $\mu\text{g}$ , 100  $\mu\text{g}$ , 150  $\mu\text{g}$ , 200  $\mu\text{g}$ , 250  $\mu\text{g}$ , 300  $\mu\text{g}$ , 350  $\mu\text{g}$ , 400  $\mu\text{g}$ , 450  $\mu\text{g}$ , 500  $\mu\text{g}$ , 550  $\mu\text{g}$ , 600  $\mu\text{g}$ , 650  $\mu\text{g}$ , 700  $\mu\text{g}$ , 750  $\mu\text{g}$ , 800  $\mu\text{g}$ , 850  $\mu\text{g}$ , 900  $\mu\text{g}$ , 950  $\mu\text{g}$ , 1000  $\mu\text{g}$ , 1050  $\mu\text{g}$ , 1100  $\mu\text{g}$ , 1150  $\mu\text{g}$ , 1200  $\mu\text{g}$ , 1250  $\mu\text{g}$ , 1300  $\mu\text{g}$ , 1350  $\mu\text{g}$ , 1400  $\mu\text{g}$ , 1450  $\mu\text{g}$ , 1500  $\mu\text{g}$ , 1550  $\mu\text{g}$ , 1600  $\mu\text{g}$ , 1650  $\mu\text{g}$ , 1700  $\mu\text{g}$ , 1750  $\mu\text{g}$ , 1800  $\mu\text{g}$ , 1850  $\mu\text{g}$ , 1900  $\mu\text{g}$ , 1950  $\mu\text{g}$ , 2000  $\mu\text{g}$ , 2050  $\mu\text{g}$ , 2100  $\mu\text{g}$ , 2150  $\mu\text{g}$ , 2200  $\mu\text{g}$ , 2250  $\mu\text{g}$ , 2300  $\mu\text{g}$ , 2350  $\mu\text{g}$ , 2400  $\mu\text{g}$ , 2450  $\mu\text{g}$ , 2500  $\mu\text{g}$ , 2550  $\mu\text{g}$ , 2600  $\mu\text{g}$ , 2650  $\mu\text{g}$ , 2700  $\mu\text{g}$ , 2750  $\mu\text{g}$ , 2800  $\mu\text{g}$ , 2850  $\mu\text{g}$ , 2900  $\mu\text{g}$ , 2950  $\mu\text{g}$ , 3000  $\mu\text{g}$ , 3250  $\mu\text{g}$ , 3500  $\mu\text{g}$ , 3750  $\mu\text{g}$ , 4000  $\mu\text{g}$ , 4250  $\mu\text{g}$ , 4500  $\mu\text{g}$ , 4750  $\mu\text{g}$ , 5000  $\mu\text{g}$  of a peptide or agonist described herein and from 100  $\mu\text{g}$  to 5000  $\mu\text{g}$  (e.g. 100  $\mu\text{g}$ , 200  $\mu\text{g}$ , 300  $\mu\text{g}$ , 400  $\mu\text{g}$ , 500  $\mu\text{g}$ , 600  $\mu\text{g}$ , 700  $\mu\text{g}$ , 800  $\mu\text{g}$ , 900  $\mu\text{g}$ ,

1000 µg, 1250 µg, 1500 µg, 1750 µg, 2000 µg, 2250 µg, 2500 µg, 2750 µg, 3000 µg, 3500 µg, 4000 µg, 4500 µg, 5000 µg) of Granisetron (Kytrel®).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30 µg, 1 to 40 µg, 1 to 50 µg, 1 to 100 µg, 1 to 200 µg, 1 to 300 µg, 1 to 400 µg, 1 to 500 µg, 1 to 600 µg, 1 to 700 µg, 1 to 800 µg, 1 to 900 µg, 1 to 1000 µg, 10 to 30 µg, 10 to 40 µg, 10 to 50 µg, 10 to 100 µg, 10 to 200 µg, 10 to 300 µg, 10 to 400 µg, 10 to 500 µg, 10 to 600 µg, 10 to 700 µg, 10 to 800 µg, 10 to 900 µg, 10 to 1000 µg, 100 to 200 µg, 100 to 300 µg, 100 to 400 µg, 100 to 500 µg, 100 to 600 µg, 100 to 700 µg, 100 to 800 µg, 100 to 900 µg, 100 to 1000 µg, 100 to 1250 µg, 100 to 1500 µg, 100 to 1750 µg, 100 to 2000 µg, 100 to 2250 µg, 100 to 2500 µg, 100 to 2750 µg, 100 to 3000 µg, 200 to 300 µg, 200 to 400 µg, 200 to 500 µg, 200 to 600 µg, 200 to 700 µg, 200 to 800 µg, 200 to 900 µg, 200 to 1000 µg, 200 to 1250 µg, 200 to 1500 µg, 200 to 1750 µg, 200 to 2000 µg, 200 to 2250 µg, 200 to 2500 µg, 200 to 2750 µg, 200 to 3000 µg, 300 to 400 µg, 300 to 500 µg, 300 to 600 µg, 300 to 700 µg, 300 to 800 µg, 300 to 900 µg, 300 to 1000 µg, 300 to 1250 µg, 300 to 1500 µg, 300 to 1750 µg, 300 to 2000 µg, 300 to 2250 µg, 300 to 2500 µg, 300 to 2750 µg, 300 to 3000 µg, 400 to 500 µg, 400 to 600 µg, 400 to 700 µg, 400 to 800 µg, 400 to 900 µg, 400 to 1000 µg, 400 to 1250 µg, 400 to 1500 µg, 400 to 1750 µg, 400 to 2000 µg, 400 to 2250 µg, 400 to 2500 µg, 400 to 2750 µg, 400 to 3000 µg, 500 to 600 µg, 500 to 700 µg, 500 to 800 µg, 500 to 900 µg, 500 to 1000 µg, 500 to 1250 µg, 500 to 1500 µg, 500 to 1750 µg, 500 to 2000 µg, 500 to 2250 µg, 500 to 2500 µg, 500 to 2750 µg, 500 to 3000 µg, 600 to 700 µg, 600 to 800 µg, 600 to 900 µg, 600 to 1000 µg, 600 to 1250 µg, 600 to 1500 µg, 600 to 1750 µg, 600 to 2000 µg, 600 to 2250 µg, 600 to 2500 µg, 600 to 2750 µg, 600 to 3000 µg, 700 to 800 µg, 700 to 900 µg, 700 to 1000 µg, 700 to 1250 µg, 700 to 1500 µg, 700 to 1750 µg, 700 to 2000 µg, 700 to 2250 µg, 700 to 2500 µg, 700 to 2750 µg, 700 to 3000 µg, 800 to 900 µg, 800 to 1000 µg, 800 to 1250 µg, 800 to 1500 µg, 800 to 1750 µg, 800 to 2000 µg, 800 to 2250 µg, 800 to 2500 µg, 800 to 2750 µg, 800 to 3000 µg, 900 to 1000 µg, 900 to 1250 µg, 900 to 1500 µg, 900 to 1750 µg, 900 to 2000 µg, 900 to 2250 µg, 900 to 2500 µg, 900 to 2750 µg, 900 to 3000 µg, 1000 to 1250 µg, 1000 to 1500 µg, 1000 to 1750 µg, 1000 to 2000 µg, 1000 to 2250 µg, 1000 to 2500 µg, 1000 to 2750 µg, 1000 to 3000 µg, 2 to 500 µg, 5 to 500 µg, 3 to 100 µg, 5 to 20 µg, 5 to 100 µg, 50 µg, 100 µg, 150 µg, 200 µg, 250 µg, 300 µg, 350 µg, 400 µg, 450 µg, 500 µg, 550 µg, 600 µg,

650 µg, 700 µg, 750 µg, 800 µg, 850 µg, 900 µg, 950 µg, 1000 µg, 1050 µg, 1100 µg, 1150 µg, 1200 µg, 1250 µg, 1300 µg, 1350 µg, 1400 µg, 1450 µg, 1500 µg, 1550 µg, 1600 µg, 1650 µg, 1700 µg, 1750 µg, 1800 µg, 1850 µg, 1900 µg, 1950 µg, 2000 µg, 2050 µg, 2100 µg, 2150 µg, 2200 µg, 2250 µg, 2300 µg, 2350 µg, 2400 µg, 2450 µg, 2500 µg, 2550 µg, 2600 µg, 2650 µg, 2700 µg, 2750 µg, 2800 µg, 2850 µg, 2900 µg, 2950 µg, 3000 µg, 3250 µg, 3500 µg, 3750 µg, 4000 µg, 4250 µg, 4500 µg, 4750 µg, 5000 µg of a peptide or agonist described herein and from 50 µg to 3000 µg (e.g. 50 µg, 100 µg, 200 µg, 300 µg, 400 µg, 500 µg, 600 µg, 700 µg, 800 µg, 900 µg, 1000 µg, 1250 µg, 1500 µg, 1750 µg, 2000 µg, 2250 µg, 2500 µg, 2750 µg, 3000 µg) of Lotronex ® (alosetron hydrochloride).

A dosage unit (e.g. an oral dosage unit) can include, for example, from 1 to 30 µg, 1 to 40 µg, 1 to 50 µg, 1 to 100 µg, 1 to 200 µg, 1 to 300 µg, 1 to 400 µg, 1 to 500 µg, 1 to 600 µg, 1 to 700 µg, 1 to 800 µg, 1 to 900 µg, 1 to 1000 µg, 10 to 30 µg, 10 to 40 µg, 10 to 50 µg, 10 to 100 µg, 10 to 200 µg, 10 to 300 µg, 10 to 400 µg, 10 to 500 µg, 10 to 600 µg, 10 to 700 µg, 10 to 800 µg, 10 to 900 µg, 10 to 1000 µg, 100 to 200 µg, 100 to 300 µg, 100 to 400 µg, 100 to 500 µg, 100 to 600 µg, 100 to 700 µg, 100 to 800 µg, 100 to 900 µg, 100 to 1000 µg, 100 to 1250 µg, 100 to 1500 µg, 100 to 1750 µg, 100 to 2000 µg, 100 to 2250 µg, 100 to 2500 µg, 100 to 2750 µg, 100 to 3000 µg, 200 to 300 µg, 200 to 400 µg, 200 to 500 µg, 200 to 600 µg, 200 to 700 µg, 200 to 800 µg, 200 to 900 µg, 200 to 1000 µg, 200 to 1250 µg, 200 to 1500 µg, 200 to 1750 µg, 200 to 2000 µg, 200 to 2250 µg, 200 to 2500 µg, 200 to 2750 µg, 200 to 3000 µg, 300 to 400 µg, 300 to 500 µg, 300 to 600 µg, 300 to 700 µg, 300 to 800 µg, 300 to 900 µg, 300 to 1000 µg, 300 to 1250 µg, 300 to 1500 µg, 300 to 1750 µg, 300 to 2000 µg, 300 to 2250 µg, 300 to 2500 µg, 300 to 2750 µg, 300 to 3000 µg, 400 to 500 µg, 400 to 600 µg, 400 to 700 µg, 400 to 800 µg, 400 to 900 µg, 400 to 1000 µg, 400 to 1250 µg, 400 to 1500 µg, 400 to 1750 µg, 400 to 2000 µg, 400 to 2250 µg, 400 to 2500 µg, 400 to 2750 µg, 400 to 3000 µg, 500 to 600 µg, 500 to 700 µg, 500 to 800 µg, 500 to 900 µg, 500 to 1000 µg, 500 to 1250 µg, 500 to 1500 µg, 500 to 1750 µg, 500 to 2000 µg, 500 to 2250 µg, 500 to 2500 µg, 500 to 2750 µg, 500 to 3000 µg, 600 to 700 µg, 600 to 800 µg, 600 to 900 µg, 600 to 1000 µg, 600 to 1250 µg, 600 to 1500 µg, 600 to 1750 µg, 600 to 2000 µg, 600 to 2250 µg, 600 to 2500 µg, 600 to 2750 µg, 600 to 3000 µg, 700 to 800 µg, 700 to 900 µg, 700 to 1000 µg, 700 to 1250 µg, 700 to 1500 µg, 700 to 1750 µg, 700 to 2000 µg, 700 to

2250 µg, 700 to 2500 µg, 700 to 2750 µg, 700 to 3000 µg, 800 to 900 µg, 800 to 1000 µg, 800 to 1250 µg, 800 to 1500 µg, 800 to 1750 µg, 800 to 2000 µg, 800 to 2250 µg, 800 to 2500 µg, 800 to 2750 µg, 800 to 3000 µg, 900 to 1000 µg, 900 to 1250 µg, 900 to 1500 µg, 900 to 1750 µg, 900 to 2000 µg, 900 to 2250 µg, 900 to 2500 µg, 900 to 2750 µg, 900 to 3000 µg, 1000 to 1250 µg, 1000 to 1500 µg, 1000 to 1750 µg, 1000 to 2000 µg, 1000 to 2250 µg, 1000 to 2500 µg, 1000 to 2750 µg, 1000 to 3000 µg, 2 to 500 µg, 50 to 500 µg, 3 to 100 µg, 5 to 20 µg, 5 to 100 µg, 50 µg, 100 µg, 150 µg, 200 µg, 250 µg, 300 µg, 350 µg, 400 µg, 450 µg, 500 µg, 550 µg, 600 µg, 650 µg, 700 µg, 750 µg, 800 µg, 850 µg, 900 µg, 950 µg, 1000 µg, 1050 µg, 1100 µg, 1150 µg, 1200 µg, 1250 µg, 1300 µg, 1350 µg, 1400 µg, 1450 µg, 1500 µg, 1550 µg, 1600 µg, 1650 µg, 1700 µg, 1750 µg, 1800 µg, 1850 µg, 1900 µg, 1950 µg, 2000 µg, 2050 µg, 2100 µg, 2150 µg, 2200 µg, 2250 µg, 2300 µg, 2350 µg, 2400 µg, 2450 µg, 2500 µg, 2550 µg, 2600 µg, 2650 µg, 2700 µg, 2750 µg, 2800 µg, 2850 µg, 2900 µg, 2950 µg, 3000 µg, 3250 µg, 3500 µg, 3750 µg, 4000 µg, 4250 µg, 4500 µg, 4750 µg, 5000 µg of a peptide or agonist described herein and from 10 mg to 600 mg (e.g. 10 mg, 20 mg, 30 mg, 40 mg, 50 mg, 60 mg, 70 mg, 80 mg, 90 mg, 100 mg, 125 mg, 150 mg, 175 mg, 200 mg, 250 mg, 300 mg, 350 mg, 400 mg, 450 mg, 500 mg, 550 mg, 600 mg) of Xifaxan® (rifaximin).

The precise amount of each of the two or more active ingredients in a dosage unit will depend on the desired dosage of each component. Thus, it can be useful to create a dosage unit that will, when administered according to a particular dosage schedule (e.g., a dosage schedule specifying a certain number of units and a particular timing for administration), deliver the same dosage of each component as would be administered if the patient was being treated with only a single component. In other circumstances, it might be desirable to create a dosage unit that will deliver a dosage of one or more components that is less than that which would be administered if the patient was being treated only with a single component. Finally, it might be desirable to create a dosage unit that will deliver a dosage of one or more components that is greater than that which would be administered if the patient was being treated only with a single component. The pharmaceutical composition can include additional ingredients including but not limited to the excipients described herein. In certain embodiments, one or more therapeutic agents of the dosage unit may exist in an extended or control release formulation and additional therapeutic

agents may not exist in extended release formulation. For example, a peptide or agonist described herein may exist in a controlled release formulation or extended release formulation in the same dosage unit with another agent that may or may not be in either a controlled release or extended release formulation. Thus, in certain embodiments, it may be desirable to provide for the immediate release of one or more of the agents described herein, and the controlled release of one or more other agents.

In certain embodiments the dosage unit and daily dose are equivalent. In certain embodiments the dosage unit and the daily dose are not equivalent. In various embodiments, the dosage unit is administered twenty minutes prior to food consumption, twenty minutes after food consumption, with food at anytime of the day, without food at anytime of the day, with food after an overnight fast (e.g. with breakfast), at bedtime after a low fat snack. In various embodiments, the dosage unit is administered once a day, twice a day, three times a day, four times a day, five times a day, six times a day.

When two or more active ingredients are combined in single dosage form, chemical interactions between the active ingredients may occur. For example, acidic and basic active ingredients can react with each other and acidic active ingredients can facilitate the degradation of acid labile substances. Thus, in certain dosage forms, acidic and basic substances can be physically separated as two distinct or isolated layers in a compressed tablet, or in the core and shell of a press-coated tablet. Additional agents that are compatible with acidic as well as basic substances, have the flexibility of being placed in either layer. In certain multiple layer compositions at least one active ingredient can be enteric-coated. In certain embodiments thereof at least one active ingredient can be presented in a controlled release form. In certain embodiments where a combination of three or more active substances are used, they can be presented as physically isolated segments of a compressed multilayer tablet, which can be optionally film coated.

The therapeutic combinations described herein can be formulated as a tablet or capsule comprising a plurality of beads, granules, or pellets. All active ingredients including the vitamins of the combination are formulated into granules or beads or pellets that are further

coated with a protective coat, an enteric coat, or a film coat to avoid the possible chemical interactions. Granulation and coating of granules or beads is done using techniques well known to a person skilled in the art. At least one active ingredient can present in a controlled release form. Finally these coated granules or beads are filled into hard gelatin capsules or compressed to form tablets.

The therapeutic combinations described herein can be formulated as a capsule comprising microtablets or minitables of all active ingredients. Microtablets of the individual agents can be prepared using well known pharmaceutical procedures of tablet making like direct compression, dry granulation or wet granulation. Individual microtablets can be filled into hard gelatin capsules. A final dosage form may comprise one or more microtablets of each individual component. The microtablets may be film coated or enteric coated.

The therapeutic combinations described herein can be formulated as a capsule comprising one or more microtablets and powder, or one or more microtablets and granules or beads. In order to avoid interactions between drugs, some active ingredients of a said combination can be formulated as microtablets and the others filled into capsules as a powder, granules, or beads. The microtablets may be film coated or enteric coated. At least one active ingredient can be presented in controlled release form.

The therapeutic combinations described herein can be formulated wherein the active ingredients are distributed in the inner and outer phase of tablets. In an attempt to divide chemically incompatible components of proposed combination, few interacting components are converted in granules or beads using well known pharmaceutical procedures in prior art. The prepared granules or beads (inner phase) are then mixed with outer phase comprising the remaining active ingredients and at least one pharmaceutically acceptable excipient. The mixture thus comprising inner and outer phase is compressed into tablets or molded into tablets. The granules or beads can be controlled release or immediate release beads or granules, and can further be coated using an enteric polymer in an aqueous or non-aqueous system, using methods and materials that are known in the art.

The therapeutic combinations described herein can be formulated as single dosage unit comprising suitable buffering agent. All powdered ingredients of said combination are mixed and a suitable quantity of one or more buffering agents is added to the blend to minimize possible interactions.

The agents described herein, alone or in combination, can be combined with any pharmaceutically acceptable carrier or medium. Thus, they can be combined with materials that do not produce an adverse, allergic or otherwise unwanted reaction when administered to a patient. The carriers or mediums used can include solvents, dispersants, coatings, absorption promoting agents, controlled release agents, and one or more inert excipients (which include starches, polyols, granulating agents, microcrystalline cellulose, diluents, lubricants, binders, disintegrating agents, and the like), etc. If desired, tablet dosages of the disclosed compositions may be coated by standard aqueous or nonaqueous techniques.

#### Analgesic Agents in combitherapy

The peptides and agonists described herein can be used in combination therapy with an analgesic agent, e.g., an analgesic compound or an analgesic peptide. These peptides and compounds can be administered with the peptides of the invention (simultaneously or sequentially). They can also be optionally covalently linked or attached to an agent described herein to create therapeutic conjugates. Among the useful analgesic agents are: Ca channel blockers, 5HT receptor antagonists (for example 5HT3, 5HT4 and 5HT1 receptor antagonists), opioid receptor agonists (loperamide, fedotozine, and fentanyl), NK1 receptor antagonists, CCK receptor agonists (e.g., loxiglumide), NK1 receptor antagonists, NK3 receptor antagonists, norepinephrine-serotonin reuptake inhibitors (NSRI), vanilloid and cannaboid receptor agonists, and sialorphin. Analgesics agents in the various classes are described in the literature.

Among the useful analgesic peptides are sialorphin-related peptides, including those comprising the amino acid sequence QHNPR (SEQ ID NO: ), including: VQHNPR (SEQ ID NO: ); VRQHNPR (SEQ ID NO: ); VRGQHNPR (SEQ ID NO: ); VRGPQHNPR (SEQ ID NO: );

VRGPRQHNPR (SEQ ID NO: ); VRGPRRQHNPR (SEQ ID NO: ); and RQHNPR (SEQ ID NO: ). Sialorphin-related peptides bind to neprilysin and inhibit neprilysin-mediated breakdown of substance P and Met-enkephalin. Thus, compounds or peptides that are inhibitors of neprilysin are useful analgesic agents which can be administered with the peptides of the invention in a co-therapy or linked to the peptides of the invention, e.g., by a covalent bond. Sialorphin and related peptides are described in U.S. Patent 6,589,750; U.S. 20030078200 A1; and WO 02/051435 A2.

Opioid receptor antagonists and agonists can be administered with the peptides of the invention in co-therapy or linked to the agent of the invention, e.g., by a covalent bond. For example, opioid receptor antagonists such as naloxone, naltrexone, methyl naloxone, nalmefene, cypridime, beta funaltrexamine, naloxonazine, naltrindole, and nor-binaltorphimine are thought to be useful in the treatment of IBS. It can be useful to formulate opioid antagonists of this type in a delayed and sustained release formulation such that initial release of the antagonist is in the mid to distal small intestine and/or ascending colon. Such antagonists are described in WO 01/32180 A2. Enkephalin pentapeptide (HOE825; Tyr-D-Lys-Gly-Phe-L-homoserine) is an agonist of the mu and delta opioid receptors and is thought to be useful for increasing intestinal motility (*Eur. J. Pharm.* 219:445, 1992), and this peptide can be used in conjunction with the peptides of the invention. Also useful is trimebutine which is thought to bind to mu/delta/kappa opioid receptors and activate release of motilin and modulate the release of gastrin, vasoactive intestinal peptide, gastrin and glucagons. Kappa opioid receptor agonists such as fedotozine, asimadoline, and ketocyclazocine, and compounds described in WO 03/097051 A2 can be used with or linked to the peptides of the invention. In addition, mu opioid receptor agonists such as morphine, diphenyloxylate, frakefamide (H-Tyr-D-Ala-Phe(F)-Phe-NH<sub>2</sub>; WO 01/019849 A1) and loperamide can be used.

Tyr-Arg (kyotorphin) is a dipeptide that acts by stimulating the release of met-enkephalins to elicit an analgesic effect (*J. Biol. Chem* 262:8165, 1987). Kyotorphin can be used with or linked to the peptides of the invention.



Chromogranin-derived peptide (CgA 47-66; see, e.g., Ghia et al. 2004 Regulatory Peptides 119:199) can be used with or linked to the peptides of the invention.

CCK receptor agonists such as caerulein from amphibians and other species are useful analgesic agents that can be used with or linked to the peptides of the invention.

Conotoxin peptides represent a large class of analgesic peptides that act at voltage gated Ca channels, NMDA receptors or nicotinic receptors. These peptides can be used with or linked to the peptides of the invention.

Peptide analogs of thymulin (FR Application 2830451) can have analgesic activity and can be used with or linked to the peptides of the invention.

CCK (CCKa or CCKb) receptor antagonists, including loxiglumide and dexloxiglumide (the R-isomer of loxiglumide) (WO 88/05774) can have analgesic activity and can be used with or linked to the peptides of the invention.

Other useful analgesic agents include 5-HT4 agonists such as tegaserod (Zelnorm®), mosapride, metoclopramide, zacopride, cisapride, renzapride, benzimidazolone derivatives such as BIMU 1 and BIMU 8, and lirexapride. Such agonists are described in: EP1321142 A1, WO 03/053432A1, EP 505322 A1, EP 505322 B1, US 5,510,353, EP 507672 A1, EP 507672 B1, and US 5,273,983.

Calcium channel blockers such as ziconotide and related compounds described in, for example, EP625162B1, US 5,364,842, US 5,587,454, US 5,824,645, US 5,859,186, US 5,994,305, US 6,087,091, US 6,136,786, WO 93/13128 A1, EP 1336409 A1, EP 835126 A1, EP 835126 B1, US 5,795,864, US 5,891,849, US 6,054,429, WO 97/01351 A1, can be used with or linked to the peptides of the invention.

Various antagonists of the NK-1, NK-2, and NK-3 receptors (for a review see Giardina et al. 2003 *Drugs* 6:758) can be used with or linked to the peptides of the invention.

NK1 receptor antagonists such as: aprepitant (Merck & Co Inc), vofopitant, ezlopitant (Pfizer, Inc.), R-673 (Hoffmann-La Roche Ltd), SR-48968 (Sanofi Synthelabo), CP-122,721 (Pfizer, Inc.), GW679769 (Glaxo Smith Kline), TAK-637 (Takeda/Abbot), SR-14033, and related compounds described in, for example, EP 873753 A1, US 20010006972 A1, US 20030109417 A1, WO 01/52844 A1, can be used with or linked to the peptides of the invention.

NK-2 receptor antagonists such as nepadutant (Menarini Ricerche SpA), saredutant (Sanofi-Synthelabo), GW597599 (Glaxo Smith Kline), SR-144190 (Sanofi-Synthelabo) and UK-290795 (Pfizer Inc) can be used with or linked to the peptides of the invention.

NK3 receptor antagonists such as osanetant (SR-142801; Sanofi-Synthelabo), SSR-241586, talnetant and related compounds described in, for example, WO 02/094187 A2, EP 876347 A1, WO 97/21680 A1, US 6,277,862, WO 98/11090, WO 95/28418, WO 97/19927, and Boden et al. (*J Med Chem.* 39:1664-75, 1996) can be used with or linked to the peptides of the invention.

Norepinephrine-serotonin reuptake inhibitors (NSRI) such as milnacipran and related compounds described in WO 03/077897 A1 can be used with or linked to the peptides of the invention.

Vanilloid receptor antagonists such as arvanil and related compounds described in WO 01/64212 A1 can be used with or linked to the peptides of the invention.

The analgesic peptides and compounds can be administered with the peptides and agonists of the invention (simultaneously or sequentially). The analgesic agents can also be covalently linked to the peptides and agonists of the invention to create therapeutic conjugates. Where the analgesic is a peptide and is covalently linked to an agent described herein the resulting peptide may also include at least one trypsin cleavage site. When present within the peptide, the analgesic peptide

may be preceded by (if it is at the carboxy terminus) or followed by (if it is at the amino terminus) a trypsin cleavage site that allows release of the analgesic peptide.

In addition to sialorphin-related peptides, analgesic peptides include: AspPhe, endomorphin-1, endomorphin-2, nocistatin, dalargin, lupron, ziconotide, and substance P.

#### Diabetes, Obesity and other disorders

Pharmaceutical compositions comprising at least two of: 1) an agent that stimulates the production of cAMP (e.g., glucagon-like peptide 1 (GLP-1)); 2) an agent that inhibits the degradation of a cyclic nucleotide (e.g., a phosphodiesterase inhibitor); and 3) a peptide or agonist of the invention useful for treating diabetes and obesity. Such compositions may also be useful for treating secondary hyperglycemias in connection with pancreatic diseases (chronic pancreatitis, pancreatectomy, hemochromatosis) or endocrine diseases (acromegaly, Cushing's syndrome, pheochromocytoma or hyperthyreosis), drug-induced hyperglycemias (benzothiadiazine saluretics, diazoxide or glucocorticoids), pathologic glucose tolerance, hyperglycemias, dyslipoproteinemias, adiposity, hyperlipoproteinemias and/or hypotensions. The phosphodiesterase inhibitor can be specific for a particular phosphodiesterase (e.g., Group III or Group IV) or a non-specific phosphodiesterase inhibitor, such as papaverine, theophylline, enprofyllines and/or IBMX. Specific phosphodiesterase inhibitors which inhibit group III phosphodiesterases (cGMP-inhibited phosphodiesterases), including indolidane (LY195115), cilostamide (OPC 3689), lixazinone (RS 82856), Y-590, imazodane (CI914), SKF 94120, quazinone, ICI 153,110, cilostazole, bemorandane (RWJ 22867), siguazodane (SK&F 94-836), adibendane (BM 14,478), milrinone (WIN 47203), enoximone (MDL 17043), pimobendane (UD-CG 115), MCI-154, saterinone (BDF 8634), sulmazole (ARL 115), UD-CG 212, motapizone, piroximone, and ICI 118233 can be useful. In addition, phosphodiesterase inhibitors which inhibit group IV phosphodiesterases (cAMP-specific phosphodiesterases), such as rolipram ZK 62711; pyrrolidone, imidazolidinone (RO 20-1724), etazolate (SQ 65442), denbufylline (BRL 30892), ICI63197, and RP73401 can be used.

### Other Agents for Use in Combitherapy

Also within the invention are pharmaceutical compositions comprising a peptide or agonists of the invention and a second therapeutic agent. The second therapeutic agent can be administered to treat any condition for which it is useful, including conditions that are not considered to be the primary indication for treatment with the second therapeutic agent. The second therapeutic agent can be administered simultaneously or sequentially. The second therapeutic agent can be covalently linked to the peptides and agonists of the invention to create a therapeutic conjugate. When the second therapeutic agent is another peptide, a linker including those described herein may be used between the peptide of the invention and the second therapeutic peptide.

Examples of additional therapeutic agents to treat gastrointestinal and other disorders include:

agents to treat constipation (e.g., a chloride channel activator such as the bicyclic fatty acid, Lubiprostone (formerly known as SPI-0211; Sucampo Pharmaceuticals, Inc.; Bethesda, MD), a laxative (eg. a bulk-forming laxative (e.g. nonstarch polysaccharides, Colonel Tablet (polycarbophil calcium), Plantago Ovata®, Equalactin® (Calcium Polycarbophil)), fiber (e.g. FIBERCON® (Calcium Polycarbophil), an osmotic laxative, a stimulant laxative (such as diphenylmethanes (e.g. bisacodyl), anthraquinones (e.g. cascara, senna), and surfactant laxatives (e.g. castor oil, docusates), an emollient/lubricating agent (such as mineral oil, glycerine, and docusates), MiraLax (Braintree Laboratories, Braintree MA), dexloxiglumide (Forest Laboratories, also known as CR 2017 Rottapharm (Rotta Research Laboratorium SpA)), saline laxatives, enemas, suppositories, and CR 3700 (Rottapharm (Rotta Research Laboratorium SpA));

acid reducing agents such as proton pump inhibitors (e.g., omeprazole (Prilosec®), esomeprazole (Nexium®), lansoprazole (Prevacid®), pantoprazole (Protonix®) and rabeprazole (Aciphex®)) and Histamine H<sub>2</sub>-receptor antagonist (also known as H<sub>2</sub> receptor blockers including cimetidine, ranitidine, famotidine and nizatidine);

prokinetic agents including itopride, octreotide, bethanechol, metoclopramide (Reglan®), domperidone (Motilium®), erythromycin (and derivatives thereof) or cisapride (propulsid®);

pro-motility agents such as the vasostatin-derived peptide, chromogranin A (4-16) (see, e.g., Ghia et al. 2004 Regulatory Peptides 121:31) or motilin agonists (e.g., GM-611 or mitemincinal fumarate) or nociceptin/Orphanin FQ receptor modulators (US20050169917);

complete or partial 5HT (e.g. 5HT1, 5HT2, 5HT3, 5HT4) receptor agonists or antagonists (including 5HT1A antagonists (e.g. AGI-001 (AGI therapeutics), 5HT2B antagonists (e.g. PGN1091 and PGN1164 (Pharmagene Laboratories Limited), and 5HT4 receptor agonists (such as tegaserod (ZELNORM®), prucalopride, mosapride, metoclopramide, zacopride, cisapride, renzapride, benzimidazolone derivatives such as BIMU 1 and BIMU 8, and lorexapride). Such agonists/modulators are described in: EP1321142 A1, WO 03/053432A1, EP 505322 A1, EP 505322 B1, US 5,510,353, EP 507672 A1, EP 507672 B1, US 5,273,983, and US 6,951,867); 5HT3 receptor agonists such as MKC-733; and 5HT3 receptor antagonists such as DDP-225 (MCI-225; Dynogen Pharmaceuticals, Inc.), cilansetron (Calmactin®), alosetron (Lotronex®), Ondansetron HCl (Zofran®), Dolasetron (ANZEMET®), palonosetron (Aloxi®), Granisetron (Kytril®), YM060(ramosetron; Astellas Pharma Inc.; ramosetron may be given as a daily dose of 0.002 to 0.02 mg as described in EP01588707) and ATI-7000 (Aryx Therapeutics, Santa Clara CA);

muscarinic receptor agonists;

anti-inflammatory agents;

antispasmodics including but not limited to anticholinergic drugs (like dicyclomine (e.g. Colimex®, Formulex®, Lomine®, Protylol®, Viscerol®, Spasmoban®, Bentyl®, Bentylol®), hyoscyamine (e.g. IB-Stat®, Nulev®, Levsin®, Levbid®, Levsinex Timecaps®, Levsin/SL®, Anaspaz®, A-Spas S/L®, Cystospaz®, Cystospaz-M®, Donnamar®, Colidrops Liquid Pediatric®, Gastroed®, Hyco Elixir®, Hyosol®, Hyospaz®, Hyosyne®, Losamine®, Medispaz®, Neosol®, Spacol®, Spasdel®, Symax®, Symax SL®), Donnatal (e.g. Donnatal Extentabs®), clidinium (e.g. Quarzan, in combination with Librium = Librax), methantheline (e.g. Banthine), Mepenzolate (e.g. Cantil), homatropine (e.g. hycodan, Homapin), Propantheline

bromide (e.g. Pro-Banthine), Glycopyrrolate (e.g. Robinul®, Robinul Forte®), scopolamine (e.g. Transderm-Scop®, Transderm-V®), hyosine-N-butylbromide (e.g. Buscopan®), Pirenzepine (e.g. Gastrozepin®) Propantheline Bromide (e.g. Propanthel®), dicycloverine (e.g. Merbentyl®), glycopyrronium bromide (e.g. Glycopyrrolate®), hyoscine hydrobromide, hyoscine methobromide, methanthelinium, and octatropine); peppermint oil; and direct smooth muscle relaxants like cimetropium bromide, mebeverine (DUSPATAL®, DUSPATALIN®, COLOFAC MR®, COLOTAL®), otilonium bromide (octilonium), pinaverium (e.g. Dicletel® (pinaverium bromide; Solvay S.A.)), Spasfon® (hydrated phloroglucinol and trimethylphloroglucinol) and trimebutine (including trimebutine maleate (Modulon®);

antidepressants, including but not limited to those listed herein, as well as tricyclic antidepressants like amitriptyline (Elavil®), desipramine (Norpramin®), imipramine (Tofranil®), amoxapine (Asendin®), nortriptyline; the selective serotonin reuptake inhibitors (SSRI's) like paroxetine (Paxil®), fluoxetine (Prozac®), sertraline (Zoloft®), and citalopram (Celexa®); and others like doxepin (Sinequan®) and trazodone (Desyrel®);

centrally-acting analgesic agents such as opioid receptor agonists, opioid receptor antagonists (e.g., naltrexone);

agents for the treatment of Inflammatory bowel disease;

agents for the treatment of Crohn's disease and/or ulcerative colitis (e.g., alequel (Enzo Biochem, Inc.; Farmingsale, NY), the anti-inflammatory peptide RDP58 (Genzyme, Inc.; Cambridge, MA), and TRAFICET-EN™ (ChemoCentryx, Inc.; San Carlos, CA);

agents that treat gastrointestinal or visceral pain;

agents that increase cGMP levels (as described in US20040121994) like adrenergic receptor antagonists, dopamine receptor agonists and PDE (phosphodiesterase) inhibitors including but not limited to those disclosed herein;

purgatives that draw fluids to the intestine (e.g., VISICOL®, a combination of sodium phosphate monobasic monohydrate and sodium phosphate dibasic anhydrate);

Corticotropin Releasing Factor (CRF) receptor antagonists (including NBI-34041 (Neurocrine Biosciences, San Diego, CA), CRH9-41, astressin, R121919 (Janssen Pharmaceutica), CP154,526, NBI-27914, Antalarmin, DMP696 (Bristol-Myers Squibb) CP-316,311 (Pfizer, Inc.), SB723620 (GSK), GW876008 (Neurocrine/Glaxo Smith Kline), ONO-2333Ms (Ono Pharmaceuticals), TS-041 (Janssen), AAG561 (Novartis) and those disclosed in US 5,063,245, US 5,861,398, US20040224964, US20040198726, US20040176400, US20040171607, US20040110815, US20040006066, and US20050209253);

glucagon-like peptides (glp-1) and analogues thereof (including exendin-4 and GTP-010 (Gastrotech Pharma A)) and inhibitors of DPP-IV (DPP-IV mediates the inactivation of glp-1);

tofisopam, enantiomerically-pure R-tofisopam, and pharmaceutically-acceptable salts thereof (US 20040229867);

tricyclic anti-depressants of the dibenzothiazepine type including but not limited to Dextofisopam® (Vela Pharmaceuticals), tianeptine (Stablon®) and other agents described in US 6,683,072;

(E)-4 (1,3bis(cyclohexylmethyl)-1,2,3,4,-tetrahydro-2,6-diono-9H-purin-8-yl)cinnamic acid nonaethylene glycol methyl ether ester and related compounds described in WO 02/067942;

the probiotic PROBACTRIX® (The BioBalance Corporation; New York, NY) which contains microorganisms useful in the treatment of gastrointestinal disorders;

antidiarrheal drugs including but not limited to loperamide (Imodium, Pepto Diarrhea), diphenoxylate with atropine (Lomotil, Lomocot), cholestyramine (Questran, Cholybar), atropine (Co-Phenotrope, Diarsed, Diphenoxylate, Lofene, Logen, Lonox, Vi-Atro, atropine sulfate injection) and Xifaxan® (rifaximin; Salix Pharmaceuticals Ltd), TZP-201 (Tranzyme Pharma Inc.), the neuronal acetylcholine receptor (nAChR) blocker AGI-004 (AGI therapeutics), and bismuth subsalicylate (Pepto-bismol);

anxiolytic drugs including but not limited to Ativan (lorazepam), alprazolam (Xanax®), chlordiazepoxide/clidinium (Librium®, Librax®), clonazepam (Klonopin®), clorazepate (Tranxene®), diazepam (Valium®), estazolam (ProSom®), flurazepam (Dalmane®), oxazepam (Serax®), prazepam (Centrax®), temazepam (Restoril®), triazolam (Halcion®);

Bedelix® (Montmorillonite beidellitic; Ipsen Ltd), Solvay SLV332 (ArQule Inc), YKP (SK Pharma), Asimadoline (Tioga Pharmaceuticals/Merck), AGI-003 (AGI Therapeutics);

the serotonin modulator AZD7371 (AstraZeneca Plc);

M3 muscarinic receptor antagonists such as darifenacin (Enablex; Novartis AG and zamifenacin (Pfizer);

herbal and natural therapies including but not limited to acidophilus, chamomile tea, evening primrose oil, fennel seeds, wormwood, comfrey, and compounds of Bao-Ji-Wan (magnolol, honokiol, imperatorin, and isoimperatorin) as in US6923992; and

compositions comprising lysine and an anti-stress agent for the treatment of irritable bowel syndrome as described in EP01550443.

The peptides and agonists described herein can be used in combination therapy with insulin and related compounds including primate, rodent, or rabbit insulin including biologically active variants thereof including allelic variants, more preferably human insulin available in



recombinant form. Sources of human insulin include pharmaceutically acceptable and sterile formulations such as those available from Eli Lilly (Indianapolis, Ind. 46285) as Humulin™ (human insulin rDNA origin). See the THE PHYSICIAN'S DESK REFERENCE, 55<sup>sup.th</sup> Ed. (2001) Medical Economics, Thomson Healthcare (disclosing other suitable human insulins). The peptides and agonists described herein can also be used in combination therapy with agents that can boost insulin effects or levels of a subject upon administration, e.g. glipizide and/or rosiglitazone. The peptides and agonists described herein can be used in combination therapy with SYMLIN® (pramlintide acetate) and Exenatide® (synthetic exendin-4; a 39 aa peptide).

The peptides and agonists described herein can also be used in combination therapy with agents (e.g., Entereg™ (alvimopan; formerly called adolor/ ADL 8-2698), conivaptan and related agents describe in US 6,645,959) used for the treatment of postoperative ileus and other disorders.

The peptides and agonists described herein can be used in combination therapy with an anti-hypertensive agent including but not limited to:

- (1) diuretics, such as thiazides, including chlorthalidone, chlorthiazide, dichlorophenamide, hydroflumethiazide, indapamide, polythiazide, and hydrochlorothiazide; loop diuretics, such as bumetanide, ethacrynic acid, furosemide, and torsemide; potassium sparing agents, such as amiloride, and triamterene; and aldosterone antagonists, such as spironolactone, eplerenone, and the like;
- (2) beta-adrenergic blockers such as acebutolol, atenolol, betaxolol, bevantolol, bisoprolol, bopindolol, carteolol, carvedilol, celiprolol, esmolol, indenolol, metoprolol, nadolol, nebivolol, penbutolol, pindolol, propanolol, sotalol, tertatolol, tilisolol, and timolol, and the like;
- (3) calcium channel blockers such as amlodipine, aranidipine, azelnidipine, barnidipine, benidipine, bepridil, cinaldipine, clevidipine, diltiazem, efonidipine, felodipine, gallopamil, isradipine, lacidipine, lemildipine, lercanidipine, nicardipine, nifedipine, nilvadipine, nimodipine, nisoldipine, nitrendipine, manidipine, pranidipine, and verapamil, and the like;
- (4) angiotensin converting enzyme (ACE) inhibitors such as benazepril; captopril; ceranapril; cilazapril; delapril; enalapril; enalapril; fosinopril; imidapril; lisinopril; losinopril; moexipril;

- quinapril; quinaprilat; ramipril; perindopril; perindopril; quanipril; spirapril; tenocapril;trandolapril, and zofenopril, and the like;
- (5) neutral endopeptidase inhibitors such as omapatrilat, cadoxatril and ecadotril, fosidotril, sampatrilat, AVE7688, ER4030, and the like;
  - (6) endothelin antagonists such as tezosentan, A308165, and YM62899, and the like;
  - (7) vasodilators such as hydralazine, clonidine, minoxidil, and nicotiny alcohol, and the like;
  - (8) angiotensin II receptor antagonists such as aprosartan, candesartan, eprosartan, irbesartan, losartan, olmesartan, prazosartan, tasosartan, telmisartan, valsartan, and EXP-3137, FI6828K, and RNH6270, and the like;
  - (9)  $\alpha/\beta$  adrenergic blockers such as nipradilol, arotinolol and amosulalol, and the like;
  - (10) alpha 1 blockers, such as terazosin, urapidil, prazosin, tamsulosin, bunazosin, trimazosin, doxazosin, naftopidil, indoramin, WHP 164, and XEN010, and the like;
  - (11) alpha 2 agonists such as lofexidine, tiamenidine, moxonidine, rilmenidine and guanobenz, and the like;
  - (12) aldosterone inhibitors, and the like; and
  - (13) angiotensin-2-binding agents such as those disclosed in WO03/030833.

Specific anti-hypertensive agents that can be used in combination with peptides and agonists described herein include, but are not limited to:

diuretics, such as thiazides (e.g., chlorthalidone, cyclothiazide (CAS RN 2259-96-3), chlorothiazide (CAS RN 72956-09-3, which may be prepared as disclosed in US2809194), dichlorophenamide, hydroflumethiazide, indapamide, polythiazide, bendroflumethazide, methyclothazide, polythiazide, trichlormethazide, chlorthalidone, indapamide, metolazone, quinethazone, althiazide (CAS RN 5588-16-9, which may be prepared as disclosed in British Patent No. 902,658), benzthiazide (CAS RN 91-33-8, which may be prepared as disclosed in US3108097), buthiazide (which may be prepared as disclosed in British Patent Nos. 861,367), and hydrochlorothiazide), loop diuretics (e.g. bumetanide, ethacrynic acid, furosemide, and torasemide), potassium sparing agents (e.g. amiloride, and triamterene (CAS Number 396-01-0)), and aldosterone antagonists (e.g. spironolactone (CAS Number 52-01-7), epi renone, and the

like);  $\beta$ -adrenergic blockers such as Amiodarone (Cordarone, Pacerone), bunolol hydrochloride (CAS RN 31969-05-8, Parke-Davis), acebutolol ( $\pm$ N-[3-Acetyl-4-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]phenyl]-butanamide, or ( $\pm$ )-3'-Acetyl-4'-[2-hydroxy-3-(isopropylamino) propoxy] butyranilide), acebutolol hydrochloride (e.g. Sectral®, Wyeth-Ayerst), alprenolol hydrochloride (CAS RN 13707-88-5 see Netherlands Patent Application No. 6,605,692), atenolol (e.g. Tenormin®, AstraZeneca), carteolol hydrochloride (e.g. Cartrol® Filmtab®, Abbott), Celiprolol hydrochloride (CAS RN 57470-78-7, also see in US4034009), cetamolol hydrochloride (CAS RN 77590-95-5, see also US4059622), labetalol hydrochloride (e.g. Normodyne®, Schering), esmolol hydrochloride (e.g. Brevibloc®, Baxter), levobetaxolol hydrochloride (e.g. Betaxon™ Ophthalmic Suspension, Alcon), levobunolol hydrochloride (e.g. Betagan® Liquifilm® with C CAP® Compliance Cap, Allergan), nadolol (e.g. Nadolol, Mylan), practolol (CAS RN 6673-35-4, see also US3408387), propranolol hydrochloride (CAS RN 318-98-9), sotalol hydrochloride (e.g. Betapace AF™, Berlex), timolol (2-Propanol, 1-[(1,1-dimethylethyl)amino]-3-[[4-(4-morpholinyl)-1,2,5-thiadiazol-3-yl]oxy]-, hemihydrate, (S)-, CAS RN 91524-16-2), timolol maleate (S)-1-[(1,1-dimethylethyl) amino]-3-[[4-(4-morpholinyl)-1,2,5-thiadiazol-3-yl]oxy]-2-propanol (Z)-2-butenedioate (1:1) salt, CAS RN 26921-17-5), bisoprolol (2-Propanol, 1-[4-[[2-(1-methylethoxy)ethoxy]-methyl]phenoxy]-3-[(1-methylethyl)amino]-, ( $\pm$ ), CAS RN 66722-44-9), bisoprolol fumarate (such as ( $\pm$ )-1-[4-[[2-(1-Methylethoxy) ethoxy]methyl]phenoxy]-3-[(1-methylethyl)amino]-2-propanol (E) -2-butenedioate (2:1) (salt), e.g., Zebeta™, Lederle Consumer), nebivalol (2H-1-Benzopyran-2-methanol,  $\alpha\alpha'$ -[iminobis(methylene)]bis[6-fluoro-3,4-dihydro-, CAS RN 99200-09-6 see also U.S. Pat. No. 4,654,362), cicloprolol hydrochloride, such 2-Propanol, 1-[4-[2-(cyclopropylmethoxy)ethoxy]phenoxy]-3-[1-methylethyl)amino]-, hydrochloride, A.A.S. RN 63686-79-3), dexpropranolol hydrochloride (2-Propanol, 1-[1-methylethyl)-amino]-3-(1-naphthalenyloxy)-hydrochloride (CAS RN 13071-11-9), diacetolol hydrochloride (Acetamide, N-[3-acetyl-4-[2-hydroxy-3-[(1-methyl-ethyl)amino]propoxy][phenyl]-, monohydrochloride CAS RN 69796-04-9), dilevalol hydrochloride (Benzamide, 2-hydroxy-5-[1-hydroxy-2-[1-methyl-3-phenylpropyl)amino]ethyl]-, monohydrochloride, CAS RN 75659-08-4), exaprolol hydrochloride (2-Propanol, 1-(2-cyclohexylphenoxy)-3-[(1-methylethyl)amino]-, hydrochloride

CAS RN 59333-90-3), fleistolol sulfate (Benzoic acid, 2-fluoro-3-[[2-[aminocarbonyl]amino]-dimethylethyl]amino]-2-hydroxypropyl ester, (±)- sulfate (1:1) (salt), CAS RN 88844-73-9; metolol hydrochloride (Methanesulfonamide, N-[4-[1-hydroxy-2-(methylamino)propyl]phenyl]-, monohydrochloride CAS RN 7701-65-7), metoprolol 2-Propanol, 1-[4-(2-methoxyethyl)phenoxy]-3-[1-methylethyl]amino]-; CAS RN 37350-58-6), metoprolol tartrate (such as 2-Propanol, 1-[4-(2-methoxyethyl)phenoxy]-3-[(1-methylethyl)amino]-, e.g., Lopressor®, Novartis), pamatolol sulfate (Carbamic acid, [2-[4-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]phenyl]-ethyl]-, methyl ester, (±) sulfate (salt) (2:1), CAS RN 59954-01-7), penbutolol sulfate (2-Propanol, 1-(2-cyclopentylphenoxy)-3-[1,1-dimethylethyl]amino]1, (S)-, sulfate (2:1) (salt), CAS RN 38363-32-5), practolol (Acetamide, N-[4-[2-hydroxy-3-[(1-methylethyl)amino]-propoxy]phenyl]-, CAS RN 6673-35-4); tiprenolol hydrochloride (Propanol, 1-[(1-methylethyl)amino]-3-[2-(methylthio)-phenoxy]-, hydrochloride, (±), CAS RN 39832-43-4), tolamolol (Benzamide, 4-[2-[[2-hydroxy-3-(2-methylphenoxy)-propyl]amino]ethoxy]-, CAS RN 38103-61-6), bopindolol, indenolol, pindolol, propanolol, tertatolol, and tilisolol, and the like; calcium channel blockers such as besylate salt of amlodipine (such as 3-ethyl-5-methyl-2-(2-aminoethoxymethyl)-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-3,5-pyridinedicarboxylate benzenesulphonate, e.g., Norvasc®, Pfizer), clementiazem maleate (1,5-Benzothiazepin-4(5H)-one, 3-(acetyloxy)-8-chloro-5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-(2S-cis)-, (Z)-2-butenedioate (1:1), see also US4567195), isradipine (3,5-Pyridinedicarboxylic acid, 4-(4-benzofurazanyl)-1,4-dihydro-2,6-dimethyl-, methyl 1-methylethyl ester, (±)-4-(4-benzofurazanyl)-1,4-dihydro-2,6-dimethyl-3,5-pyridinedicarboxylate, see also US4466972); nimodipine (such as isopropyl (2-methoxyethyl) 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-3,5-pyridine-dicarboxylate, e.g. Nimotop®, Bayer), felodipine (such as ethyl methyl 4-(2,3-dichlorophenyl)-1,4-dihydro-2,6-dimethyl-3,5-pyridinedicarboxylate-, e.g. Plendil® Extended-Release, AstraZeneca LP), nilvadipine (3,5-Pyridinedicarboxylic acid, 2-cyano-1,4-dihydro-6-methyl-4-(3-nitrophenyl)-3-methyl 5-(1-methylethyl) ester, also see US3799934), nifedipine (such as 3,5-pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-, dimethyl ester, e.g., Procardia XL® Extended Release Tablets, Pfizer), diltiazem hydrochloride (such as 1,5-Benzothiazepin-4(5H)-one, 3-(acetyloxy)-5[2-(dimethylamino)ethyl]-2,-3-dihydro-2(4-methoxyphenyl)-, monohydrochloride, (+)-cis., e.g.,

Tiazac®, Forest), verapamil hydrochloride (such as benzeneacetonitrile, (alpha)-[[3-[[2-(3,4-dimethoxyphenyl) ethyl]methylamino]propyl]-3,4-dimethoxy-(alpha)-(1-methylethyl) hydrochloride, e.g., Isoptin® SR, Knoll Labs), teludipine hydrochloride (3,5-Pyridinedicarboxylic acid, 2-[(dimethylamino)methyl]4-[2-[(1E)-3-(1,1-dimethylethoxy)-3-oxo-1-propenyl]phenyl]-1,4-dihydro-6-methyl-, diethyl ester, monohydrochloride) CAS RN 108700-03-4), belfosdil (Phosphonic acid, [2-(2-phenoxyethyl)-1,3-propane-diyl]bis-, tetrabutyl ester CAS RN 103486-79-9), fostedil (Phosphonic acid, [[4-(2-benzothiazolyl)phenyl]methyl]-, diethyl ester CAS RN 75889-62-2), aranidipine, azelnidipine, barnidipine, benidipine, bepridil, cinaldipine, clevidipine, efonidipine, gallopamil, lacidipine, lemildipine, lercanidipine, monatepil maleate (1-Piperazinebutanamide, N-(6,11-dihydrodibenzo(b,e)thiepin-11-yl)<sub>4</sub>-(4-fluorophenyl)-, (±)-, (Z)-2-butenedioate (1:1) (±)-N-(6,11-Dihydrodibenzo(b,e)thiepin-11-yl)-4-(p-fluorophenyl)-1-piperazinebutyramide maleate (1:1) CAS RN 132046-06-1), nicardipine, nisoldipine, nitrendipine, manidipine, pranidipine, and the like;

T-channel calcium antagonists such as mibefradil; angiotensin converting enzyme (ACE) inhibitors such as benazepril, benazepril hydrochloride (such as 3-[[1-(ethoxycarbonyl)-3-phenyl-(1S)-propyl]amino]-2,3,4,5-tetrahydro-2-oxo-1H-1-(3S)-benzazepine-1-acetic acid monohydrochloride, e.g., Lotrel®, Novartis), captopril (such as 1-[(2S)-3-mercapto-2-methylpropionyl]-L-proline, e.g., Captopril, Mylan, CAS RN 62571-86-2 and others disclosed in US4046889), ceranapril (and others disclosed in US4452790), cetapril (alacepril, Dainippon disclosed in Eur. Therap. Res. 39:671 (1986); 40:543 (1986)), cilazapril (Hoffman-LaRoche disclosed in J. Cardiovasc. Pharmacol. 9:39 (1987), indalapril (delapril hydrochloride (2H-1,2,4-Benzothiadiazine-7-sulfonamide, 3-bicyclo[2.2.1]hept-5-en-2-yl-6-chloro-3,4-dihydro-, 1,1-dioxide CAS RN 2259-96-3); disclosed in US4385051), enalapril (and others disclosed in US4374829), enalapril, enalaprilat, fosinopril, ((such as L-proline, 4-cyclohexyl-1-[[[2-methyl-1-(1-oxopropoxy) propoxy](4-phenylbutyl) phosphinyl]acetyl]-, sodium salt, trans—, e.g., Monopril, Bristol-Myers Squibb and others disclosed in US4168267), fosinopril sodium (L-Proline, 4-cyclohexyl-1-[[[R)-(1S)-2-methyl-1-(1-oxopropoxy)propox], imidapril, indolapril (Schering, disclosed in J. Cardiovasc. Pharmacol. 5:643, 655 (1983)), lisinopril (Merck), losinopril, moexipril, moexipril hydrochloride (3-Isoquinolinecarboxylic acid, 2-[(2S)-2-[[[(1S)-1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]-1-, 2,3,4-tetrahydro-6,7-dimethoxy-,

monohydrochloride, (3S)- CAS RN 82586-52-5), quinapril, quinaprilat, ramipril (Hoechst) disclosed in EP 79022 and *Curr. Ther. Res.* 40:74 (1986), perindopril erbumine (such as 2S,3aS,7aS-1-[(S)-N-[(S)-1-Carboxybutyl]alanyl]hexahydro-2-indolinecarboxylic acid, 1-ethyl ester, compound with tert-butylamine (1:1), e.g., Aceon®, Solvay), perindopril (Servier, disclosed in *Eur. J. clin. Pharmacol.* 31:519 (1987)), quanipril (disclosed in US4344949), spirapril (Schering, disclosed in *Acta. Pharmacol. Toxicol.* 59 (Supp. 5):173 (1986)), tenocapril, trandolapril, zofenopril (and others disclosed in US4316906), rentiapril (fentiapril, disclosed in *Clin. Exp. Pharmacol. Physiol.* 10:131 (1983)), pivopril, YS980, teprotide (Bradykinin potentiator BPP9a CAS RN 35115-60-7), BRL 36,378 (Smith Kline Beecham, see EP80822 and EP60668), MC-838 (Chugai, see C.A. 102:72588v and *Jap. J. Pharmacol.* 40:373 (1986), CGS 14824 (Ciba-Geigy, 3-([1-ethoxycarbonyl-3-phenyl-(1S)-propyl]amino)-2,3,4,5-tetrahydro-2-oxo-1-(3S)-benzazepine-1 acetic acid HCl, see U.K. Patent No. 2103614), CGS 16,617 (Ciba-Geigy, 3(S)-[[[(1S)-5-amino-1-carboxypentyl]amino]-2,3,4,- 5-tetrahydro-2-oxo-1H-1-benzazepine-1-ethanoic acid, see US4473575), Ru 44570 (Hoechst, see *Arzneimittelforschung* 34:1254 (1985)), R 31-2201 (Hoffman-LaRoche see *FEBS Lett.* 165:201 (1984)), CI925 (*Pharmacologist* 26:243, 266 (1984)), WY-44221 (Wyeth, see *J. Med. Chem.* 26:394 (1983)), and those disclosed in US2003006922 (paragraph 28), US4337201, US4432971 (phosphoramidates); neutral endopeptidase inhibitors such as omapatrilat (Vanlev®), CGS 30440, cadoxatril and ecadotril, fasidotril (also known as aladotril or alatriopril), sampatrilat, mixanpril, and gemopatrilat, AVE7688, ER4030, and those disclosed in US5362727, US5366973, US5225401, US4722810, US5223516, US4749688, US5552397, US5504080, US5612359, US5525723, EP0599444, EP0481522, EP0599444, EP0595610, EP0534363, EP534396, EP534492, EP0629627;

endothelin antagonists such as tezosentan, A308165, and YM62899, and the like;

vasodilators such as hydralazine (apresoline), clonidine (clonidine hydrochloride (1H-Imidazol-2-amine, N-(2,6-dichlorophenyl)4,5-dihydro-, monohydrochloride CAS RN 4205-91-8), catapres, minoxidil (loniten), nicotinyl alcohol (roniacol), diltiazem hydrochloride (such as 1,5-Benzothiazepin-4(5H)-one,3-(acetyloxy)-5[2-(dimethylamino)ethyl]-2,-3-dihydro-2(4-methoxyphenyl)-, monohydrochloride, (+)-cis, e.g., Tiazac®, Forest), isosorbide dinitrate (such as 1,4:3,6-dianhydro-D-glucitol 2,5-dinitrate e.g., Isordil® Titradose®, Wyeth-Ayerst),

sosorbide mononitrate (such as 1,4:3,6-dianhydro-D-glucito-1,5-nitrate, an organic nitrate, e.g., Ismo®, Wyeth-Ayerst), nitroglycerin (such as 2,3 propanetriol trinitrate, e.g., Nitrostat® Parke-Davis), verapamil hydrochloride (such as benzeneacetonitrile, (±)-(alpha)[3-[[2-(3,4-dimethoxyphenyl)ethyl]methylamino]propyl]-3,4-dimethoxy-(alpha)-(1-methylethyl) hydrochloride, e.g., Covera HS® Extended-Release, Searle), chromonar (which may be prepared as disclosed in US3282938), clonitate (Annalen 1870 155), droprenilamine (which may be prepared as disclosed in DE2521113), lidoflazine (which may be prepared as disclosed in US3267104); prenylamine (which may be prepared as disclosed in US3152173), propatyl nitrate (which may be prepared as disclosed in French Patent No. 1,103,113), mioflazine hydrochloride (1-Piperazineacetamide, 3-(aminocarbonyl)-[4,4-bis(4-fluorophenyl)butyl]-N-(2,6-dichlorophenyl)-, dihydrochloride CAS RN 83898-67-3), mixidine (Benzeneethanamine, 3,4-dimethoxy-N-(1-methyl-2-pyrrolidinylidene)- Pyrrolidine, 2-[(3,4-dimethoxyphenethyl)imino]-1-methyl-1-Methyl-2-[(3,4-dimethoxyphenethyl)imino]pyrrolidine CAS RN 27737-38-8), molsidomine (1,2,3-Oxadiazolium, 5-[(ethoxycarbonyl)amino]-3-(4-morpholinyl)-, inner salt CAS RN 25717-80-0), isosorbide mononitrate (D-Glucitol, 1,4:3,6-dianhydro-, 5-nitrate CAS RN 16051-77-7), erythrityl tetranitrate (1,2,3,4-Butanetetrol, tetranitrate, (2R,3S)-rel-CAS RN 7297-25-8), clonitate(1,2-Propanediol, 3-chloro-, dinitrate (7CI, 8CI, 9CI) CAS RN 2612-33-1), dipyridamole Ethanol, 2,2',2'',2'''-[(4,8-di-1-piperidinylpyrimido[5,4-d]pyrimidine-2,6-diyl)dinitrilo]tetrakis- CAS RN 58-32-2), nicorandil (CAS RN 65141-46-0 3-), pyridinecarboxamide (N-[2-(nitrooxy)ethyl]-Nisoldipine3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-, methyl 2-methylpropyl ester CAS RN 63675-72-9), nifedipine3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-, dimethyl ester CAS RN 21829-25-4), perhexiline maleate (Piperidine, 2-(2,2-dicyclohexylethyl)-, (2Z)-2-butenedioate (1:1) CAS RN 6724-53-4), oxprenolol hydrochloride (2-Propanol, 1-[(1-methylethyl)amino]-3-[2-(2-propenyloxy)phenoxy]-, hydrochloride CAS RN 6452-73-9), pentrinitrol (1,3-Propanediol, 2,2-bis[(nitrooxy)methyl]-, mononitrate (ester) CAS RN 1607-17-6), verapamil (Benzeneacetonitrile, α-[3-[[2-(3,4-dimethoxyphenyl)ethyl]-methylamino]propyl]-3,4-dimethoxy-α-(1-methylethyl)- CAS RN 52-53-9) and the like; angiotensin II receptor antagonists such as, aprosartan, zolasartan, olmesartan, prazosartan, FI6828K, RNH6270, candesartan (1 H-Benzimidazole-7-carboxylic acid, 2-ethoxy-1-[[2'-(1H-tetrazol-5-yl)[1,1'-

biphenyl]4-yl]methyl]- CAS RN 139481-59-7), candesartan cilexetil ((+/-)-1-(cyclohexylcarbonyloxy)ethyl-2-ethoxy-1-[[2'-(1H-tetrazol-5-yl)biphenyl-4-yl]-1H-benzimidazole carboxylate, CAS RN 145040-37-5, US5703110 and US5196444), eprosartan (3-[1-4-carboxyphenylmethyl)-2-n-butyl-imidazol-5-yl]-(2-thienylmethyl) propenoic acid, US5185351 and US5650650), irbesartan (2-n-butyl-3- [[2'-(1H-tetrazol-5-yl)biphenyl-4-yl]methyl]1,3-diazaspiro[4,4]non-1-en-4-one, US5270317 and US5352788), losartan (2-N-butyl-4-chloro-5-hydroxymethyl-1-[(2'-(1H-tetrazol-5-yl)biphenyl-4-yl)-methyl]imidazole, potassium salt, US5138069, US5153197 and US5128355), tasosartan (5,8-dihydro-2,4-dimethyl-8-[(2'-(1H-tetrazol-5-yl)[1,1'-biphenyl]4-yl)methyl]-pyrido[2,3-d]pyrimidin-7(6H)-one, US5149699), telmisartan (4'-[(1,4-dimethyl-2'-propyl-(2,6'-bi-1H-benzimidazol)-1'-yl)]-[1,1'-biphenyl]-2-carboxylic acid, CAS RN 144701-48-4, US5591762), milfasartan, abitesartan, valsartan (Diovan® (Novartis), (S)-N-valeryl-N-[[2'-(1H-tetrazol-5-yl)biphenyl-4-yl)methyl]valine, US5399578), EXP-3137 (2-N-butyl-4-chloro-1-[(2'-(1H-tetrazol-5-yl)biphenyl-4-yl)-methyl]imidazole-5-carboxylic acid, US5138069, US5153197 and US5128355), 3-(2'-(tetrazol-5-yl)-1,1'-biphen-4-yl)methyl-5,7-dimethyl-2-ethyl-3H-imidazo[4,5-b]pyridine, 4'[2-ethyl-4-methyl-6-(5,6,7,8-tetrahydroimidazo[1,2-a]pyridin-2-yl)-benzimidazol-1-yl]-methyl]-1,1'-biphenyl]-2- carboxylic acid, 2-butyl-6-(1-methoxy-1-methylethyl)-2-[2'-(1H-tetrazol-5-yl)biphenyl-4-ylmethyl]guinazolin-4(3H)-one, 3-[2'-carboxybiphenyl-4-yl)methyl]-2-cyclopropyl-7-methyl- 3H-imidazo[4,5-b]pyridine, 2-butyl-4-chloro-1-[(2'-tetrazol-5-yl)biphenyl-4-yl)methyl]imidazole-carboxylic acid, 2-butyl-4-chloro-1-[[2'-(1H-tetrazol-5-yl)[1,1'-biphenyl]-4-yl]methyl]-1H-imidazole-5-carboxylic acid-1-(ethoxycarbonyl-oxy)ethyl ester potassium salt, dipotassium 2-butyl-4-(methylthio)-1-[[2-[[[(propylamino)carbonyl]amino]-sulfonyl](1,1'-biphenyl)-4-yl]methyl]-1H-imidazole-5-carboxylate, methyl-2-[[4-butyl-2-methyl-6-oxo-5-[[2'-(1H-tetrazol-5-yl)-[1,1'-biphenyl]-4-yl]methyl]-1-(6H)-pyrimidinyl]methyl]-3-thiophencarboxylate, 5-[(3,5-dibutyl-1H-1,2,4-triazol-1-yl)methyl]-2-[2-(1H-tetrazol-5-ylphenyl)]pyridine, 6-butyl-2-(2-phenylethyl)-5[[2'-(1H-tetrazol-5-yl)[1,1'-biphenyl]-4-methyl]pyrimidin-4-(3H)-one D,L lysine salt, 5-methyl-7-n-propyl-8-[[2'-(1H-tetrazol-5-yl)biphenyl-4-yl]methyl]-[1,2,4]-triazolo[1,5-c]pyrimidin-2(3H)-one, 2,7-diethyl-5-[[2'-(5-tetrazolyl)biphenyl-4-yl]methyl]-5H-pyrazolo[1,5-b][1,2,4]triazole potassium salt, 2-[2-butyl-4,5-dihydro-4-oxo-3-[2'-(1H-tetrazol-5-yl)-4-biphenylmethyl]-3H-imidazol[4,5-



c]pyridine-5-ylmethyl]benzoic acid, ethyl ester, potassium salt, 3-methoxy-2,6-dimethyl-4-[[2'-(1H-tetrazol-5-yl)-1,1'-biphenyl-4-yl]methoxy]pyridine, 2-ethoxy-1-[[2'-(5-oxo-2,5-dihydro-1,2,4-oxadiazol-3-yl)biphenyl-4-yl]methyl]-1H-benzimidazole-7-carboxylic acid, 1-[N-(2'-(1H-tetrazol-5-yl)biphenyl-4-yl-methyl)-N-valerolylaminomethyl]cyclopentane-1-carboxylic acid, 7-methyl-2n-propyl-3-[[2'1H-tetrazol-5-yl)biphenyl-4-yl]methyl]-3H-imidazo[4,5-6]pyridine, 2-[5-[(2-ethyl-5,7-dimethyl-3H-imidazo[4,5-b]pyridine-3-yl)methyl]-2-quinoliny]sodium benzoate, 2-butyl-6-chloro-4-hydroxymethyl-5-methyl-3-[[2'-(1H-tetrazol-5-yl)biphenyl-4-yl]methyl]pyridine, 2-[[[2-butyl-1-[(4-carboxyphenyl)methyl]-1H-imidazol-5-yl]methyl]amino]benzoic acid tetrazol-5-yl)biphenyl-4-yl]methyl]pyrimidin-6-one, 4(S)-[4-(carboxymethyl)phenoxy]-N-[2(R)-[4-(2-sulfobenzamido)imidazol-1-yl]octanoyl]-L-proline, 1-(2,6-dimethylphenyl)-4-butyl-1,3-dihydro-3-[[6-[2-(1H-tetrazol-5-yl)phenyl]-3-pyridinyl]methyl]-2H-imidazol-2-one, 5,8-ethano-5,8-dimethyl-2-n-propyl-5,6,7,8-tetrahydro-1-[[2'-(1H-tetrazol-5-yl)biphenyl-4-yl]methyl]-1H,4H-1,3,4a,8a-tetrazacyclopentanaphthalene-9-one, 4-[1-[2'-(1,2,3,4-tetrazol-5-yl)biphen-4-yl)methylamino]-5,6,7,8-tetrahydro-2-triflylquinazoline, 2-(2-chlorobenzoyl)imino-5-ethyl-3-[2'-(1H-tetrazole-5-yl)biphenyl-4-yl)methyl]-1,3,4-thiadiazoline, 2-[5-ethyl-3-[2-(1H-tetrazole-5-yl)biphenyl-4-yl]methyl]-1,3,4-thiazoline-2-ylidene]aminocarbonyl-1-cyclopentencarboxylic acid dipotassium salt, and 2-butyl-4-[N-methyl-N-(3-methylcrotonoyl)amino]-1-[[2'-(1H-tetrazol-5-yl)biphenyl-4-yl]methyl]-1H-imidazole-5-carboxylic acid 1-ethoxycarbonyloxyethyl ester, those disclosed in patent publications EP475206, EP497150, EP539086, EP539713, EP535463, EP535465, EP542059, EP497121, EP535420, EP407342, EP415886, EP424317, EP435827, EP433983, EP475898, EP490820, EP528762, EP324377, EP323841, EP420237, EP500297, EP426021, EP480204, EP429257, EP430709, EP434249, EP446062, EP505954, EP524217, EP514197, EP514198, EP514193, EP514192, EP450566, EP468372, EP485929, EP503162, EP533058, EP467207, EP399731, EP399732, EP412848, EP453210, EP456442, EP470794, EP470795, EP495626, EP495627, EP499414, EP499416, EP499415, EP511791, EP516392, EP520723, EP520724, EP539066, EP438869, EP505893, EP530702, EP400835, EP400974, EP401030, EP407102, EP411766, EP409332, EP412594, EP419048, EP480659, EP481614, EP490587, EP467715, EP479479, EP502725, EP503838, EP505098, EP505111 EP513,979 EP507594, EP510812, EP511767, EP512675, EP512676, EP512870, EP517357, EP537937, EP534706, EP527534,

EP540356, EP461040, EP540039, EP465368, EP498723, EP498722, EP498721, EP515265, EP503785, EP501892, EP519831, EP532410, EP498361, EP432737, EP504888, EP508393, EP508445, EP403159, EP403158, EP425211, EP427463, EP437103, EP481448, EP488532, EP501269, EP500409, EP540400, EP005528, EP028834, EP028833, EP411507, EP425921, EP430300, EP434038, EP442473, EP443568, EP445811, EP459136, EP483683, EP518033, EP520423, EP531876, EP531874, EP392317, EP468470, EP470543, EP502314, EP529253, EP543263, EP540209, EP449699, EP465323, EP521768, EP415594, WO92/14468, WO93/08171, WO93/08169, WO91/00277, WO91/00281, WO91/14367, WO92/00067, WO92/00977, WO92/20342, WO93/04045, WO93/04046, WO91/15206, WO92/14714, WO92/09600, WO92/16552, WO93/05025, WO93/03018, WO91/07404, WO92/02508, WO92/13853, WO91/19697, WO91/11909, WO91/12001, WO91/11999, WO91/15209, WO91/15479, WO92/20687, WO92/20662, WO92/20661, WO93/01177, WO91/14679, WO91/13063, WO92/13564, WO91/17148, WO91/18888, WO91/19715, WO92/02257, WO92/04335, WO92/05161, WO92/07852, WO92/15577, WO93/03033, WO91/16313, WO92/00068, WO92/02510, WO92/09278, WO92/10179, WO92/10180, WO92/10186, WO92/10181, WO92/10097, WO92/10183, WO92/10182, WO92/10187, WO92/10184, WO92/10188, WO92/10180, WO92/10185, WO92/20651, WO93/03722, WO93/06828, WO93/03040, WO92/19211, WO92/22533, WO92/06081, WO92/05784, WO93/00341, WO92/04343, WO92/04059, US5104877, US5187168, US5149699, US5185340, US4880804, US5138069, US4916129, US5153197, US5173494, US5137906, US5155126, US5140037, US5137902, US5157026, US5053329, US5132216, US5057522, US5066586, US5089626, US5049565, US5087702, US5124335, US5102880, US5128327, US5151435, US5202322, US5187159, US5198438, US5182288, US5036048, US5140036, US5087634, US5196537, US5153347, US5191086, US5190942, US5177097, US5212177, US5208234, US5208235, US5212195, US5130439, US5045540, US5041152, and US5210204, and pharmaceutically acceptable salts and esters thereof;  $\alpha/\beta$  adrenergic blockers such as nipradilol, arotinolol, amosulalol, bretylium tosylate (CAS RN: 61-75-6), dihydroergamine mesylate (such as ergotaman-3', 6', 18-trione, 9, 10-dihydro-12'-hydroxy-2'-methyl-5'-(phenylmethyl)-, (5'( $\alpha$ ))- monomethanesulfonate, e.g., DHE 45® Injection, Novartis), carvedilol (such as ( $\pm$ )-1-(Carbazol-4-yloxy)-3-[[2-(o-methoxyphenoxy)ethyl]amino]-2-propanol, e.g., Coreg®, SmithKline

Beecham), labetalol (such as 5-[1-hydroxy-2-[(1-methyl-3-phenylpropyl) amino] ethyl]salicylamide monohydrochloride, e.g., Normodyne®, Schering), bretylium tosylate (Benzenemethanaminium, 2-bromo-N-ethyl-N,N-dimethyl-, salt with 4-methylbenzenesulfonic acid (1:1) CAS RN 61-75-6), phentolamine mesylate (Phenol, 3-[[4,5-dihydro-1H-imidazol-2-yl)methyl](4-methylphenyl)amino]-, monomethanesulfonate (salt) CAS RN 65-28-1), solypertine tartrate (5H-1,3-Dioxolo[4,5-f]indole, 7-[2-[4-(2-methoxyphenyl)-1-piperazinyl]ethyl]-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) CAS RN 5591-43-5), zolertine hydrochloride (Piperazine, 1-phenyl-4-[2-(1H-tetrazol-5-yl)ethyl]-, monohydrochloride (8Cl, 9Cl) CAS RN 7241-94-3) and the like;

$\alpha$  adrenergic receptor blockers, such as alfuzosin (CAS RN: 81403-68-1), terazosin, urapidil, prazosin (Minipress®), tamsulosin, bunazosin, trimazosin, doxazosin, naftopidil, indoramin, WHP 164, XEN010, fenspiride hydrochloride (which may be prepared as disclosed in US3399192), proroxan (CAS RN 33743-96-3), and labetalol hydrochloride and combinations thereof;  $\alpha$  2 agonists such as methyldopa, methyldopa HCL, lofexidine, tiamenidine, moxonidine, rilmenidine, guanobenz, and the like;

aldosterone inhibitors, and the like; renin inhibitors including Aliskiren (SPP100; Novartis/Speedel); angiopoietin-2-binding agents such as those disclosed in WO03/030833; anti-angina agents such as ranolazine (hydrochloride 1-Piperazineacetamide, N-(2,6-dimethylphenyl)-4-[2-hydroxy-3-(2-methoxyphenoxy)propyl]-, dihydrochloride CAS RN 95635-56-6), betaxolol hydrochloride (2-Propanol, 1-[4-[2 (cyclopropylmethoxy)ethyl]phenoxy]-3-[(1-methylethyl)amino]-, hydrochloride CAS RN 63659-19-8), butopropazine hydrochloride (Methanone, [4-[3(dibutylamino)propoxy]phenyl](2-ethyl-3-indoliziny)-, monohydrochloride CAS RN 62134-34-3), cinepazet maleate 1-Piperazineacetic acid, 4-[1-oxo-3-(3,4,5-trimethoxyphenyl)-2-propenyl]-, ethyl ester, (2Z)-2-butenedioate (1:1) CAS RN 50679-07-7), tosisfen (Benzenesulfonamide, 4-methyl-N-[[[(1S)-1-methyl-2-phenylethyl]amino]carbonyl]- CAS RN 32295-184), verapamil hydrochloride (Benzeneacetonitrile,  $\alpha$ -[3-[[2-(3,4-dimethoxyphenyl)ethyl]methylamino]propyl]-3,4-dimethoxy- $\alpha$ -(1-methylethyl)-, monohydrochloride CAS RN 152-114), molsidomine (1,2,3-Oxadiazolium, 5-[(ethoxycarbonyl)amino]-3-(4-morpholinyl)-, inner salt CAS RN 25717-80-0), and ranolazine hydrochloride (1-Piperazineacetamide, N-(2,6-dimethylphenyl)-4-[2-hydroxy-3-(2-meth-

oxyphenoxy)propyl]-, dihydrochloride CAS RN 95635-56-6); tosisfen (Benzenesulfonamide, 4-methyl-N-[[[(1S)-1-methyl-2-phenylethyl]amino]carbonyl]- CAS RN 32295-184); adrenergic stimulants such as guanfacine hydrochloride (such as N-amidino-2-(2,6-dichlorophenyl)acetamide hydrochloride, e.g., Tenex® Tablets available from Robins); methyl dopa-hydrochlorothiazide (such as levo-3-(3,4-dihydroxyphenyl)-2-methylalanine) combined with Hydrochlorothiazide (such as 6-chloro-3,4-dihydro-2H-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide, e.g., the combination as, e.g., Aldoril® Tablets available from Merck), methyl dopa-chlorothiazide (such as 6-chloro-2H-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide and methyl dopa as described above, e.g., Aldoclor®, Merck), clonidine hydrochloride (such as 2-(2,6-dichlorophenylamino)-2-imidazoline hydrochloride and chlorthalidone (such as 2-chloro-5-(1-hydroxy-3-oxo-1-isoindolinyl) benzenesulfonamide), e.g., Combipres®, Boehringer Ingelheim), clonidine hydrochloride (such as 2-(2,6-dichlorophenylamino)-2-imidazoline hydrochloride, e.g., Catapres®, Boehringer Ingelheim), clonidine (1H-Imidazol-2-amine, N-(2,6-dichlorophenyl)4,5-dihydro-CAS RN 4205-90-7), Hyzaar (Merck; a combination of losartan and hydrochlorothiazide), Co-Diovan (Novartis; a combination of valsartan and hydrochlorothiazide), Lotrel (Novartis; a combination of benazepril and amlodipine) and Caduet (Pfizer; a combination of amlodipine and atorvastatin), and those agents disclosed in US20030069221.

The peptides and agonists described herein can be used in combination therapy with one or more of the following agents useful in the treatment of respiratory and other disorders including but not limited to:

- (1)  $\beta$ -agonists including but not limited to: albuterol (PROVENTIL®, SALBUTAMOL®, VENTOLIN®), bambuterol, bitoterol, clenbuterol, fenoterol, formoterol, isoetharine (BRONKOSOL®, BRONKOMETER®), metaproterenol (ALUPENT®, METAPREL®), pirbuterol (MAXAIR®), reproterol, rimiterol, salmeterol, terbutaline (BRETHAIRE®, BRETHINE®, BRICANYL®), adrenalin, isoproterenol (ISUPREL®), epinephrine bitartrate (PRIMATENE®), ephedrine, orciprenline, fenoterol and isoetharine;
- (2) steroids, including but not limited to beclomethasone, beclomethasone dipropionate, betamethasone, budesonide, budesonide, butixocort, dexamethasone, flunisolide, fluocortin,

- fluticasone, hydrocortisone, methyl prednisone, mometasone, predonisolone, predonisone, tiptredane, tixocortal, triamcinolone, and triamcinolone acetoneide;
- (3)  $\beta$ 2-agonist-corticosteroid combinations [e.g., salmeterol-fluticasone (ADV AIR®), formoterol-budesonid (SYMBICORT®)];
- (4) leukotriene D4 receptor antagonists/leukotriene antagonists/LTD4 antagonists (i.e., any compound that is capable of blocking, inhibiting, reducing or otherwise interrupting the interaction between leukotrienes and the Cys LTI receptor) including but not limited to: zafirlukast, montelukast, montelukast sodium (SINGULAIR®), pranlukast, iralukast, pobilukast, SKB-106,203 and compounds described as having LTD4 antagonizing activity described in U.S. Patent No. 5,565,473;
- (5) 5-lipoxygenase inhibitors and/or leukotriene biosynthesis inhibitors [e.g., zileuton and BAY1005 (CA registry 128253-31-6)];
- (6) histamine H1 receptor antagonists/antihistamines (i.e., any compound that is capable of blocking, inhibiting, reducing or otherwise interrupting the interaction between histamine and its receptor) including but not limited to: astemizole, acrivastine, antazoline, azatadine, azelastine, astemizole, bromopheniramine, bromopheniramine maleate, carbinoxamine, carebastine, cetirizine, chlorpheniramine, chlorpheniramine maleate, cimetidine, clemastine, cyclizine, cyproheptadine, descarboethoxyloratadine, dexchlorpheniramine, dimethindene, diphenhydramine, diphenylpyraline, doxylamine succinate, doxylamine, ebastine, efletirizine, epinastine, famotidine, fexofenadine, hydroxyzine, hydroxyzine, ketotifen, levocabastine, levocetirizine, levocetirizine, loratadine, meclizine, mepyramine, mequitazine, methdilazine, mianserin, mizolastine, noberastine, norastemizole, noraztemizole, phenindamine, pheniramine, picumast, promethazine, pynlamine, pyrilamine, ranitidine, temelastine, terfenadine, trimeprazine, tripelenamine, and triprolidine;
- (7) an anticholinergic including but not limited to: atropine, benztropine, biperiden, flutropium, hyoscyamine (e.g. Levsin®; Levbid®; Levsin/SL®, Anaspaz®, Levsinex timecaps®, NuLev®), ilutropium, ipratropium, ipratropium bromide, methscopolamine, oxybutinin, rispenzepine, scopolamine, and tiotropium;
- (8) an anti-tussive including but not limited to: dextromethorphan, codeine, and hydromorphone;

- (9) a decongestant including but not limited to: pseudoephedrine and phenylpropanolamine;
- (10) an expectorant including but not limited to: guaifenesin, guaicol sulfate, terpin, ammonium chloride, glycerol guaicolate, and iodinated glycerol;
- (11) a bronchodilator including but not limited to: theophylline and aminophylline;
- (12) an anti-inflammatory including but not limited to: flurbiprofen, diclofenac, indomethacin, ketoprofen, S-ketoprofen, tenoxicam;
- (13) a PDE (phosphodiesterase) inhibitor including but not limited to those disclosed herein;
- (14) a recombinant humanized monoclonal antibody [e.g. xolair (also called omalizumab), rhuMab, and talizumab];
- (15) a humanized lung surfactant including recombinant forms of surfactant proteins SP-B, SP-C or SP-D [e.g. SURFAXIN®, formerly known as dsc-104 (Discovery Laboratories)];
- (16) agents that inhibit epithelial sodium channels (ENaC) such as amiloride and related compounds;
- (17) antimicrobial agents used to treat pulmonary infections such as acyclovir, amikacin, amoxicillin, doxycycline, trimethoprim sulfamethoxazole, amphotericin B, azithromycin, clarithromycin, roxithromycin, clarithromycin, cephalosporins( ceftiofur, cefmetazole etc), ciprofloxacin, ethambutol, gentamicin, ganciclovir, imipenem, isoniazid, itraconazole, penicillin, ribavirin, rifampin, rifabutin, amantadine, rimantidine, streptomycin, tobramycin, and vancomycin;
- (18) agents that activate chloride secretion through  $Ca^{++}$  dependent chloride channels (such as purinergic receptor (P2Y(2)) agonists);
- (19) agents that decrease sputum viscosity, such as human recombinant DNase 1, (Pulmozyme®);
- (20) nonsteroidal anti-inflammatory agents (acetaminophen, acetylsalicylic acid, alclofenac, alminoprofen, apazone, aspirin, benoxaprofen, bezpiperylon, bucloxic acid, carprofen, clidanac, diclofenac, diflunisal, diflusinal, etodolac, fenbufen, fenclofenac, fenclozic acid, fenoprofen, fentiazac, feprazone, flufenamic acid, flufenisal, flufenisal, fluprofen, flurbiprofen, flurbiprofen, furofenac, ibufenac, ibuprofen, indomethacin, indomethacin, indoprofen, isoxepac, isoxicam, ketoprofen, ketoprofen, ketorolac, meclofenamic acid, meclofenamic acid, mefenamic acid, mefenamic acid, miroprofen, mofebutazone,

nabumetone oxaprozin, naproxen, naproxen, niflumic acid , oxaprozin, oxpinac, oxyphenbutazone, phenacetin, phenylbutazone, phenylbutazone, piroxicam, piroxicam, piroprofen, pranoprofen, sudoxicam, tenoxicam , sulfasalazine, sulindac, sulindac, suprofen, tiaprofenic acid, tiopinac, tiroxaprofen, tolfenamic acid, tolmetin, tolmetin, zidometacin, zomepirac, and zomepirac); and

(21) aerosolized antioxidant therapeutics such as S-Nitrosoglutathione.

The peptides and agonists described herein can be used in combination therapy with an anti-obesity agent. Suitable such agents include, but are not limited to:

11 $\beta$  HSD-1 (11-beta hydroxy steroid dehydrogenase type 1) inhibitors, such as BVT 3498, BVT 2733, 3-(1-adamantyl)-4-ethyl-5-(ethylthio)-4H-1,2,4-triazole, 3-(1-adamantyl)-5-(3,4,5-trimethoxyphenyl)-4-methyl-4H-1,2,4-triazole, 3-adamantanyl-4,5,6,7,8,9,10,11,12,3a-decahydro-1,2,4-triazolo[4,3-a][1,1]annulene, and those compounds disclosed in WO01/90091, WO01/90090, WO01/90092 and WO02/072084;

5HT antagonists such as those in WO03/037871, WO03/037887, and the like;

5HT1a modulators such as carbidopa, benserazide and those disclosed in US6207699, WO03/031439, and the like;

5HT2c (serotonin receptor 2c) agonists, such as BVT933, DPCA37215, IK264, PNU 22394, WAY161503, R-1065, SB 243213 (Glaxo Smith Kline) and YM 348 and those disclosed in US3914250, WO00/77010, WO02/36596, WO02/48124, WO02/10169, WO01/66548, WO02/44152, WO02/51844, WO02/40456, and WO02/40457;

5HT6 receptor modulators, such as those in WO03/030901, WO03/035061, WO03/039547, and the like;

acyl-estrogens, such as oleoyl-estrone, disclosed in del Mar-Grasa, M. et al., Obesity Research, 9:202-9 (2001) and Japanese Patent Application No. JP 2000256190;

anorectic bicyclic compounds such as 1426 (Aventis) and 1954 (Aventis), and the compounds disclosed in WO00/18749, WO01/32638, WO01/62746, WO01/62747, and WO03/015769;

CB 1 (cannabinoid-1 receptor) antagonist/inverse agonists such as rimonabant (Acomplia; Sanofi), SR-147778 (Sanofi), SR-141716 (Sanofi), BAY 65-2520 (Bayer), and SLV 319 (Solvay), and those disclosed in patent publications US4973587, US5013837, US5081122, US5112820, US5292736, US5532237, US5624941, US6028084, US6509367, US6509367, WO96/33159, WO97/29079, WO98/31227, WO98/33765, WO98/37061, WO98/41519, WO98/43635, WO98/43636, WO99/02499, WO00/10967, WO00/10968, WO01/09120, WO01/58869, WO01/64632, WO01/64633, WO01/64634, WO01/70700, WO01/96330, WO02/076949, WO03/006007, WO03/007887, WO03/020217, WO03/026647, WO03/026648, WO03/027069, WO03/027076, WO03/027114, WO03/037332, WO03/040107, WO03/086940, WO03/084943 and EP658546;

CCK-A (cholecystokinin-A) agonists, such as AR-R 15849, GI 181771 (GSK), JMV-180, A-71378, A-71623 and SR146131 (Sanofi), and those described in US5739106;

CNTF (Ciliary neurotrophic factors), such as GI-181771 (Glaxo-SmithKline), SR146131 (Sanofi Synthelabo), butabindide, PD170,292, and PD 149164 (Pfizer);

CNTF derivatives, such as Axokine® (Regeneron), and those disclosed in WO94/09134, WO98/22128, and WO99/43813;

dipeptidyl peptidase IV (DP-IV) inhibitors, such as isoleucine thiazolidide, valine pyrrolidide, NVP-DPP728, LAF237, P93/01, P 3298, TSL 225 (tryptophyl-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid; disclosed by Yamada et al, Bioorg. & Med. Chem. Lett. 8 (1998) 1537-1540), TMC-2A/2B/2C, CD26 inhibitors, FE 999011, P9310/K364, VIP 0177, SDZ 274-444, 2-cyanopyrrolidides and 4-cyanopyrrolidides as disclosed by Ashworth et al, Bioorg. & Med. Chem. Lett., Vol. 6, No. 22, pp 1163-1166 and 2745-2748 (1996) and the compounds disclosed patent publications. WO99/38501, WO99/46272, WO99/67279 (Probiodrugs), WO99/67278 (Probiodrugs), WO99/61431 (Probiodrugs), WO02/083128, WO02/062764, WO03/000180, WO03/000181, WO03/000250, WO03/002530, WO03/002531, WO03/002553, WO03/002593,



WO03/004498, WO03/004496, WO03/017936, WO03/024942, WO03/024965, WO03/033524, WO03/037327 and EP1258476;

growth hormone secretagogue receptor agonists/antagonists, such as NN703, hexarelin, MK-0677 (Merck), SM-130686, CP-424391 (Pfizer), LY 444,711 (Eli Lilly), L-692,429 and L-163,255, and such as those disclosed in USSN 09/662448, US provisional application 60/203335, US6358951, US2002049196, US2002/022637, WO01/56592 and WO02/32888;

H3 (histamine H3) antagonist/inverse agonists, such as thioperamide, 3-(1H-imidazol-4-yl)propyl N-(4-pentenyl)carbamate, clobenpropit, iodophenpropit, imoproxifan, GT2394 (Gliatech), and A331440, O-[3-(1H-imidazol-4-yl)propanol]carbamates (Kiec-Kononowicz, K. et al., *Pharmazie*, 55:349-55 (2000)), piperidine-containing histamine H3-receptor antagonists (Lazewska, D. et al., *Pharmazie*, 56:927-32 (2001)), benzophenone derivatives and related compounds (Sasse, A. et al., *Arch. Pharm.(Weinheim)* 334:45-52 (2001)), substituted N-phenylcarbamates (Reidemeister, S. et al., *Pharmazie*, 55:83-6 (2000)), and proxifan derivatives (Sasse, A. et al., *J. Med. Chem.* 43:3335-43 (2000)) and histamine H3 receptor modulators such as those disclosed in WO02/15905, WO03/024928 and WO03/024929;

leptin derivatives, such as those disclosed in US5552524, US5552523, US5552522, US5521283, WO96/23513, WO96/23514, WO96/23515, WO96/23516, WO96/23517, WO96/23518, WO96/23519, and WO96/23520;

leptin, including recombinant human leptin (PEG-OB, Hoffman La Roche) and recombinant methionyl human leptin (Amgen);

lipase inhibitors, such as tetrahydrolipstatin (orlistat/Xenical®), Triton WR1339, RHC80267, lipstatin, teasaponin, diethylumbelliferyl phosphate, FL-386, WAY-121898, Bay-N-3176, valilactone, esteracin, ebelactone A, ebelactone B, and RHC 80267, and those disclosed in patent publications WO01/77094, US4598089, US4452813, US5512565, US5391571, US5602151, US4405644, US4189438, and US4242453;

lipid metabolism modulators such as maslinic acid, erythrodiol, ursolic acid uvaol, betulinic acid, betulin, and the like and compounds disclosed in WO03/011267;

Mc4r (melanocortin 4 receptor) agonists, such as CHIR86036 (Chiron), ME-10142, ME-10145, and HS-131 (Melacure), and those disclosed in PCT publication Nos. WO99/64002, WO00/74679, WO01/991752, WO01/25192, WO01/52880, WO01/74844, WO01/70708, WO01/70337, WO01/91752, WO02/059095, WO02/059107, WO02/059108, WO02/059117, WO02/06276, WO02/12166, WO02/11715, WO02/12178, WO02/15909, WO02/38544, WO02/068387, WO02/068388, WO02/067869, WO02/081430, WO03/06604, WO03/007949, WO03/009847, WO03/009850, WO03/013509, and WO03/031410;

Mc5r (melanocortin 5 receptor) modulators, such as those disclosed in WO97/19952, WO00/15826, WO00/15790, US20030092041;

melanin-concentrating hormone 1 receptor (MCHR) antagonists, such as T-226296 (Takeda), SB 568849, SNP-7941 (Synaptic), and those disclosed in patent publications WO01/21169, WO01/82925, WO01/87834, WO02/051809, WO02/06245, WO02/076929, WO02/076947, WO02/04433, WO02/51809, WO02/083134, WO02/094799, WO03/004027, WO03/13574, WO03/15769, WO03/028641, WO03/035624, WO03/033476, WO03/033480, JP13226269, and JP1437059;

mGluR5 modulators such as those disclosed in WO03/029210, WO03/047581, WO03/048137, WO03/051315, WO03/051833, WO03/053922, WO03/059904, and the like;

serotonergic agents, such as fenfluramine (such as Pondimin® (Benzeneethanamine, N-ethyl-alpha-methyl-3-(trifluoromethyl)-, hydrochloride), Robbins), dexfenfluramine (such as Redux® (Benzeneethanamine, N-ethyl-alpha-methyl-3-(trifluoromethyl)-, hydrochloride), Interneuron) and sibutramine ((Meridia®, Knoll/Reductil™) including racemic mixtures, as optically pure isomers (+) and (-), and pharmaceutically acceptable salts, solvents, hydrates, clathrates and prodrugs thereof including sibutramine hydrochloride monohydrate salts thereof, and those compounds disclosed in US4746680, US4806570, and US5436272, US20020006964, WO01/27068, and WO01/62341;

NE (norepinephrine) transport inhibitors, such as GW 320659, despiramine, talsupram, and nomifensine;

NPY 1 antagonists, such as BIBP3226, J-115814, BIBO 3304, LY-357897, CP-671906, GI-264879A, and those disclosed in US6001836, WO96/14307, WO01/23387, WO99/51600, WO01/85690, WO01/85098, WO01/85173, and WO01/89528;

NPY5 (neuropeptide Y Y5) antagonists, such as 152,804, GW-569180A, GW-594884A, GW-587081X, GW-548118X, FR235208, FR226928, FR240662, FR252384, 1229U91, GI-264879A, CGP71683A, LY-377897, LY-366377, PD-160170, SR-120562A, SR-120819A, JCF-104, and H409/22 and those compounds disclosed in patent publications US6140354, US6191160, US6218408, US6258837, US6313298, US6326375, US6329395, US6335345, US6337332, US6329395, US6340683, EP01010691, EP-01044970, WO97/19682, WO97/20820, WO97/20821, WO97/20822, WO97/20823, WO98/27063, WO00/107409, WO00/185714, WO00/185730, WO00/64880, WO00/68197, WO00/69849, WO/0113917, WO01/09120, WO01/14376, WO01/85714, WO01/85730, WO01/07409, WO01/02379, WO01/23388, WO01/23389, WO01/44201, WO01/62737, WO01/62738, WO01/09120, WO02/20488, WO02/22592, WO02/48152, WO02/49648, WO02/051806, WO02/094789, WO03/009845, WO03/014083, WO03/022849, WO03/028726 and Norman et al., J. Med. Chem. 43:4288-4312 (2000);

opioid antagonists, such as nalmefene (REVEX®), 3-methoxynaltrexone, naloxone, and naltrexone (e.g. PT901; Pain Therapeutics, Inc.) and those disclosed in WO00/21509;

orexin antagonists, such as SB-334867-A and those disclosed in patent publications WO01/96302, WO01/68609, WO02/44172, WO02/51232, WO02/51838, WO02/089800, WO02/090355, WO03/023561, WO03/032991, and WO03/037847;

PDE inhibitors (e.g. compounds which slow the degradation of cyclic AMP (cAMP) and/or cyclic GMP (cGMP) by inhibition of the phosphodiesterases, which can lead to a relative increase in the intracellular concentration of cAMP and cGMP; possible PDE inhibitors are primarily those substances which are to be numbered among the class consisting of the PDE3

inhibitors, the class consisting of the PDE4 inhibitors and/or the class consisting of the PDE5 inhibitors, in particular those substances which can be designated as mixed types of PDE3/4 inhibitors or as mixed types of PDE3/4/5 inhibitors) such as those disclosed in patent publications DE1470341, DE2108438, DE2123328, DE2305339, DE2305575, DE2315801, DE2402908, DE2413935, DE2451417, DE2459090, DE2646469, DE2727481, DE2825048, DE2837161, DE2845220, DE2847621, DE2934747, DE3021792, DE3038166, DE3044568, EP000718, EP0008408, EP0010759, EP0059948, EP0075436, EP0096517, EP0112987, EP0116948, EP0150937, EP0158380, EP0161632, EP0161918, EP0167121, EP0199127, EP0220044, EP0247725, EP0258191, EP0272910, EP0272914, EP0294647, EP0300726, EP0335386, EP0357788, EP0389282, EP0406958, EP0426180, EP0428302, EP0435811, EP0470805, EP0482208, EP0490823, EP0506194, EP0511865, EP0527117, EP0626939, EP0664289, EP0671389, EP0685474, EP0685475, EP0685479, JP92234389, JP94329652, JP95010875, US4963561, US5141931, WO9117991, WO9200968, WO9212961, WO9307146, WO9315044, WO9315045, WO9318024, WO9319068, WO9319720, WO9319747, WO9319749, WO9319751, WO9325517, WO9402465, WO9406423, WO9412461, WO9420455, WO9422852, WO9425437, WO9427947, WO9500516, WO9501980, WO9503794, WO9504045, WO9504046, WO9505386, WO9508534, WO9509623, WO9509624, WO9509627, WO9509836, WO9514667, WO9514680, WO9514681, WO9517392, WO9517399, WO9519362, WO9522520, WO9524381, WO9527692, WO9528926, WO9535281, WO9535282, WO9600218, WO9601825, WO9602541, WO9611917, DE3142982, DE1116676, DE2162096, EP0293063, EP0463756, EP0482208, EP0579496, EP0667345 US6331543, US20050004222 (including those disclosed in formulas I-XIII and paragraphs 37-39, 85-0545 and 557-577), WO9307124, EP0163965, EP0393500, EP0510562, EP0553174, WO9501338 and WO9603399, as well as PDE5 inhibitors (such as RX-RA-69, SCH-51866, KT-734, vesnarinone, zaprinast, SKF-96231, ER-21355, BF/GP-385, NM-702 and sildenafil (Viagra<sup>TM</sup>)), PDE4 inhibitors (such as etazolate, ICI63197, RP73401, imazolidinone (RO-20-1724), MEM 1414 (R1533/R1500; Pharmacia Roche), denbufylline, rolipram, oxagrelate, nitraquazone, Y-590, DH-6471, SKF-94120, motapizone, lixazinone, indolidan, olprinone, atizoram, KS-506-G, dipamfylline, BMY-43351, atizoram, arofylline, filaminast, PDB-093, UCB-29646, CDP-840, SKF-107806, piclamilast, RS-17597, RS-25344-

000, SB-207499, TIBENELAST, SB-210667, SB-211572, SB-211600, SB-212066, SB-212179, GW-3600, CDP-840, mopidamol, anagrelide, ibudilast, amrinone, pimobendan, cilostazol, quazinone and N-(3,5-dichloropyrid-4-yl)-3-cyclopropylmethoxy-4-difluoromethoxybenzamide, PDE3 inhibitors (such as ICI153, 100, bemorandane (RWJ 22867), MCI-154, UD-CG 212, sulmazole, ampizone, cilostamide, carbazeran, piroximone, imazodan, CI-930, siguazodan, adibendan, saterinone, SKF-95654, SDZ-MKS-492, 349-U-85, emoradan, EMD-53998, EMD-57033, NSP-306, NSP-307, revizinone, NM-702, WIN-62582 and WIN-63291, enoximone and milrinone, PDE3/4 inhibitors (such as benafentrine, trequinsin, ORG-30029, zardaverine, L-686398, SDZ-ISQ-844, ORG-20241, EMD-54622, and tolafentrine) and other PDE inhibitors (such as vinpocetin, papaverine, enprofylline, cilomilast, fenoximone, pentoxifylline, roflumilast, tadalafil(Cialis®), theophylline, and vardenafil(Levitra®);

Neuropeptide Y2 (NPY2) agonists include but are not limited to: peptide YY and fragments and variants thereof (e.g. YY3-36 (PYY3-36) (N. Engl. J. Med. 349:941, 2003; IKPEAPGE DASPEELNRY YASLRHYLNL VTRQRY (SEQ ID NO:XXX)) and PYY agonists such as those disclosed in WO03/026591, WO03/057235, and WO03/027637;

serotonin reuptake inhibitors, such as, paroxetine, fluoxetine (Prozac™), fluvoxamine, sertraline, citalopram, and imipramine, and those disclosed in US6162805, US6365633, WO03/00663, WO01/27060, and WO01/162341;

thyroid hormone  $\beta$  agonists, such as KB-2611 (KaroBioBMS), and those disclosed in WO02/15845, WO97/21993, WO99/00353, GB98/284425, U.S. Provisional Application No. 60/183,223, and Japanese Patent Application No. JP 2000256190;

UCP-1 (uncoupling protein-1), 2, or 3 activators, such as phytanic acid, 4-[(E)-2-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)-1-propenyl]benzoic acid (TTNPB), retinoic acid, and those disclosed in WO99/00123;

$\beta$ 3 (beta adrenergic receptor 3) agonists, such as AJ9677/TAK677 (Dainippon/Takeda), L750355 (Merck), CP331648 (Pfizer), CL-316,243, SB 418790, BRL-37344, L-796568, BMS-196085, BRL-35135A, CGP12177A, BTA-243, GW 427353, Trecadrine, Zeneca D7114, N-5984

(Nisshin Kyorin), LY-377604 (Lilly), SR 59119A, and those disclosed in US5541204, US5770615, US5491134, US5776983, US488064, US5705515, US5451677, WO94/18161, WO95/29159, WO97/46556, WO98/04526 and WO98/32753, WO01/74782, WO02/32897, WO03/014113, WO03/016276, WO03/016307, WO03/024948, WO03/024953 and WO03/037881;

noradrenergic agents including, but not limited to, diethylpropion (such as Tenuate® (1-propanone, 2-(diethylamino)-1-phenyl-, hydrochloride), Merrell), dextroamphetamine (also known as dextroamphetamine sulfate, dexamphetamine, dexedrine, Dexampex, Ferndex, Oxydess II, Robese, Spancap #1), mazindol ((or 5-(p-chlorophenyl)-2,5-dihydro-3H-imidazo[2,1-a]isoindol-5-ol) such as Sanorex®, Novartis or Mazanor®, Wyeth Ayerst), phenylpropanolamine (or Benzenemethanol, alpha-(1-aminoethyl)-, hydrochloride), phentermine ((or Phenol, 3-[[4,5-dihydro-1H-imidazol-2-yl)ethyl](4-methylphenyl)amino], monohydrochloride) such as Adipex-P®, Lemmon, FASTIN®, Smith-Kline Beecham and Ionamin®, Medeva), phendimetrazine ((or (2S,3S)-3,4-Dimethyl-2-phenylmorpholine L-(+)-tartrate (1:1)) such as Metra® (Forest), Plegine® (Wyeth-Ayerst), Prelu-2® (Boehringer Ingelheim), and Statobex® (Lemmon), phendamine tartrate (such as Thephorin® (2,3,4,9-Tetrahydro-2-methyl-9-phenyl-1H-indenol[2,1-c]pyridine L-(+)-tartrate (1:1)), Hoffmann-LaRoche), methamphetamine (such as Desoxyn®, Abbot ((S)--N, (alpha)-dimethylbenzeneethanamine hydrochloride)), and phendimetrazine tartrate (such as Bontril® Slow-Release Capsules, Amarin (-3,4-Dimethyl-2-phenylmorpholine Tartrate);

fatty acid oxidation upregulator/inducers such as Famoxin® (Genset);

monamine oxidase inhibitors including but not limited to befloxatone, moclobemide, brofaromine, phenoxathine, esuprone, befol, toloxatone, pirlindol, amiflamine, serclorephine, bazinaprine, lazabemide, milacemide, caroxazone and other certain compounds as disclosed by WO01/12176; and

other anti-obesity agents such as 5HT-2 agonists, ACC (acetyl-CoA carboxylase) inhibitors such as those described in WO03/072197, alpha-lipoic acid (alpha-LA), AOD9604, appetite

suppressants such as those in WO03/40107, ATL-962 (Alizyme PLC), benzocaine, benzphetamine hydrochloride (Didrex), bladderwrack (*focus vesiculosus*), BRS3 (bombesin receptor subtype 3) agonists, bupropion, caffeine, CCK agonists, chitosan, chromium, conjugated linoleic acid, corticotropin-releasing hormone agonists, dehydroepiandrosterone, DGAT1 (diacylglycerol acyltransferase 1) inhibitors, DGAT2 (diacylglycerol acyltransferase 2) inhibitors, dicarboxylate transporter inhibitors, ephedra, exendin-4 (an inhibitor of glp-1) FAS (fatty acid synthase) inhibitors (such as Cerulenin and C75), fat resorption inhibitors (such as those in WO03/053451, and the like), fatty acid transporter inhibitors, natural water soluble fibers (such as psyllium, plantago, guar, oat, pectin), galanin antagonists, galega (Goat's Rue, French Lilac), garcinia cambogia, germander (*teucrium chamaedrys*), ghrelin antibodies and ghrelin antagonists (such as those disclosed in WO01/87335, and WO02/08250), peptide hormones and variants thereof which affect the islet cell secretion, such as the hormones of the secretin/gastric inhibitory peptide (GIP)/vasoactive intestinal peptide (VIP)/pituitary adenylate cyclase activating peptide (PACAP)/glucagon-like peptide II (GLP-II)/glicentin/glucagon gene family and/or those of the adrenomedullin/amylin/calcitonin gene related peptide (CGRP) gene family including GLP-1 (glucagon-like peptide 1) agonists (e.g. (1) exendin-4, (2) those GLP-1 molecules described in US20050130891 including GLP-1(7-34), GLP-1(7-35), GLP-1(7-36) or GLP-1(7-37) in its C-terminally carboxylated or amidated form or as modified GLP-1 peptides and modifications thereof including those described in paragraphs 17-44 of US20050130891, and derivatives derived from GLP-1-(7-34)COOH and the corresponding acid amide are employed which have the following general formula:



wherein R=H or an organic compound having from 1 to 10 carbon atoms. Preferably, R is the residue of a carboxylic acid. Particularly preferred are the following carboxylic acid residues: formyl, acetyl, propionyl, isopropionyl, methyl, ethyl, propyl, isopropyl, n-butyl, sec-butyl, tert-butyl.) and glp-1 (glucagon-like peptide-1), glucocorticoid antagonists, glucose transporter inhibitors, growth hormone secretagogues (such as those disclosed and specifically described in US5536716), interleukin-6 (IL-6) and modulators thereof (as in WO03/057237, and the like), L-carnitine, Mc3r (melanocortin 3 receptor) agonists, MCH2R (melanin concentrating hormone

2R) agonist/antagonists, melanin concentrating hormone antagonists, melanocortin agonists (such as Melanotan II or those described in WO 99/64002 and WO 00/74679), nomame herba, phosphate transporter inhibitors, phytopharm compound 57 (CP 644,673), pyruvate, SCD-1 (stearoyl-CoA desaturase-1) inhibitors, T71 (Tularik, Inc., Boulder CO), Topiramate (Topimax®, indicated as an anti-convulsant which has been shown to increase weight loss), transcription factor modulators (such as those disclosed in WO03/026576),  $\beta$ -hydroxy steroid dehydrogenase-1 inhibitors ( $\beta$ -HSD-1),  $\beta$ -hydroxy- $\beta$ -methylbutyrate, p57 (Pfizer), Zonisamide (Zonegran™, indicated as an anti-epileptic which has been shown to lead to weight loss), and the agents disclosed in US20030119428 paragraphs 20-26.

The peptides and agonists described herein can be used in therapeutic combination with one or more anti-diabetic agents, including but not limited to:

PPAR $\gamma$  agonists such as glitazones (e.g., WAY-120,744, AD 5075, balaglitazone, ciglitazone, darglitazone (CP-86325, Pfizer), englitazone (CP-68722, Pfizer), isaglitazone (MIT/J&J), MCC-555 (Mitsubishi disclosed in US5594016), pioglitazone (such as such as Actos™ pioglitazone; Takeda), rosiglitazone (Avandia™;Smith Kline Beecham), rosiglitazone maleate, troglitazone (Rezulin®, disclosed in US4572912), rivoglitazone (CS-011, Sankyo), GL-262570 (Glaxo Welcome), BRL49653 (disclosed in WO98/05331), CLX-0921, 5-BTZD, GW-0207, LG-100641, JJT-501 (JPNT/P&U), L-895645 (Merck), R-119702 (Sankyo/Pfizer), NN-2344 (Dr. Reddy/NN), YM-440 (Yamanouchi), LY-300512, LY-519818, R483 (Roche), T131 (Tularik), and the like and compounds disclosed in US4687777, US5002953, US5741803, US5965584, US6150383, US6150384, US6166042, US6166043, US6172090, US6211205, US6271243, US6288095, US6303640, US6329404, US5994554, W097/10813, WO97/27857, WO97/28115, WO97/28137, WO97/27847, WO00/76488, WO03/000685, WO03/027112, WO03/035602, WO03/048130, WO03/055867, and pharmaceutically acceptable salts thereof;

biguanides such as metformin hydrochloride (N,N-dimethylimidodicarbonimidic diamide hydrochloride, such as Glucophage™, Bristol-Myers Squibb); metformin hydrochloride with glyburide, such as Glucovance™, Bristol-Myers Squibb); buformin (Imidodicarbonimidic diamide, N-butyl-); etoformine (1-Butyl-2-ethylbiguanide, Schering A. G.); other metformin salt



forms (including where the salt is chosen from the group of, acetate, benzoate, citrate, fimate, embonate, chlorophenoxyacetate, glycolate, palmoate, aspartate, methanesulphonate, maleate, parachlorophenoxyisobutyrate, formate, lactate, succinate, sulphate, tartrate, cyclohexanecarboxylate, hexanoate, octanoate, decanoate, hexadecanoate, octodecanoate, benzenesulphonate, trimethoxybenzoate, paratoluenesulphonate, adamantanecarboxylate, glycoxylate, glutarnate, pyrrolidonecarboxylate, naphthalenesulphonate, 1-glucosephosphate, nitrate, sulphite, dithionate and phosphate), and phenformin;

protein tyrosine phosphatase-1B (PTP-1B) inhibitors, such as A-401,674, KR 61639, OC-060062, OC-83839, OC-297962, MC52445, MC52453, ISIS 113715, and those disclosed in WO99/585521, WO99/58518, WO99/58522, WO99/61435, WO03/032916, WO03/032982, WO03/041729, WO03/055883, WO02/26707, WO02/26743, JP2002114768, and pharmaceutically acceptable salts and esters thereof;

sulfonylureas such as acetohexamide (e.g. Dymelor, Eli Lilly), carbutamide, chlorpropamide (e.g. Diabinese®, Pfizer), gliamilide (Pfizer), gliclazide (e.g. Diamcron, Servier Canada Inc), glimepiride (e.g. disclosed in US4379785, such as Amaryl™, Aventis), glipentide, glipizide (e.g. Glucotrol or Glucotrol XL Extended Release, Pfizer), gliquidone, glisolamide, glyburide/glibenclamide (e.g. Micronase or Glynase Prestab, Pharmacia & Upjohn and Diabeta, Aventis), tolazamide (e.g. Tolinase), and tolbutamide (e.g. Orinase), and pharmaceutically acceptable salts and esters thereof;

meglitinides such as repaglinide (e.g. Prandin®, Novo Nordisk), KAD1229 (PF/Kissei), and nateglinide (e.g. Starlix®, Novartis), and pharmaceutically acceptable salts and esters thereof;

$\alpha$  glucoside hydrolase inhibitors (or glucoside inhibitors) such as acarbose (e.g. Precose™, Bayer disclosed in US4904769), miglitol (such as GLYSET™, Pharmacia & Upjohn disclosed in US4639436), camiglibose (Methyl 6-deoxy-6-[(2R,3R,4R,5S)-3,4,5-trihydroxy-2-(hydroxymethyl)piperidino]- $\alpha$ -D-glucopyranoside, Marion Merrell Dow), voglibose (Takeda), adiposine, emiglitate, pradimicin-Q, salbostatin, CKD-711, MDL- 25,637, MDL-73,945, and MOR 14, and the compounds disclosed in US4062950, US4174439, US4254256, US4701559, US4639436, US5192772, US4634765, US5157116, US5504078, US5091418, US5217877, US51091 and WO01/47528 (polyamines);

$\alpha$ -amylase inhibitors such as tendamistat, trestatin, and A1-3688, and the compounds disclosed

in US4451455, US4623714, and US4273765;  
SGLT2 inhibitors including those disclosed in US6414126 and US6515117;  
an aP2 inhibitor such as disclosed in US6548529;  
insulin secretagogues such as linogiride, A-4166, forskilin, dibutyl cAMP,  
isobutylmethylxanthine (IBMX), and pharmaceutically acceptable salts and esters thereof;  
fatty acid oxidation inhibitors, such as clomoxir, and etomoxir, and pharmaceutically acceptable  
salts and esters thereof;  
A2 antagonists, such as midaglizole, isaglidole, deriglidole, idazoxan, eadoxan, and fluparoxan,  
and pharmaceutically acceptable salts and esters thereof;  
insulin and related compounds (e.g. insulin mimetics) such as biota, LP-100, novarapid, insulin  
detemir, insulin lispro, insulin glargine, insulin zinc suspension (lente and ultralente), Lys-Pro  
insulin, GLP-1 (1-36) amide, GLP-1 (73-7) (insulintropin, disclosed in US5614492), LY-315902  
(Lilly), GLP-1 (7-36)-NH<sub>2</sub>), AL-401 (AutoImmune), certain compositions as disclosed in  
US4579730, US4849405, US4963526, US5642868, US5763396, US5824638, US5843866,  
US6153632, US6191105, and WO 85/05029, and primate, rodent, or rabbit insulin including  
biologically active variants thereof including allelic variants, more preferably human insulin  
available in recombinant form (sources of human insulin include pharmaceutically acceptable  
and sterile formulations such as those available from Eli Lilly (Indianapolis, Ind. 46285) as  
Humulin™ (human insulin rDNA origin), also see the THE PHYSICIAN'S DESK REFERENCE,  
55.sup.th Ed. (2001) Medical Economics, Thomson Healthcare (disclosing other suitable human  
insulins);  
non-thiazolidinediones such as JT-501 and farglitazar (GW-2570/GI- 262579), and  
pharmaceutically acceptable salts and esters thereof;  
PPAR $\alpha$ / $\gamma$  dual agonists such as AR-HO39242 (Astrazeneca), GW-409544 (Glaxo-Wellcome),  
BVT-142, CLX-0940, GW-1536, GW-1929, GW-2433, KRP-297 (Kyorin Merck; 5-[(2,4-Dioxo  
thiazolidinyl)methyl] methoxy-N-[[4-(trifluoromethyl)phenyl] methyl]benzamide), L-796449,  
LR-90, MK-0767 (Merck/Kyorin/Banyu), SB 219994, muraglitazar (BMS), tesaglitazar  
(Astrazeneca), reglitazar (JTT-501) and those disclosed in WO99/16758, WO99/19313,  
WO99/20614, WO99/38850, WO00/23415, WO00/23417, WO00/23445, WO00/50414,  
WO01/00579, WO01/79150, WO02/062799, WO03/004458, WO03/016265, WO03/018010,

WO03/033481, WO03/033450, WO03/033453, WO03/043985, WO 031053976, U.S. application Ser. No. 09/664,598, filed Sep. 18, 2000, Murakami et al. Diabetes 47, 1841-1847 (1998), and pharmaceutically acceptable salts and esters thereof;  
other insulin sensitizing drugs;  
VPAC2 receptor agonists;  
GLK modulators, such as those disclosed in WO03/015774;  
retinoid modulators such as those disclosed in WO03/000249;  
GSK 3 $\beta$ /GSK 3 inhibitors such as 4-[2-(2-bromophenyl)-4-(4-fluorophenyl-1H-imidazol-5-yl)pyridine and those compounds disclosed in WO03/024447, WO03/037869, WO03/037877, WO03/037891, WO03/068773, EP1295884, EP1295885, and the like;  
glycogen phosphorylase (HGLPa) inhibitors such as CP-368,296, CP-316,819, BAYR3401, and compounds disclosed in WO01/94300, WO02/20530, WO03/037864, and pharmaceutically acceptable salts or esters thereof;  
ATP consumption promoters such as those disclosed in WO03/007990;  
TRB3 inhibitors;  
vanilloid receptor ligands such as those disclosed in WO03/049702;  
hypoglycemic agents such as those disclosed in WO03/015781 and WO03/040114;  
glycogen synthase kinase 3 inhibitors such as those disclosed in WO03/035663  
agents such as those disclosed in WO99/51225, US20030134890, WO01/24786, and WO03/059870;  
insulin-responsive DNA binding protein-1 (IRDBP-1) as disclosed in WO03/057827, and the like;  
adenosine A2 antagonists such as those disclosed in WO03/035639, WO03/035640, and the like;  
PPAR $\delta$  agonists such as GW 501516, GW 590735, and compounds disclosed in JP10237049 and WO02/14291;  
dipeptidyl peptidase IV (DP-IV) inhibitors, such as isoleucine thiazolidide, NVP-DPP728A (1-[[[2-[(5-cyanopyridin-2-yl)amino]ethyl]amino]acetyl]-2-cyano-(S)-pyrrolidine, disclosed by Hughes et al, Biochemistry, 38(36), 11597-11603, 1999), P32/98, NVP-LAF-237, P3298, TSL225 (tryptophyl-1,2,3,4-tetrahydro-isoquinoline-3-carboxylic acid, disclosed by Yamada et al, Bioorg. & Med. Chem. Lett. 8 (1998) 1537-1540), valine pyrrolidide, TMC-2A/2B/2C, CD-

26 inhibitors, FE999011, P9310/K364, VIP 0177, DPP4, SDZ 274-444, 2-cyanopyrrolidides and 4-cyanopyrrolidides as disclosed by Ashworth et al, *Bioorg. & Med. Chem. Lett.*, Vol. 6, No. 22, pp 1163-1166 and 2745-2748 (1996), and the compounds disclosed in US6395767, US6573287, US6395767 (compounds disclosed include BMS-477118, BMS-471211 and BMS 538,305), WO99/38501, WO99/46272, WO99/67279, WO99/67278, WO99/61431WO03/004498, WO03/004496, EP1258476, WO02/083128, WO02/062764, WO03/000250, WO03/002530, WO03/002531, WO03/002553, WO03/002593, WO03/000180, and WO03/000181; GLP-1 agonists such as exendin-3 and exendin-4 (including the 39 aa peptide synthetic exendin-4 called Exenatide®), and compounds disclosed in US2003087821 and NZ 504256, and pharmaceutically acceptable salts and esters thereof; peptides including amlintide and Symlin® (pramlintide acetate); and glycol kinase activators such as those disclosed in US2002103199 (fused heteroaromatic compounds) and WO02/48106 (isoindolin-1-one-substituted propionamide compounds).

The peptides and agonists described herein useful in the treatment of obesity can be administered as a cotherapy with electrostimulation (US20040015201).

The peptides and agonists described herein can be used in combination therapy with agents that activate soluble guanylate cyclase, for example those described in US20040192680.

The peptides and agonists described herein can be used in combination therapy with a phosphodiesterase inhibitor. PDE inhibitors are those compounds which slow the degradation of cyclic AMP (cAMP) and/or cyclic GMP (cGMP) by inhibition of the phosphodiesterases, which can lead to a relative increase in the intracellular concentration of cAMP and/or cGMP. Possible PDE inhibitors are primarily those substances which are to be numbered among the class consisting of the PDE3 inhibitors, the class consisting of the PDE4 inhibitors and/or the class consisting of the PDE5 inhibitors, in particular those substances which can be designated as mixed types of PDE3/4 inhibitors or as mixed types of PDE3/4/5 inhibitors. By way of example, those PDE inhibitors may be mentioned such as are described and/or claimed in the following patent applications and patents: DE1470341, DE2108438, DE2123328, DE2305339,

DE2305575, DE2315801, DE2402908, DE2413935, DE2451417, DE2459090, DE2646469, DE2727481, DE2825048, DE2837161, DE2845220, DE2847621, DE2934747, DE3021792, DE3038166, DE3044568, EP000718, EP0008408, EP0010759, EP0059948, EP0075436, EP0096517, EP0112987, EP0116948, EP0150937, EP0158380, EP0161632, EP0161918, EP0167121, EP0199127, EP0220044, EP0247725, EP0258191, EP0272910, EP0272914, EP0294647, EP0300726, EP0335386, EP0357788, EP0389282, EP0406958, EP0426180, EP0428302, EP0435811, EP0470805, EP0482208, EP0490823, EP0506194, EP0511865, EP0527117, EP0626939, EP0664289, EP0671389, EP0685474, EP0685475, EP0685479, JP92234389, JP94329652, JP95010875, U.S. Pat. Nos. 4,963,561, 5,141,931, WO9117991, WO9200968, WO9212961, WO9307146, WO9315044, WO9315045, WO9318024, WO9319068, WO9319720, WO9319747, WO9319749, WO9319751, WO9325517, WO9402465, WO9406423, WO9412461, WO9420455, WO9422852, WO9425437, WO9427947, WO9500516, WO9501980, WO9503794, WO9504045, WO9504046, WO9505386, WO9508534, WO9509623, WO9509624, WO9509627, WO9509836, WO9514667, WO9514680, WO9514681, WO9517392, WO9517399, WO9519362, WO9522520, WO9524381, WO9527692, WO9528926, WO9535281, WO9535282, WO9600218, WO9601825, WO9602541, WO9611917, DE3142982, DE1116676, DE2162096, EP0293063, EP0463756, EP0482208, EP0579496, EP0667345 US6,331,543, US20050004222 (including those disclosed in formulas I-XIII and paragraphs 37-39, 85-0545 and 557-577) and WO9307124, EP0163965, EP0393500, EP0510562, EP0553174, WO9501338 and WO9603399. PDE5 inhibitors which may be mentioned by way of example are RX-RA-69, SCH-51866, KT-734, vesnarinone, zaprinast, SKF-96231, ER-21355, BF/GP-385, NM-702 and sildenafil (Viagra®). PDE4 inhibitors which may be mentioned by way of example are RO-20-1724, MEM 1414 (R1533/R1500; Pharmacia Roche), DENBUFYLLINE, ROLIPRAM, OXAGRELATE, NITRAQUAZONE, Y-590, DH-6471, SKF-94120, MOTAPIZONE, LIXAZINONE, INDOLIDAN, OLPRINONE, ATIZORAM, KS-506-G, DIPAMFYLLINE, BMY-43351, ATIZORAM, AROFYLLINE, FILAMINAST, PDB-093, UCB-29646, CDP-840, SKF-107806, PICLAMILAST, RS-17597, RS-25344-000, SB-207499, TIBENELAST, SB-210667, SB-211572, SB-211600, SB-212066, SB-212179, GW-3600, CDP-840, MOPIDAMOL, ANAGRELIDE, IBUDILAST, AMRINONE, PIMOBENDAN, CILOSTAZOL, QUAZINONE

and N-(3,5-dichloropyrid-4-yl)-3-cyclopropylmethoxy-4-difluoromethoxybenzamide. PDE3 inhibitors which may be mentioned by way of example are SULMAZOLE, AMPIZONE, CILOSTAMIDE, CARBAZERAN, PIROXIMONE, IMAZODAN, CI-930, SIGUAZODAN, ADIBENDAN, SATERINONE, SKF-95654, SDZ-MKS-492, 349-U-85, EMORADAN, EMD-53998, EMD-57033, NSP-306, NSP-307, REVIZINONE, NM-702, WIN-62582 and WIN-63291, ENOXIMONE and MILRINONE. PDE3/4 inhibitors which may be mentioned by way of example are BENAFENTRINE, TREQUINSIN, ORG-30029, ZARDAVERINE, L-686398, SDZ-ISQ-844, ORG-20241, EMD-54622, and TOLAFENTRINE. Other PDE inhibitors include: cilomilast, pentoxifylline, roflumilast, tadalafil(Cialis®), theophylline, and vardenafil(Levitra®), zaprinast (PDE5 specific).

The peptides and agonists described herein can be used in combination therapy (for example, in order to decrease or inhibit uterine contractions) with a tocolytic agent including but not limited to beta-adrenergic agents, magnesium sulfate, prostaglandin inhibitors, and calcium channel blockers.

The peptides and agonists of the invention can be used in combination therapy with an anti-neoplastic agents including but not limited to alkylating agents, epipodophyllotoxins, nitrosoureas, antimetabolites, vinca alkaloids, anthracycline antibiotics, nitrogen mustard agents, and the like. Particular anti-neoplastic agents may include tamoxifen, taxol, etoposide and 5-fluorouracil. The peptides and agonists of the invention can be used in combination therapy (for example as in a chemotherapeutic composition) with an antiviral and monoclonal antibody therapies.

The peptides and agonists of the invention can be used in combination therapy (for example, in prevention/treatment of congestive heart failure or another method described herein) with the partial agonist of the nociceptin receptor ORL1 described by Dooley et al. (The Journal of Pharmacology and Experimental Therapeutics, 283 (2): 735-741, 1997). The agonist is a hexapeptide having the amino acid sequence Ac- RYY (RK) (WI) (RK)-NH<sub>2</sub> ("the Dooley peptide"), where the brackets show allowable variation of amino acid residue. Thus Dooley

peptide can include but are not limited to KYRWR, RYRWR, KWRYYR, RYRWK, RYRWK (all-D amino acids), RYRIK, RYRIR, RYKIK, RYKIR, RYKWR, RYKWK, RYRWR, RYRWK, RYRIK, RYKWR, RYKWK, RYRWK and KYRWK, wherein the amino acid residues are in the L-form unless otherwise specified. The peptides and agonists of the invention can also be used in combination therapy with peptide conjugate modifications of the Dooley peptide described in WO0198324.

#### Methods of Treatment

A number of disorders might be treated with GC-C receptor agonists and agents that increase cGMP levels including the peptides and agonists of the invention.

The peptides and agonists of the invention can be used alone or in combination therapy for the treatment or prevention of congestive heart failure. Such agents can be used in combination with natriuretic peptides (e.g., atrial natriuretic peptide, brain natriuretic peptide or C-type natriuretic peptide), a diuretic, or an inhibitor of angiotensin converting enzyme.

The peptides and agonists of the invention can be used alone or in combination therapy for the treatment or prevention of benign prostatic hyperplasia (BPH). Such agents can be used in combination with one or more agents for treatment of BPH, for example, a 5-alpha reductase inhibitor (e.g., finasteride) or an alpha adrenergic inhibitor (e.g., doxazosine).

The peptides and agonists of the invention can be used alone or in combination therapy for the treatment, prevention or reduction of visceral pain associated with a gastrointestinal disorder or pain associated with another disorder.

The peptides and agonists of the invention can be used alone or in combination therapy for the treatment or prevention of obesity-related disorders (e.g. disorders that are associated with, caused by, or result from obesity). Examples of obesity-related disorders include overeating and bulimia, hypertension, diabetes, elevated plasma insulin concentrations and insulin resistance, dyslipidemias, hyperlipidemia, endometrial, breast, prostate and colon cancer, osteoarthritis,

obstructive sleep apnea, cholelithiasis, gallstones, heart disease, abnormal heart rhythms and arrhythmias, myocardial infarction, congestive heart failure, coronary heart disease, sudden death, stroke, polycystic ovarian disease, craniopharyngioma, the Prader-Willi Syndrome, Frohlich's syndrome, GH-deficient subjects, normal variant short stature, Turner's syndrome, and other pathological conditions showing reduced metabolic activity or a decrease in resting energy expenditure as a percentage of total fat-free mass, e.g., children with acute lymphoblastic leukemia. The agents of the invention may be used to reduce or control body weight (or fat) or to prevent and/or treat obesity or other appetite related disorders related to the excess consumption of food, ethanol and other appetizing substances. The agents may be used to modulate lipid metabolism, reduce body fat (e.g. via increasing fat utilization) or reduce (or suppress) appetite (e.g. via inducing satiety). Further examples of obesity-related disorders are metabolic syndrome, also known as syndrome X, insulin resistance syndrome, sexual and reproductive dysfunction, such as infertility, hypogonadism in males and hirsutism in females, gastrointestinal motility disorders, such as obesity-related gastroesophageal reflux, respiratory disorders, such as obesity-hypoventilation syndrome (Pickwickian syndrome), cardiovascular disorders, inflammation, such as systemic inflammation of the vasculature, arteriosclerosis, hypercholesterolemia, hyperuricaemia, lower back pain, gallbladder disease, gout, and kidney cancer. The agents of the present invention are also useful for reducing the risk of secondary outcomes of obesity, such as reducing the risk of left ventricular hypertrophy.

The peptides and agonists of the invention can be used alone or in combination therapy for the treatment or prevention of gastrointestinal related disorders including: chronic intestinal pseudo-obstruction (Ogilvie's syndrome), colonic pseudoobstruction, Crohn's disease, dyspepsia (including functional dyspepsia or nonulcer dyspepsia), duodenogastric reflux, functional bowel disorder, functional gastrointestinal disorders, functional heartburn, gastroesophageal reflux disease (GERD), gastrointestinal motility disorders, gastroparesis (e.g. idiopathic gastroparesis), hypertrophic pyloric stenosis, Inflammatory bowel disease, irritable bowel syndrome (IBS), post-operative ileus, and ulcerative colitis. The peptides and agonists of the invention can be used alone or in combination therapy to patient suffering from or susceptible to GI disorders relating to damage to the GI tract stemming from impact or surgical intervention. The peptides and



agonists of the invention can be used alone or in combination therapy to patients at risk for or having particular diseases associated with hypomotility (e.g. colonic inertia) or stasis in the GI tract. For example, diabetic neuropathy, anorexia nervosa, and achlorhydria are frequently accompanied by gastric hypomotility. Damage to the GI tract following surgical intervention, for instance, can result in substantial gastric stasis. The peptides and agonists of the invention can be administered alone or in combination therapy to patients susceptible to or having a GI disorder associated with diabetes (e.g. diabetic gastropathy). The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat GI disorders characterized by at least one of nausea, vomiting, heartburn, postprandial discomfort, diarrhea, constipation, indigestion or related symptoms. The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat GI disorders associated with at least one of diabetes, anorexia nervosa, bulimia, achlorhydria, achalasia, anal fissure, haemorrhoids, irritable bowel syndrome, intestinal pseudoobstruction, scleroderma and gastrointestinal damage.

The peptides and agonists of the invention can be used to prevent and/or treat constipation. Constipation can be used to describe bowel patterns which include one or more of hard, small, infrequent stools; the sensation of difficulty in passing stool, specifically excessive or ineffectual straining; the sensation of incomplete evacuation. Constipation has also been described as the passage of stool less than a certain number (e.g. 3) of times per week. A number of conditions can be associated with constipation. Constipation can be associated with numerous disorders and conditions. For example, constipation can be (1) associated with the use of a therapeutic agent (e.g. antihypertensives, anticonvulsants, antispasmodics, analgesics, anticholinergics, antidepressants, antipsychotics, cation-containing agents, anticonvulsants, ganglion blockers, vinca alkaloids); (2) associated with a muscular, neuropathic, metabolic or endocrine disorder (including but not limited to myotonic dystrophy, dermatomyositis, systemic sclerosis, scleroderma, amyloidosis (neurologic or muscular), ischemia, tumor of the central nervous system, autonomic neuropathy, Chagas disease, cystic fibrosis, diabetes mellitus, Hirschsprung disease, hyperthyroidism, hypocalcaemia, hypothyroidism, Multiple Sclerosis, neurofibromatosis, Parkinson's disease, and spinal cord lesions (for example, related to sacral nerve damage related to trauma or a tumor of the enteric nervous system)); (3) post-surgical constipation

(postoperative ileus); (4) associated with a structural colon alteration (for example that associated with Neoplasm, stricture, volvulus, anorectal, inflammation, prolapse, rectocele, or fissure); (5) associated with the a gastrointestinal disorder; (6) associated with a systemic illness or disorder (for example, electrolyte abnormalities, thyroid disease, diabetes mellitus, panhypopituitarism, Addison's disease, pheochromocytoma, uremia, porphyria); (7) chronic constipation; (8) associated with the use of analgesic drugs (e.g. opioid induced constipation); (9) associated with megacolon; and (10) idiopathic constipation (functional constipation). Functional constipation can be associated with normal transit, slow transit (e.g. one or fewer bowel movements per week) and pelvic floor dyssynergia. Pelvic floor dyssynergia is considered a disorder of the rectum and anus although these patients also have abnormal contractions throughout the colon. Patients with pelvic floor dyssynergia have abnormal colonic pressure waves prior to defecation and present with symptoms that may include a sensation of incomplete evacuation, excessive straining, a need for digital disimpaction, perianal heaviness, and tenesmus. Constipation can be associated with bloating and abdominal pain. The peptides and agonists of the invention can be used to prevent and/or treat low stool frequency or poor stool consistency.

The peptides and agonists of the invention can be used to treat decreased intestinal motility, slow digestion or slow stomach emptying. The peptides and agonists can be used to relieve one or more symptoms of IBS (bloating, pain, constipation), GERD (acid reflux into the esophagus), duodenogastric reflux, functional dyspepsia, or gastroparesis (nausea, vomiting, bloating, delayed gastric emptying) and other disorders described herein. The peptides and agonists of the invention can be used to treat flatulence.

The peptides and agonists of the invention can be used to increase intestinal motility, slow colonic transit, and to prevent and/or treat gastrointestinal immotility and other conditions calling for laxative or stool softener therapy. Gastrointestinal immotility can include constipation, and also includes delayed oral cecal transit time, irregular Taxation, and other related gastrointestinal motility dysfunction including impaction. Impaction is a condition where a large mass of dry, hard stool develops in the rectum, often due to chronic constipation. This mass may be so hard

that it cannot be excreted. The subjects affected by constipation or gastrointestinal immotility can be refractory to laxative therapy and/or stool softener therapy.

The peptides and agonists of the invention can be used for the treatment or prevention of cancer, pre-cancerous growths, or metastatic growths. For example, they can be used for the prevention or treatment of: colorectal/local metastasized colorectal cancer, intestinal polyps, gastrointestinal tract cancer, lung cancer, cancer or pre-cancerous growths or metastatic growths of epithelial cells, polyps, breast, colorectal, lung, ovarian, pancreatic, prostatic, renal, stomach, bladder, liver, esophageal and testicular carcinoma, carcinoma (e.g., basal cell, basosquamous, Brown-Pearce, ductal carcinoma, Ehrlich tumor, Krebs, Merkel cell, small or non-small cell lung, oat cell, papillary, bronchiolar, squamous cell, transitional cell, (Walker), leukemia (e.g., B-cell, T-cell, HTLV, acute or chronic lymphocytic, mast cell, myeloid), histiocytosis, histiocytoma, Hodgkin's disease, non-Hodgkin's lymphoma, plasmacytoma, reticuloendotheliosis, adenoma, adeno-carcinoma, adenofibroma, adenolymphoma, ameloblastoma, angiokeratoma, angiolymphoid hyperplasia with eosinophilia, sclerosing angioma, angiomatosis, apudoma, branchionia, malignant carcinoid syndrome, carcinoid heart disease, carcinosarcoma, cementoma, cholangioma, cholesteatoma, chondrosarcoma, chondroblastoma, chondrosarcoma, chordoma, choristoma, craniopharyngioma, chondroma, cylindroma, cystadenocarcinoma, cystadenoma, cystosarcoma phyllodes, dysgerminoma, ependymoma, Ewing sarcoma, fibroma, fibrosarcoma, giant cell tumor, ganglioneuroma, glioblastoma, glomangioma, granulosa cell tumor, gynandroblastoma, hamartoma, hemangioendothelioma, hemangioma, hemangiopericytoma, hemangiosarcoma, hepatoma, islet cell tumor, Kaposi sarcoma, leiomyoma, leiomyosarcoma, leukosarcoma, Leydig cell tumor, lipoma, liposarcoma, lymphangioma, lymphangiomyoma, lymphangiosarcoma, medulloblastoma, meningioma, mesenchymoma, mesonephroma, mesothelioma, myoblastoma, myoma, myosarcoma, myxoma, myxosarcoma, neurilemmoma, neuroma, neuroblastoma, neuroepithelioma, neurofibroma, neurofibromatosis, odontoma, osteoma, osteosarcoma, papilloma, paraganglioma, paraganglionia, nonchromaffin, pinealoma, rhabdomyoma, rhabdomyosarcoma, Sertoli cell tumor, teratoma, theca cell tumor, and other diseases in which cells have become dysplastic, immortalized, or transformed.

The peptides and agonists of the invention can be used for the treatment or prevention of: Familial Adenomatous Polyposis (FAP) (autosomal dominant syndrome) that precedes colon cancer, hereditary nonpolyposis colorectal cancer (HNPCC), and inherited autosomal dominant syndrome.

For treatment or prevention of cancer, pre-cancerous growths and metastatic growths, the peptides and agonists of the invention can be used in combination therapy with radiation or chemotherapeutic agents, an inhibitor of a cGMP-dependent phosphodiesterase or a selective cyclooxygenase-2 inhibitor. A number of selective cyclooxygenase-2 inhibitors are described in US20010024664, U.S. Pat. No. 5,380,738, U.S. Pat. No. 5,344,991, U.S. Pat. No. 5,393,790, U.S. Pat. No. 5,434,178, U.S. Pat. No. 5,474,995, U.S. Pat. No. 5,510,368, WO02/062369, WO 96/06840, WO 96/03388, WO 96/03387, WO 96/19469, WO 96/25405, WO 95/15316, WO 94/15932, WO 94/27980, WO 95/00501, WO 94/13635, WO 94/20480, and WO 94/26731, the disclosures of which are herein incorporated by reference. [Pyrazol-1-yl]benzenesulfonamides have also been described as inhibitors of cyclooxygenase-2.

The peptides and agonists of the invention can be used in the treatment or prevention of inflammation. Thus, they can be used alone or in combination with an inhibitor of cGMP-dependent phosphodiesterase or a selective cyclooxygenase-2 inhibitor for treatment of: organ inflammation, IBD (e.g. Crohn's disease, ulcerative colitis), asthma, nephritis, hepatitis, pancreatitis, bronchitis, cystic fibrosis, ischemic bowel diseases, intestinal inflammations/allergies, coeliac disease, proctitis, eosinophilic gastroenteritis, mastocytosis, and other inflammatory disorders. The peptides and agonists of the invention can be used alone or in combination therapy in the treatment or prevention of gastrointestinal tract inflammation (e.g. inflammation associated with a gastrointestinal disorder, gastrointestinal tract infection, or another disorder). They can be used alone or in combination therapy with phenoxyalkylcarboxylic acid derivatives for the treatment of interstitial cystitis, irritable bowel syndrome, ulcerative colitis, and other inflammatory conditions, as mentioned in US20050239902A1.

The peptides and agonists of the invention can also be used to treat or prevent insulin-related disorders, for example: II diabetes mellitus, hyperglycemia, obesity, disorders associated with disturbances in glucose or electrolyte transport and insulin secretion in cells, or endocrine disorders. They can be also used in insulin resistance treatment and post-surgical and non-post surgery decrease in insulin responsiveness.

The peptides and agonists of the invention can be used to prevent and/or treat pulmonary and respiratory related disorders, including, inhalation, ventilation and mucus secretion disorders, pulmonary hypertension, chronic obstruction of vessels and airways, acute respiratory failure, and irreversible obstructions of vessels and bronchi. One may administer an agent of the invention for treating bronchospasm, for inducing bronchodilation, for treating chronic obstructive pulmonary disease (including chronic bronchitis with normal airflow), for treating asthma (including bronchial asthma, intrinsic asthma, extrinsic asthma, acute asthma, chronic or inveterate asthma (e.g. late asthma and airways hyper-responsiveness), dust-induced asthma, allergen-induced asthma, viral-induced asthma, cold-induced asthma, pollution-induced asthma and exercise-induced asthma) and for treating rhinitis (including acute-, allergic, hypertrophic rhinitis or chronic rhinitis (such as rhinitis caseosa, hypertrophic rhinitis, rhinitis purulenta, rhinitis sicca), rhinitis medicamentosa, membranous rhinitis (including croupous, fibrinous and pseudomembranous rhinitis), scrofulous rhinitis, perennial allergic rhinitis, seasonal rhinitis (including rhinitis nervosa (hay fever) and vasomotor rhinitis). The peptides of the invention may also be useful in the treatment of dry eye disease and chronic sinusitis. The peptides of the invention may also be used to prevent and/or treat disorders characterized by acute pulmonary vasoconstriction such as may result from pneumonia, traumatic injury, aspiration or inhalation injury, fat embolism in the lung, acidosis inflammation of the lung, adult respiratory distress syndrome, acute pulmonary edema, acute mountain sickness, post-cardiac surgery, acute pulmonary hypertension, persistent pulmonary hypertension of the newborn, perinatal aspiration syndrome, hyaline membrane disease, acute pulmonary thromboembolism, herapin-protamine reactions, sepsis, status asthmaticus or hypoxia (including iatrogenic hypoxia) and other forms of reversible pulmonary vasoconstriction. Such pulmonary disorders also are also characterized by inflammation of the lung including those associated with the migration into the lung of

nonresident cell types including the various leucocyte subclasses. Also included in the respiratory disorders contemplated are: bullous disease, cough, chronic cough associated with inflammation or iatrogenic induced, airway constriction, pigeon fancier's disease, eosinophilic bronchitis, asthmatic bronchitis, chronic bronchitis with airway obstruction (chronic obstructive bronchitis), eosinophilic lung disease, emphysema, farmer's lung, allergic eye diseases (including allergic conjunctivitis, vernal conjunctivitis, vernal keratoconjunctivitis, and giant papillary conjunctivitis), idiopathic pulmonary fibrosis, cystic fibrosis, diffuse pan bronchiolitis and other diseases which are characterized by inflammation of the lung and/or excess mucosal secretion. Other physiological events which are contemplated to be prevented, treated or controlled include platelet activation in the lung, chronic inflammatory diseases of the lung which result in interstitial fibrosis, such as interstitial lung diseases (ILD) (e.g., idiopathic pulmonary fibrosis, or ILD associated with rheumatoid arthritis, or other autoimmune conditions), chronic obstructive pulmonary disease (COPD)(such as irreversible COPD), chronic sinusitis, fibroid lung, hypersensitivity lung diseases, hypersensitivity pneumonitis, idiopathic interstitial pneumonia, nasal congestion, nasal polyposis, and otitis media.

The peptides and agonists of the invention can be used alone or in combitherapy to prevent or treat: retinopathy, nephropathy, diabetic angiopathy, and edema formation

The peptides and agonists of the invention can be used alone or in combitherapy to prevent or treat neurological disorders, for example, headache, tension-type headache, migraines, anxiety, stress, cognitive disorders, cerebral ischemia, brain trauma, movement disorders, aggression, psychosis, seizures, panic attacks, hysteria, sleep disorders, depression, schizoaffective disorders, sleep apnea, attention deficit syndromes, memory loss, dementia, memory and learning disorders as discussed in Moncada and Higgs 1995 FASEB J. 9:1319-1330; Severina 1998 Biochemistry 63:794; Lee et al. 2000 PNAS 97: 10763-10768; Hobbs 1997 TIPS 18:484-491; Murad 1994 Adv. Pharmacol. 26:1-335; and Denninger et al. 1999 Biochim. Biophys. Acta 1411:334-350 and narcolepsy. They may also be used as a sedative.

The peptides and detectably peptides and agonists of the invention can be used as markers to identify, detect, stage, or diagnosis diseases and conditions of small intestine, including, without limitation: Crohn's disease, colitis, inflammatory bowel disease, tumors, benign tumors, such as benign stromal tumors, adenoma, angioma, adenomatous (pedunculated and sessile) polyps, malignant, carcinoid tumors, endocrine cell tumors, lymphoma, adenocarcinoma, foregut, midgut, and hindgut carcinoma, gastrointestinal stromal tumor (GIST), such as leiomyoma, cellular leiomyoma, leiomyoblastoma, and leiomyosarcoma, gastrointestinal autonomic nerve tumor, malabsorption syndromes, celiac diseases, diverticulosis, Meckel's diverticulum, colonic diverticula, megacolon, Hirschsprung's disease, irritable bowel syndrome, mesenteric ischemia, ischemic colitis, colorectal cancer, colonic polyposis, polyp syndrome, intestinal adenocarcinoma, Liddle syndrome, Brody myopathy, infantile convulsions, and choreoathetosis

The peptides and agonists of the invention can be conjugated to another molecule (e.g., a diagnostic or therapeutic molecule) to target cells bearing the GC-C receptor, e.g., cystic fibrosis lesions and specific cells lining the intestinal tract. Thus, they can be used to target radioactive moieties or therapeutic moieties (active moieties like a radionuclide, an enzyme, a fluorescent label, a metal chelating group, a chemiluminescent label, a bioluminescent label, a chemotherapeutic, a toxin, an inactive prodrug, a radiosensitizing agent, a photodynamic agent) to the intestine to aid in imaging and diagnosing or treating colorectal/metastasized or local colorectal cancer. In addition, they can be used to deliver antisense molecules or nucleic acid molecules (like normal copies of the p53 tumor suppressor gene) to the intestinal tract. The peptides and agonists of the invention can also be used to increase the number of GC-C molecules on the surface of a cell. In some embodiments the cell is a metastasized colorectal cancer cell. In one embodiment the peptide or agonist of the invention is therapeutically conjugated to a second agent. In certain embodiments, the second agent can be radioactive or radiostable. In certain embodiments the second agent can be selected from the group consisting of a compound that causes cell death, a compound that inhibits cell division, a compound that induces cell differentiation, a chemotherapeutic, a toxin and a radiosensitizing agent. In certain embodiments the second agent can be selected from the group consisting of: methotrexate, doxorubicin, daunorubicin, cytosinarabioside, etoposide, 5-4 fluorouracil, melphalan,

chlorambucil, cis-platin, vindesine, mitomycin, bleomycin, puorhionin, macromomycin, 1,4-benzoquinone derivatives, trenimon, ricin, ricin A chain, Pseudomonas exotoxin, diphtheria toxin, Clostridium perfringens phospholipase C, bovine pancreatic ribonuclease, pokeweed antiviral protein, abrin, abrin A chain, cobra venom factor, gelonin, saporin, modeccin, viscumin, volkensin, nitroimidazole, metronidazole and misonidazole. In certain embodiments the second agent can be a cytotoxic agent selected from the group consisting of cemadotin, a derivative of cemadotin, a derivative of hemiasterlin, esperamicin C, neocarzinostatin, maytansinoid DM1, 7-chloromethyl-10,11 methylenedioxy-camptothecin, rhizoxin, and the halichondrin B analog, ER-086526.

The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat inner ear disorders, *e.g.*, to prevent and/or treat Meniere's disease (including symptoms thereof such as vertigo, hearing loss, tinnitus, sensation of fullness in the ear), Mal de débarquement syndrome, otitis externa, otitis media, otorrhea, acute mastoiditis, otosclerosis, otic pain, otic bleeding, otic inflammation, Lermoyez's syndrome, vestibular neuronitis, benign paroxysmal positional vertigo (BPPV), herpes zoster oticus, Ramsay Hunt's syndrome, herpes, labyrinthitis, purulent labyrinthitis, perilymph fistulas, presbycusis, ototoxicity (including drug-induced ototoxicity), neuromias (including acoustic neuromas), aerotitis media, infectious myringitis, bullous myringitis, squamous cell carcinoma, basal cell carcinoma, pre-cancerous otic conditions, nonchromaffin paragangliomas, chemodectomas, glomus jugulare tumors, glomus tympanicum tumors, perichondritis, aural eczematoid dermatitis, malignant external otitis, subperichondrial hematoma, ceruminomas, impacted cerumen, sebaceous cysts, osteomas, keloids, otalgia, tinnitus, tympanic membrane infection, tympanitis, otic furuncles, petrositis, conductive and sensorineural hearing loss, epidural abscess, lateral sinus thrombosis, subdural empyema, otitic hydrocephalus, Dandy's syndrome, bullous myringitis, diffuse external otitis, foreign bodies, keratosis obturans, otic neoplasm, otomycosis, trauma, acute barotitis media, acute eustachian tube obstruction, postsurgical otalgia, cholesteatoma, infections related to an otic surgical procedure, and complications associated with any of said disorders. The peptides and agonists of the invention can be used alone or in combination therapy to maintain fluid homeostasis in the inner ear. neuronitis (including viral neuronitis), ganglionitis, geniculate



The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat disorders associated with fluid and sodium retention, e.g., diseases of the electrolyte-water/electrolyte transport system within the kidney, gut and urogenital system, congestive heart failure, hypertension, hypotension, salt dependent forms of high blood pressure, hepatic edema, and liver cirrhosis. In addition they can be used to facilitate diuresis or control intestinal fluid. The peptides and agonists of the invention can also be used to treat disorders where there is abnormal proliferation of epithelial cells within the kidney (e.g. as in the case of renal cancer).

The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat kidney disease. "Kidney disease" includes renal failure (including acute renal failure), renal insufficiency, nephrotic edema, glomerulonephritis, pyelonephritis, kidney failure, chronic renal failure, nephritis, nephrosis, azotemia, uremia, immune renal disease, acute nephritic syndrome, rapidly progressive nephritic syndrome, nephrotic syndrome, Berger's Disease, chronic nephritic/proteinuric syndrome, tubulointerstitial disease, nephrotoxic disorders, renal infarction, atheroembolic renal disease, renal cortical necrosis, malignant nephroangiosclerosis, renal vein thrombosis, renal tubular acidosis, renal glucosuria, nephrogenic diabetes insipidus, Bartter's Syndrome, Liddle's Syndrome, polycystic kidney disease, medullary cystic disease, medullary sponge kidney, hereditary nephritis, and nail-patella syndrome, along with any disease or disorder that relates to the renal system and related disorders, as well as symptoms indicative of, or related to, renal or kidney disease and related disorders.

The peptides and agonists of the invention can be used alone or in combination therapy to prevent or treat polycystic kidney disease. Polycystic kidney disease "PKD" (also called "polycystic renal disease") refers to a group of disorders characterized by a large number of cysts distributed throughout dramatically enlarged kidneys. The resultant cyst development leads to impairment of kidney function and can eventually cause kidney failure. "PKD" specifically includes autosomal dominant polycystic kidney disease (ADPKD) and recessive autosomal

recessive polycystic kidney disease (ARPKD), in all stages of development, regardless of the underlying cause.

The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat disorders associated with bicarbonate secretion, e.g., Cystic Fibrosis.

The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat disorders associated with bile secretion. In addition, they can be used to facilitate or control chloride and bile fluid secretion in the gall bladder.

The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat disorders associated with liver cell regeneration. This may include administration of the peptides and agonists to liver transplant recipients and to patients with drug or alcohol induced-liver damage. Furthermore, the peptides and agonists may be useful to treat liver damage as in the case of viral mediated hepatitis. The peptides and agonists of the invention may be used alone or in combination to prevent and/or treat liver abscess, liver cancer (either primary or metastatic), cirrhosis (such as cirrhosis caused by the alcohol consumption or primary biliary cirrhosis), amebic liver abscess, autoimmune hepatitis, biliary atresia, coccidioidomycosis disseminated,  $\delta$  agent (hepatitis  $\delta$ ), hemochromatosis, hepatitis a, hepatitis b, hepatitis c, or any other acute, subacute, fulminant or chronic hepatitis of viral, metabolic or toxic etiology, hepatocellular carcinoma, pyogenic liver abscess, Reye's syndrome, sclerosing cholangitis, Wilson's disease, drug induced hepatotoxicity, or fulminant or acute liver failure. The peptides and agonists may be used in stimulating hepatic regeneration after surgical hepatectomy.

The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat myocardial infraction, coronary artery disease, nitrate-induced tolerance, nitrate tolerance, diastolic dysfunction, angina pectoris, stable, unstable and variant (Prinzmetal) angina, atherosclerosis, thrombosis, endothelial dysfunction, cardiac edema, stroke, conditions of

reduced blood vessel patency, e.g., postpercutaneous transluminal coronary angioplasty (post-PTCA), and peripheral vascular disease.

The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat glaucoma.

The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat immunodeficiency.

The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat bladder outlet obstruction and incontinence.

The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat male (e.g. erectile dysfunction) or female sexual dysfunction, dysmenorrhea, endometriosis, polycystic ovary syndrome, vaginal dryness, uterine pain, or pelvic pain. These peptides and agonists of the invention can be utilized as tocolytic agents that decrease or arrest uterine contractions. The peptides and agonists of the invention can be used to prevent/treat premature/preterm labor. Premature or preterm labor can be associated with, for example, an illness/disorder/condition of the mother (such as pre-eclampsia, high blood pressure or diabetes, abnormal shape or size of the uterus, weak or short cervix, hormone imbalance, vaginal infection that spreads to the uterus, abnormalities of the placenta, such as placenta previa, and excessive amniotic fluid), premature rupture of the amniotic membranes ("water breaks"), large fetus, and more than one fetus. The peptides or agonists of the invention can be used to prevent uterine rupture. The peptides or agonists of the invention can be used treat rapid uterine contractions (for example, associated with placental abruption wherein the placental abruption is associated with hypertension, diabetes, a multiply pregnancy, an unusually large amount of amniotic fluid, numerous previous deliveries, or advanced maternal age (e.g. >40 years old). In certain embodiments they can be used in combination with a phosphodiesterase inhibitor. The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat infertility, for example, male infertility due to poor sperm quality, decreased sperm motility or low sperm count.

The peptides and agonists of the invention can be used alone or in combination therapy to prevent and/or treat osteopenia disorders (bone loss disorders). "Bone loss disorders" include conditions and diseases wherein the inhibition of bone loss and/or the promotion of bone formation is desirable. Among such conditions and diseases are osteoporosis, osteomyelitis, Paget's disease (osteitis deformans), periodontitis, hypercalcemia, osteonecrosis, osteosarcoma, osteolytic metastases, familial expansile osteolysis, prosthetic loosening, periprosthetic osteolysis, bone loss attendant rheumatoid arthritis, and cleidocranial dysplasia (CCD). Osteoporosis includes primary osteoporosis, endocrine osteoporosis (hyperthyroidism, hyperparathyroidism, Cushing's syndrome, and acromegaly), hereditary and congenital forms of osteoporosis (osteogenesis imperfecta, homocystinuria, Menkes' syndrome, and Rile-Day syndrome) and osteoporosis due to immobilization of extremities, osteomyelitis, or an infectious lesion in bone leading to bone loss. The peptides and agonists can be used alone or in combination therapy to stimulating bone regeneration. The bone regeneration may be following reconstruction of bone defects in cranio-maxillofacial surgery, or following an implant into bone, for example a dental implant, bone supporting implant, or prosthesis. The bone regeneration may also be following a bone fracture.

The peptides and agonists of the invention may be used alone or in combination therapy (for example, with other agents that increase cGMP) to prevent or treat disorders related to an alteration in cGMP including, but not limited to Alzheimer's disease, psoriasis, skin necrosis, scarring, fibrosis, baldness, Kawasaki's Disease, nutcracker oesophagus (US20050245544), septic shock, NSAID-induced gastric disease or disorder, ischemic renal disease or disorder, peptic ulcer, sickle cell anemia, epilepsy, and a neuroinflammatory disease or disorder (for example as described in WO05105765).

The peptides of the invention can be used as immunogens to create antibodies for immunoassays. The peptides of the invention can be used as immunogens to treat and/or prevent one or more disease symptoms associated with traveler's diarrhea and for vaccination against pathogens, including but not limited to enterotoxigenic *E.coli* (ETEC). They may also be used in vaccines which also comprise interleukin 18 and either saponin adjuvant or CpG adjuvant for example as described in WO05039634 and WO05039630. The methods described in US20040146534, US4220584, US4285391, US5182109, US4603049, US4545931, US4886663, US4758655, WO08402700, FR2525592, and FR2532850 can be similarly used to create immunogens comprising the peptides of the invention. US6043057, US5834246, US5268276, and EP368819, specifically describe an expression system containing CTB (cholera toxin Beta subunit) fused to an ST-like peptide under a foreign promoter for use as a vaccine. The nucleic acids that encode the peptides of the invention may be use as genetic vaccines as described in US20050260605 and WO0148018. The nucleic acid molecules may also be used for the manufacture of a functional ribonucleic acid, wherein the functional ribonucleic acid is selected from the group comprising ribozymes, antisense nucleic acids and siRNA (as described in WO05103073).

What is claimed is:

1. A purified polypeptide comprising the amino acid sequence: Xaa<sub>1</sub> Xaa<sub>2</sub> Xaa<sub>3</sub> Cys<sub>4</sub> Xaa<sub>5</sub> Xaa<sub>6</sub> Xaa<sub>7</sub> Xaa<sub>8</sub> Xaa<sub>9</sub> Xaa<sub>10</sub> Xaa<sub>11</sub> Cys<sub>12</sub> Xaa<sub>13</sub> Xaa<sub>14</sub> Xaa<sub>15</sub> Xaa<sub>16</sub> (SEQ ID NO:1) wherein:
  - Xaa<sub>1</sub> is Ser, Asn, Tyr, Ala, Gln, Pro, Lys, Gly, or Thr, or is missing;
  - Xaa<sub>2</sub> is His, Asp, Glu, Ala, Ser, Asn, Gly, or is missing;
  - Xaa<sub>3</sub> is Thr, Asp, Ser, Glu, Pro, Val or Leu;
  - Xaa<sub>5</sub> is Asp, Ile or Glu;
  - Xaa<sub>6</sub> is Ile, Trp or Leu;
  - Xaa<sub>7</sub> is Cys, Ser, or Tyr;
  - Xaa<sub>8</sub> is Ala, Val, Thr, Ile, Met or is missing;
  - Xaa<sub>9</sub> is a) any amino acid, b) Phe, Tyr, Asn, Trp, c) an amino acid other than Phe, Trp, or Tyr, d) non-aromatic amino acid or e) is missing;
  - Xaa<sub>10</sub> is Ala, Val, Met, Thr or Ile;
  - Xaa<sub>11</sub> is Ala or Val;
  - Xaa<sub>13</sub> is Ala or Thr;
  - Xaa<sub>14</sub> is Gly, Ala or Ser;
  - Xaa<sub>15</sub> is Cys, Tyr or is missing; and
  - Xaa<sub>16</sub> is: a) Trp, Tyr or Phe to create a chymotrypsin cleavage site; b) Lys or Arg to create a trypsin cleavage site; c) is missing or d) His or Leu or Ser.
2. The purified polypeptide of claim 1 wherein Xaa<sub>1</sub> is preceded by Lys or Tyr.
3. A composition comprising the purified polypeptide of claim 1 and a pharmaceutically acceptable carrier.
4. The purified polypeptide of claim 1 wherein Xaa<sub>15</sub> is other than Cys or is missing and Xaa<sub>7</sub> is Ser or an amino acid other than Cys.
5. The purified polypeptide of claim 1 wherein at least 5 of Xaa<sub>1</sub>, Xaa<sub>2</sub>, Xaa<sub>3</sub>, Xaa<sub>5</sub>, Xaa<sub>6</sub>, Xaa<sub>7</sub>, Xaa<sub>8</sub>, Xaa<sub>9</sub>, Xaa<sub>10</sub>, Xaa<sub>11</sub>, Xaa<sub>13</sub>, Xaa<sub>14</sub>, and Xaa<sub>16</sub> are any amino acid other than Cys.

6. The purified polypeptide of claim 1 wherein: Xaa<sub>9</sub> is any amino acid other than Gln.
7. The purified polypeptide of claim 1 wherein Xaa<sub>2</sub> and Xaa<sub>3</sub> are Glu.
8. The purified polypeptide of claim 1 wherein the polypeptide is not cleaved after Xaa<sub>9</sub> by chymotrypsin.
9. The purified polypeptide of claim 1 wherein the polypeptide does not comprise the amino acid sequence PGTCEICAYAACTGC.
10. A purified polypeptide selected from the group consisting of:
  - a polypeptide comprising the amino acid sequence KPGTCEICAYAACTGC;
  - a polypeptide comprising the amino acid sequence PGTCEICAXAACTGC wherein X is any amino acid other than Phe;
  - a polypeptide comprising the amino acid sequence PGTCEICAXAACTGC wherein X is any amino acid other than Phe and Trp;
  - a polypeptide comprising the amino acid sequence PGTCEICAXAACTGC wherein X is any amino acid other than Phe, Trp, Ile, Leu and Val;
  - a polypeptide comprising the amino acid sequence PGTCEICAXAACTGC wherein X is any amino acid other than Phe, Trp, Ile, Leu, Val and His;
  - a polypeptide comprising the amino acid sequence PGTCEICAXAACTGC wherein X is any non-aromatic amino acid or
  - a polypeptide comprising the amino acid sequence PGTCEICAXAACTGC wherein X is missing;
  - a polypeptide comprising an amino acid sequence selected from the group consisting of:
    - PGTCEICASAACTGC (SEQ ID NO: )
    - PGTCEICATAACTGC (SEQ ID NO: )
    - PGTCEICANAACTGC (SEQ ID NO: )
    - PGTCEICAQAACTGC (SEQ ID NO: )
    - PGTCEICARAACTGC (SEQ ID NO: )
    - PGTCEICAEAACTGC (SEQ ID NO: )

PGTCEICADA AACTGC (SEQ ID NO: )  
 PGTCEICAGAACTGC (SEQ ID NO: )  
 PGTCEICAAA AACTGC (SEQ ID NO: )  
 PGTCEICAMA AACTGC (SEQ ID NO: )  
 PGTCEICAIA AACTGC (SEQ ID NO: )  
 PGTCEICALAACTGC (SEQ ID NO: )  
 PGTCEICAVA AACTGC (SEQ ID NO: ) and  
 PGTCEICAHAACTGC (SEQ ID NO: );

a polypeptide comprising an amino acid sequence selected from the group consisting of:

PGTCEGICAYA AACTGC (SEQ ID NO: )  
 PGTCEIGCAYA AACTGC (SEQ ID NO: )  
 PGTCEICGAYA AACTGC (SEQ ID NO: )  
 PGTCEICAGYA AACTGC (SEQ ID NO: )  
 PGTCEICAYGA AACTGC (SEQ ID NO: )  
 PGTCEICAYAG AACTGC (SEQ ID NO: )  
 PGTCEICAYAAGCTGC (SEQ ID NO: )  
 PGTCEICAYAACGTGC (SEQ ID NO: )  
 PGTCEICAYA AACTGGC (SEQ ID NO: )  
 PGTCAEICAYA AACTGC (SEQ ID NO: )  
 PGTCEAICAYA AACTGC (SEQ ID NO: )  
 PGTCEIACAYA AACTGC (SEQ ID NO: )  
 PGTCEICAAYA AACTGC (SEQ ID NO: )  
 PGTCEICAYAA AACTGC (SEQ ID NO: )  
 PGTCEICAYAACATGC (SEQ ID NO: )  
 PGTCEICAYA AACTAGC (SEQ ID NO: )  
 PGTCEICAYA AACTGAC (SEQ ID NO: )  
 PGTCAEICAAAYA AACTGC (SEQ ID NO: )  
 PGTCEAICAAYA AACTGC (SEQ ID NO: ) and  
 PGTCEIACAAYA AACTGC (SEQ ID NO: ).



11. A method for treating a gastrointestinal disorder comprising administering a composition comprising the purified polypeptide of any of claims 1-10.
12. The method of claim 11 wherein the gastrointestinal disorder is: a gastrointestinal motility disorder, irritable bowel syndrome, a functional gastrointestinal disorder, gastroesophageal reflux disease, duodenogastric reflux, functional heartburn, dyspepsia, functional dyspepsia, nonulcer dyspepsia, gastroparesis, chronic intestinal pseudo-obstruction, or colonic pseudo-obstruction.
13. A method for treating obesity comprising administering a composition comprising the purified polypeptide of any of claims 1-10.
14. A method for treating congestive heart failure comprising administering a composition comprising the purified polypeptide of any of claims 1-10.
15. A method for treating benign prostatic hyperplasia comprising administering a composition comprising the purified polypeptide of any of claims 1-10.
16. A method for treating constipation comprising administering a composition comprising the purified polypeptide of any of claims 1-10.
17. A method for increasing gastrointestinal motility in a patient, the method comprising administering to the patient the polypeptide of any of claims 1-10.
18. A method for decreasing gastrointestinal pain or visceral pain in a patient, the method comprising administering to the patient the polypeptide of any of claims 1-10.
19. A method for increasing the activity of an intestinal guanylate cyclase (GC-C) receptor in a patient, the method comprising administering to the patient the polypeptide of any of claims 1-10.

20. A method for treating a patient suffering from a gastrointestinal disorder, the method comprising administering to the patient a composition comprising a complete or partial agonist of the GC-C receptor.
21. The purified polypeptide of any of claims 1-10 wherein the polypeptide increases the activity of the GC-C receptor.
22. The purified polypeptide of any of claims 1-10 wherein the polypeptide increases intestinal transit when administered to a subject.
23. The purified polypeptide of any of claims 1-10 wherein the polypeptide decreases intestinal transit when administered to a subject.
24. The purified polypeptide of any of claims 1-10 wherein the polypeptide decreases stool firmness when administered to a subject.
25. The purified polypeptide of any of claims 1-10 wherein the polypeptide increases stool frequency when administered to a subject.
26. The purified polypeptide of any of claims 1-10 wherein the polypeptide decreases visceral pain when administered to a subject.
27. The purified polypeptide of any of claims 1-10 wherein in the polypeptide comprises fewer than 30 amino acids.
28. The purified polypeptide of any of claims 1-10 wherein in the polypeptide comprises fewer than 20 amino acids.
29. The purified polypeptide of any of claims 1-10 wherein in the polypeptide comprises fewer than 19 amino acids.

30. The purified polypeptide of any of claims 1-10 wherein in the polypeptide comprises fewer than 18 amino acids.

31. The purified polypeptide of any of claims 1-10 wherein in the polypeptide comprises fewer than 17 amino acids.

32. The purified polypeptide of any of claims 1-10 provided that the polypeptide is not:

SHTCEICAF AACAGC (opossum guanylin) (SEQ ID NO: );

PGTCEICAYAACTGC (human guanylin) (SEQ ID NO: );

PSTCEICAYAAACAGC (pig guanylin) (SEQ ID NO: );

PNTCEICAYAACTGC (rat guanylin) (SEQ ID NO: );

PDPCEICANA ACTGCL (European eel guanylin, inferred) (SEQ ID NO: );

NDDCELCVNVACTGCL (human uroguanylin) (SEQ ID NO: );

QEECELCINMACTGY (opossum lymphoguanylin) (SEQ ID NO: );

GDDCELCVNVACTGCS (pig uroguanylin) (SEQ ID NO: );

NDECELCVNIACTGC (guinea pig uroguanylin) (SEQ ID NO: );

TDECELCINVACTGC (rat uroguanylin) (SEQ ID NO: );

QEDCELCINVACTGC (opossum uroguanylin) (SEQ ID NO: );

QEECELSINMACTGY (opossum lymphoguanylin analog) (SEQ ID NO: );

YDECEICMFAACTGC (Japanese eel guanylin) (SEQ ID NO: );

VCEICAFAACTGC (Zebrafish guanylin, inferred) (SEQ ID NO: );

ADLCEICAFAACTGCL (Japanese eel renoguanylin, inferred) (SEQ ID NO: );

NDDCELCVNVACTGCS (cow uroguanylin) (SEQ ID NO:....);

PDVCDVCAFAACSGC (Xenopus guanylin) (SEQ ID NO....);

LDLCEICAFAACTGC (Fugu guanylin) (SEQ ID NO....);

VDVCEICAFAACTGC (Zebrafish guanylin) (SEQ ID NO...);

LDICEICAFAACTGC (Pufferfish guanylin) (SEQ ID NO...);

ADLCEICANAACSGCF (chicken uroguanylin) (SEQ ID NO...);

LDPCEICANPSCFGCLN (fugu uroguanylin) (SEQ ID NO...);

IDPCEICANVACTGC (eel uroguanylin) (SEQ ID NO.); or

SDPCEICANPSCFGCLD (killifish uroguanylin) (SEQ ID NO.).

33. The method of claim 16 provided that the purified polypeptide is not PGTCEICAYAACTGC (human guanylin) (SEQ ID NO: ) or NDDCELCVNVACTGCL (human uroguanylin) (SEQ ID NO: ).

34. The method of claim 17 provided that the purified polypeptide is not PGTCEICAYAACTGC (human guanylin) (SEQ ID NO: ) or NDDCELCVNVACTGCL (human uroguanylin) (SEQ ID NO: ).

35. The method of claim 18 provided that the purified polypeptide is not PGTCEICAYAACTGC (human guanylin) (SEQ ID NO: ) or NDDCELCVNVACTGCL (human uroguanylin) (SEQ ID NO: ).
36. The method of claim 19 provided that the purified polypeptide is not PGTCEICAYAACTGC (human guanylin) (SEQ ID NO: ) or NDDCELCVNVACTGCL (human uroguanylin) (SEQ ID NO: ).
37. The method of claim 11 provided that the purified polypeptide is not PGTCEICAYAACTGC (human guanylin) (SEQ ID NO: ) or NDDCELCVNVACTGCL (human uroguanylin) (SEQ ID NO: ).
38. The method of claim 12 provided that the purified polypeptide is not PGTCEICAYAACTGC (human guanylin) (SEQ ID NO: ) or NDDCELCVNVACTGCL (human uroguanylin) (SEQ ID NO: ).

Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys

Human Guanylin (SEQ ID NO:19)

--- Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 96 )  
 --- --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 97 )  
 --- --- --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 98 )  
 --- --- --- Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 99 )  
 --- --- --- Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 100 )  
 --- --- --- Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 101 )  
 --- --- --- Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 102 )  
 --- --- --- Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 103 )  
 --- --- --- Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 104 )  
 --- --- --- Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 105 )  
 --- --- --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 106 )  
 --- --- --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 107 )  
 --- --- --- Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 108 )  
 --- --- --- Thr Cys --- --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 109 )  
 --- --- --- Thr Cys --- Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 110 )  
 --- --- --- Thr Cys --- Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 111 )  
 --- --- --- Thr Cys --- Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 112 )  
 --- --- --- Thr Cys --- Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 113 )  
 --- --- --- Thr Cys --- Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 114 )  
 --- --- --- Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 115 )  
 --- --- --- Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 116 )  
 --- --- --- Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 117 )  
 --- --- --- Thr Cys Gly --- --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 118 )  
 --- --- --- Thr Cys Gly --- Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 119 )  
 --- --- --- Thr Cys Gly --- Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 120 )  
 --- --- --- Thr Cys Gly --- Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 121 )  
 --- --- --- Thr Cys Gly --- Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 122 )  
 --- --- --- Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 123 )  
 --- --- --- Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 124 )  
 --- --- --- Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 125 )  
 --- --- --- Thr Cys Gly Glu --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 126 )  
 --- --- --- Thr Cys Gly Glu --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 127 )  
 --- --- --- Thr Cys Gly Glu --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 128 )  
 --- --- --- Thr Cys Gly Glu --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 129 )  
 --- --- --- Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 130 )  
 --- --- --- Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 131 )  
 --- --- --- Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 132 )  
 --- --- --- Thr Cys Gly Glu Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 133 )  
 --- --- --- Thr Cys Gly Glu Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 134 )  
 --- --- --- Thr Cys Gly Glu Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 135 )  
 --- --- --- Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 136 )  
 --- --- --- Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 137 )  
 --- --- --- Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 138 )  
 --- --- --- Thr Cys Gly Glu Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 139 )

FIG. 1  
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--- --- Thr Cys Gly Glu Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 140)  
--- --- Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 141)  
--- --- Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 142)  
--- --- Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 143)  
--- --- Thr Cys Gly Glu Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 144)  
--- --- Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 145)  
--- --- Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 146)  
--- --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 147)  
--- --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 148)  
--- --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 149)  
--- --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 150)  
--- --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 151)  
--- --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 152)  
--- Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 153)  
--- Gly --- Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 154)  
--- Gly --- Cys --- --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 155)  
--- Gly --- Cys --- Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 156)  
--- Gly --- Cys --- Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 157)  
--- Gly --- Cys --- Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 158)  
--- Gly --- Cys --- Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 159)  
--- Gly --- Cys --- Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 160)  
--- Gly --- Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 161)  
--- Gly --- Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 162)  
--- Gly --- Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 163)  
--- Gly --- Cys Gly --- --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 164)  
--- Gly --- Cys Gly --- Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 165)  
--- Gly --- Cys Gly --- Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 166)  
--- Gly --- Cys Gly --- Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 167)  
--- Gly --- Cys Gly --- Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 168)  
--- Gly --- Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 169)  
--- Gly --- Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 170)  
--- Gly --- Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 171)  
--- Gly --- Cys Gly Glu --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 172)  
--- Gly --- Cys Gly Glu --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 173)  
--- Gly --- Cys Gly Glu --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 174)  
--- Gly --- Cys Gly Glu --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 175)  
--- Gly --- Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 176)  
--- Gly --- Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 177)  
--- Gly --- Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 178)  
--- Gly --- Cys Gly Glu Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 179)  
--- Gly --- Cys Gly Glu Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 180)  
--- Gly --- Cys Gly Glu Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 181)  
--- Gly --- Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 182)  
--- Gly --- Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 183)  
--- Gly --- Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 184)  
--- Gly --- Cys Gly Glu Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 185)  
--- Gly --- Cys Gly Glu Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 186)

FIG. 1  
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--- Gly --- Cys Gly Glu Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 187)  
--- Gly --- Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 188)  
--- Gly --- Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 189)  
--- Gly --- Cys Gly Glu Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 190)  
--- Gly --- Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 191)  
--- Gly --- Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 192)  
--- Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 193)  
--- Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 194)  
--- Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 195)  
--- Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 196)  
--- Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 197)  
--- Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 198)  
--- Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 199)  
--- Gly Thr Cys --- --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 200)  
--- Gly Thr Cys --- --- --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 201)  
--- Gly Thr Cys --- --- Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 202)  
--- Gly Thr Cys --- --- Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 203)  
--- Gly Thr Cys --- --- Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 204)  
--- Gly Thr Cys --- --- Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 205)  
--- Gly Thr Cys --- --- Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 206)  
--- Gly Thr Cys --- --- Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 207)  
--- Gly Thr Cys --- Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 208)  
--- Gly Thr Cys --- Glu --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 209)  
--- Gly Thr Cys --- Glu --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 210)  
--- Gly Thr Cys --- Glu --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 211)  
--- Gly Thr Cys --- Glu --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 212)  
--- Gly Thr Cys --- Glu --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 213)  
--- Gly Thr Cys --- Glu --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 214)  
--- Gly Thr Cys --- Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 215)  
--- Gly Thr Cys --- Glu Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 216)  
--- Gly Thr Cys --- Glu Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 217)  
--- Gly Thr Cys --- Glu Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 218)  
--- Gly Thr Cys --- Glu Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 219)  
--- Gly Thr Cys --- Glu Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 220)  
--- Gly Thr Cys --- Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 221)  
--- Gly Thr Cys --- Glu Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 222)  
--- Gly Thr Cys --- Glu Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 223)  
--- Gly Thr Cys --- Glu Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 224)  
--- Gly Thr Cys --- Glu Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 225)  
--- Gly Thr Cys --- Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 226)  
--- Gly Thr Cys --- Glu Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 227)  
--- Gly Thr Cys --- Glu Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 228)  
--- Gly Thr Cys --- Glu Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 229)  
--- Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 230)  
--- Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 231)  
--- Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 232)  
--- Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 233)

**FIG. 1**  
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--- Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 234)  
 --- Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 235)  
 --- Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 236)  
 --- Gly Thr Cys Gly --- --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 237)  
 --- Gly Thr Cys Gly --- --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 238)  
 --- Gly Thr Cys Gly --- --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 239)  
 --- Gly Thr Cys Gly --- --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 240)  
 --- Gly Thr Cys Gly --- --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 241)  
 --- Gly Thr Cys Gly --- --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 242)  
 --- Gly Thr Cys Gly --- --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 243)  
 --- Gly Thr Cys Gly --- Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 244)  
 --- Gly Thr Cys Gly --- Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 245)  
 --- Gly Thr Cys Gly --- Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 246)  
 --- Gly Thr Cys Gly --- Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 247)  
 --- Gly Thr Cys Gly --- Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 248)  
 --- Gly Thr Cys Gly --- Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 249)  
 --- Gly Thr Cys Gly --- Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 250)  
 --- Gly Thr Cys Gly --- Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 251)  
 --- Gly Thr Cys Gly --- Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 252)  
 --- Gly Thr Cys Gly --- Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 253)  
 --- Gly Thr Cys Gly --- Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 254)  
 --- Gly Thr Cys Gly --- Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 255)  
 --- Gly Thr Cys Gly --- Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 256)  
 --- Gly Thr Cys Gly --- Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 257)  
 --- Gly Thr Cys Gly --- Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 258)  
 --- Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 259)  
 --- Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 260)  
 --- Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 261)  
 --- Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 262)  
 --- Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 263)  
 --- Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 264)  
 --- Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 265)  
 --- Gly Thr Cys Gly Glu --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 266)  
 --- Gly Thr Cys Gly Glu --- Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 267)  
 --- Gly Thr Cys Gly Glu --- Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 268)  
 --- Gly Thr Cys Gly Glu --- Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 269)  
 --- Gly Thr Cys Gly Glu --- Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 270)  
 --- Gly Thr Cys Gly Glu --- Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 271)  
 --- Gly Thr Cys Gly Glu --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 272)  
 --- Gly Thr Cys Gly Glu --- Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 273)  
 --- Gly Thr Cys Gly Glu --- Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 274)  
 --- Gly Thr Cys Gly Glu --- Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 275)  
 --- Gly Thr Cys Gly Glu --- Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 276)  
 --- Gly Thr Cys Gly Glu --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 277)  
 --- Gly Thr Cys Gly Glu --- Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 278)  
 --- Gly Thr Cys Gly Glu --- Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 279)  
 --- Gly Thr Cys Gly Glu --- Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 280)

**FIG. 1**  
 (sheet 4 of 17)

--- Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 281 )  
 --- Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 282 )  
 --- Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 283 )  
 --- Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 284 )  
 --- Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 285 )  
 --- Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 286 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 287 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 288 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 289 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 290 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 291 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 292 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 293 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 294 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 295 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 296 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 297 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 298 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 299 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 300 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 301 )  
 --- Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 302 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 303 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 304 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala --- --- --- Cys Thr Gly Cys (SEQ ID NO: 305 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala --- --- Ala Cys --- Gly Cys (SEQ ID NO: 306 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala --- --- Ala Cys Thr --- Cys (SEQ ID NO: 307 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 308 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala --- Ala --- Cys --- Gly Cys (SEQ ID NO: 309 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala --- Ala --- Cys Thr --- Cys (SEQ ID NO: 310 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 311 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys --- --- Cys (SEQ ID NO: 312 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 313 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 314 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 315 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- --- Cys --- Gly Cys (SEQ ID NO: 316 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- --- Cys Thr --- Cys (SEQ ID NO: 317 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 318 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys --- --- Cys (SEQ ID NO: 319 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 320 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 321 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 322 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys --- --- Cys (SEQ ID NO: 323 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 324 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 325 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 326 )  
 --- Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 327 )

**FIG. 1**  
 (sheet 5 of 17)

Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 328)  
Pro --- --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 329)  
Pro --- --- Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 330)  
Pro --- --- Cys --- --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 331)  
Pro --- --- Cys --- Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 332)  
Pro --- --- Cys --- Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 333)  
Pro --- --- Cys --- Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 334)  
Pro --- --- Cys --- Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 335)  
Pro --- --- Cys --- Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 336)  
Pro --- --- Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 337)  
Pro --- --- Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 338)  
Pro --- --- Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 339)  
Pro --- --- Cys Gly --- --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 340)  
Pro --- --- Cys Gly --- Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 341)  
Pro --- --- Cys Gly --- Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 342)  
Pro --- --- Cys Gly --- Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 343)  
Pro --- --- Cys Gly --- Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 344)  
Pro --- --- Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 345)  
Pro --- --- Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 346)  
Pro --- --- Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 347)  
Pro --- --- Cys Gly Glu --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 348)  
Pro --- --- Cys Gly Glu --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 349)  
Pro --- --- Cys Gly Glu --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 350)  
Pro --- --- Cys Gly Glu --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 351)  
Pro --- --- Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 352)  
Pro --- --- Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 353)  
Pro --- --- Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 354)  
Pro --- --- Cys Gly Glu Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 355)  
Pro --- --- Cys Gly Glu Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 356)  
Pro --- --- Cys Gly Glu Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 357)  
Pro --- --- Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 358)  
Pro --- --- Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 359)  
Pro --- --- Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 360)  
Pro --- --- Cys Gly Glu Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 361)  
Pro --- --- Cys Gly Glu Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 362)  
Pro --- --- Cys Gly Glu Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 363)  
Pro --- --- Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 364)  
Pro --- --- Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 365)  
Pro --- --- Cys Gly Glu Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 366)  
Pro --- --- Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 367)  
Pro --- --- Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 368)  
Pro --- --- Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 369)  
Pro --- --- Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 370)  
Pro --- --- Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 371)  
Pro --- --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 372)  
Pro --- --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 373)  
Pro --- --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 374)

FIG. 1  
(sheet 6 of 17)

Pro --- Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 375)  
Pro --- Thr Cys --- --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 376)  
Pro --- Thr Cys --- --- --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 377)  
Pro --- Thr Cys --- --- Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 378)  
Pro --- Thr Cys --- --- Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 379)  
Pro --- Thr Cys --- --- Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 380)  
Pro --- Thr Cys --- --- Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 381)  
Pro --- Thr Cys --- --- Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 382)  
Pro --- Thr Cys --- --- Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 383)  
Pro --- Thr Cys --- Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 384)  
Pro --- Thr Cys --- Glu --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 385)  
Pro --- Thr Cys --- Glu --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 386)  
Pro --- Thr Cys --- Glu --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 387)  
Pro --- Thr Cys --- Glu --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 388)  
Pro --- Thr Cys --- Glu --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 389)  
Pro --- Thr Cys --- Glu --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 390)  
Pro --- Thr Cys --- Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 391)  
Pro --- Thr Cys --- Glu Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 392)  
Pro --- Thr Cys --- Glu Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 393)  
Pro --- Thr Cys --- Glu Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 394)  
Pro --- Thr Cys --- Glu Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 395)  
Pro --- Thr Cys --- Glu Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 396)  
Pro --- Thr Cys --- Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 397)  
Pro --- Thr Cys --- Glu Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 398)  
Pro --- Thr Cys --- Glu Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 399)  
Pro --- Thr Cys --- Glu Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 400)  
Pro --- Thr Cys --- Glu Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 401)  
Pro --- Thr Cys --- Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 402)  
Pro --- Thr Cys --- Glu Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 403)  
Pro --- Thr Cys --- Glu Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 404)  
Pro --- Thr Cys --- Glu Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 405)  
Pro --- Thr Cys --- Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 406)  
Pro --- Thr Cys --- Glu Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 407)  
Pro --- Thr Cys --- Glu Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 408)  
Pro --- Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 409)  
Pro --- Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 410)  
Pro --- Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 411)  
Pro --- Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 412)  
Pro --- Thr Cys Gly --- --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 413)  
Pro --- Thr Cys Gly --- --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 414)  
Pro --- Thr Cys Gly --- --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 415)  
Pro --- Thr Cys Gly --- --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 416)  
Pro --- Thr Cys Gly --- --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 417)  
Pro --- Thr Cys Gly --- --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 418)  
Pro --- Thr Cys Gly --- --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 419)  
Pro --- Thr Cys Gly --- Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 420)  
Pro --- Thr Cys Gly --- Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 421)

FIG. 1  
(sheet 7 of 17)

Pro --- Thr Cys Gly --- Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 422)  
 Pro --- Thr Cys Gly --- Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 423)  
 Pro --- Thr Cys Gly --- Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 424)  
 Pro --- Thr Cys Gly --- Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 425)  
 Pro --- Thr Cys Gly --- Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 426)  
 Pro --- Thr Cys Gly --- Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 427)  
 Pro --- Thr Cys Gly --- Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 428)  
 Pro --- Thr Cys Gly --- Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 429)  
 Pro --- Thr Cys Gly --- Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 430)  
 Pro --- Thr Cys Gly --- Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 431)  
 Pro --- Thr Cys Gly --- Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 432)  
 Pro --- Thr Cys Gly --- Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 433)  
 Pro --- Thr Cys Gly --- Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 434)  
 Pro --- Thr Cys Gly --- Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 435)  
 Pro --- Thr Cys Gly --- Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 436)  
 Pro --- Thr Cys Gly --- Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 437)  
 Pro --- Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 438)  
 Pro --- Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 439)  
 Pro --- Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 440)  
 Pro --- Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 441)  
 Pro --- Thr Cys Gly Glu --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 442)  
 Pro --- Thr Cys Gly Glu --- Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 443)  
 Pro --- Thr Cys Gly Glu --- Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 444)  
 Pro --- Thr Cys Gly Glu --- Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 445)  
 Pro --- Thr Cys Gly Glu --- Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 446)  
 Pro --- Thr Cys Gly Glu --- Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 447)  
 Pro --- Thr Cys Gly Glu --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 448)  
 Pro --- Thr Cys Gly Glu --- Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 449)  
 Pro --- Thr Cys Gly Glu --- Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 450)  
 Pro --- Thr Cys Gly Glu --- Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 451)  
 Pro --- Thr Cys Gly Glu --- Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 452)  
 Pro --- Thr Cys Gly Glu --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 453)  
 Pro --- Thr Cys Gly Glu --- Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 454)  
 Pro --- Thr Cys Gly Glu --- Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 455)  
 Pro --- Thr Cys Gly Glu --- Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 456)  
 Pro --- Thr Cys Gly Glu --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 457)  
 Pro --- Thr Cys Gly Glu --- Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 458)  
 Pro --- Thr Cys Gly Glu --- Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 459)  
 Pro --- Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 460)  
 Pro --- Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 461)  
 Pro --- Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 462)  
 Pro --- Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 463)  
 Pro --- Thr Cys Gly Glu Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 464)  
 Pro --- Thr Cys Gly Glu Ile Cys --- --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 465)  
 Pro --- Thr Cys Gly Glu Ile Cys --- --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 466)  
 Pro --- Thr Cys Gly Glu Ile Cys --- --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 467)  
 Pro --- Thr Cys Gly Glu Ile Cys --- --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 468)

**FIG. 1**  
 (sheet 8 of 17)

Pro --- Thr Cys Gly Glu Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 469)  
 Pro --- Thr Cys Gly Glu Ile Cys --- Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 470)  
 Pro --- Thr Cys Gly Glu Ile Cys --- Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 471)  
 Pro --- Thr Cys Gly Glu Ile Cys --- Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 472)  
 Pro --- Thr Cys Gly Glu Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 473)  
 Pro --- Thr Cys Gly Glu Ile Cys --- Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 474)  
 Pro --- Thr Cys Gly Glu Ile Cys --- Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 475)  
 Pro --- Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 476)  
 Pro --- Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 477)  
 Pro --- Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 478)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 479)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 480)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala --- --- --- Cys Thr Gly Cys (SEQ ID NO: 481)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala --- --- Ala Cys --- Gly Cys (SEQ ID NO: 482)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala --- --- Ala Cys Thr --- Cys (SEQ ID NO: 483)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 484)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala --- Ala --- Cys --- Gly Cys (SEQ ID NO: 485)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala --- Ala --- Cys Thr --- Cys (SEQ ID NO: 486)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 487)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys --- --- Cys (SEQ ID NO: 488)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 489)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 490)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 491)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr --- --- Cys --- Gly Cys (SEQ ID NO: 492)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr --- --- Cys Thr --- Cys (SEQ ID NO: 493)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 494)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys --- --- Cys (SEQ ID NO: 495)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 496)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 497)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 498)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys --- --- Cys (SEQ ID NO: 499)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 500)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 501)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 502)  
 Pro --- Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 503)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 504)  
 Pro Gly --- Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 505)  
 Pro Gly --- Cys --- --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 506)  
 Pro Gly --- Cys --- --- --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 507)  
 Pro Gly --- Cys --- --- Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 508)  
 Pro Gly --- Cys --- --- Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 509)  
 Pro Gly --- Cys --- --- Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 510)  
 Pro Gly --- Cys --- --- Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 511)  
 Pro Gly --- Cys --- --- Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 512)  
 Pro Gly --- Cys --- --- Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 513)  
 Pro Gly --- Cys --- Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 514)  
 Pro Gly --- Cys --- Glu --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 515)

**FIG. 1**  
 (sheet 9 of 17)

Pro Gly --- Cys --- Glu --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 516)  
 Pro Gly --- Cys --- Glu --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 517)  
 Pro Gly --- Cys --- Glu --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 518)  
 Pro Gly --- Cys --- Glu --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 519)  
 Pro Gly --- Cys --- Glu --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 520)  
 Pro Gly --- Cys --- Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 521)  
 Pro Gly --- Cys --- Glu Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 522)  
 Pro Gly --- Cys --- Glu Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 523)  
 Pro Gly --- Cys --- Glu Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 524)  
 Pro Gly --- Cys --- Glu Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 525)  
 Pro Gly --- Cys --- Glu Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 526)  
 Pro Gly --- Cys --- Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 527)  
 Pro Gly --- Cys --- Glu Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 528)  
 Pro Gly --- Cys --- Glu Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 529)  
 Pro Gly --- Cys --- Glu Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 530)  
 Pro Gly --- Cys --- Glu Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 531)  
 Pro Gly --- Cys --- Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 532)  
 Pro Gly --- Cys --- Glu Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 533)  
 Pro Gly --- Cys --- Glu Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 534)  
 Pro Gly --- Cys --- Glu Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 535)  
 Pro Gly --- Cys --- Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 536)  
 Pro Gly --- Cys --- Glu Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 537)  
 Pro Gly --- Cys --- Glu Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 538)  
 Pro Gly --- Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 539)  
 Pro Gly --- Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 540)  
 Pro Gly --- Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 541)  
 Pro Gly --- Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 542)  
 Pro Gly --- Cys Gly --- --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 543)  
 Pro Gly --- Cys Gly --- --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 544)  
 Pro Gly --- Cys Gly --- --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 545)  
 Pro Gly --- Cys Gly --- --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 546)  
 Pro Gly --- Cys Gly --- --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 547)  
 Pro Gly --- Cys Gly --- --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 548)  
 Pro Gly --- Cys Gly --- --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 549)  
 Pro Gly --- Cys Gly --- Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 550)  
 Pro Gly --- Cys Gly --- Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 551)  
 Pro Gly --- Cys Gly --- Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 552)  
 Pro Gly --- Cys Gly --- Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 553)  
 Pro Gly --- Cys Gly --- Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 554)  
 Pro Gly --- Cys Gly --- Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 555)  
 Pro Gly --- Cys Gly --- Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 556)  
 Pro Gly --- Cys Gly --- Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 557)  
 Pro Gly --- Cys Gly --- Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 558)  
 Pro Gly --- Cys Gly --- Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 559)  
 Pro Gly --- Cys Gly --- Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 560)  
 Pro Gly --- Cys Gly --- Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 561)  
 Pro Gly --- Cys Gly --- Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 562)

**FIG. 1**  
 (sheet 10 of 17)

Pro Gly --- Cys Gly --- Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 563)  
Pro Gly --- Cys Gly --- Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 564)  
Pro Gly --- Cys Gly --- Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 565)  
Pro Gly --- Cys Gly --- Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 566)  
Pro Gly --- Cys Gly --- Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 567)  
Pro Gly --- Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 568)  
Pro Gly --- Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 569)  
Pro Gly --- Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 570)  
Pro Gly --- Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 571)  
Pro Gly --- Cys Gly Glu --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 572)  
Pro Gly --- Cys Gly Glu --- Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 573)  
Pro Gly --- Cys Gly Glu --- Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 574)  
Pro Gly --- Cys Gly Glu --- Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 575)  
Pro Gly --- Cys Gly Glu --- Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 576)  
Pro Gly --- Cys Gly Glu --- Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 577)  
Pro Gly --- Cys Gly Glu --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 578)  
Pro Gly --- Cys Gly Glu --- Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 579)  
Pro Gly --- Cys Gly Glu --- Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 580)  
Pro Gly --- Cys Gly Glu --- Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 581)  
Pro Gly --- Cys Gly Glu --- Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 582)  
Pro Gly --- Cys Gly Glu --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 583)  
Pro Gly --- Cys Gly Glu --- Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 584)  
Pro Gly --- Cys Gly Glu --- Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 585)  
Pro Gly --- Cys Gly Glu --- Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 586)  
Pro Gly --- Cys Gly Glu --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 587)  
Pro Gly --- Cys Gly Glu --- Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 588)  
Pro Gly --- Cys Gly Glu --- Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 589)  
Pro Gly --- Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 590)  
Pro Gly --- Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 591)  
Pro Gly --- Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 592)  
Pro Gly --- Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 593)  
Pro Gly --- Cys Gly Glu Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 594)  
Pro Gly --- Cys Gly Glu Ile Cys --- --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 595)  
Pro Gly --- Cys Gly Glu Ile Cys --- --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 596)  
Pro Gly --- Cys Gly Glu Ile Cys --- --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 597)  
Pro Gly --- Cys Gly Glu Ile Cys --- --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 598)  
Pro Gly --- Cys Gly Glu Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 599)  
Pro Gly --- Cys Gly Glu Ile Cys --- Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 600)  
Pro Gly --- Cys Gly Glu Ile Cys --- Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 601)  
Pro Gly --- Cys Gly Glu Ile Cys --- Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 602)  
Pro Gly --- Cys Gly Glu Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 603)  
Pro Gly --- Cys Gly Glu Ile Cys --- Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 604)  
Pro Gly --- Cys Gly Glu Ile Cys --- Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 605)  
Pro Gly --- Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 606)  
Pro Gly --- Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 607)  
Pro Gly --- Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 608)  
Pro Gly --- Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 609)

FIG. 1  
(sheet 11 of 17)



Pro Gly --- Cys Gly Glu Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 610)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala --- --- --- Cys Thr Gly Cys (SEQ ID NO: 611)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala --- --- Ala Cys --- Gly Cys (SEQ ID NO: 612)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala --- --- Ala Cys Thr --- Cys (SEQ ID NO: 613)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 614)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala --- Ala --- Cys --- Gly Cys (SEQ ID NO: 615)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala --- Ala --- Cys Thr --- Cys (SEQ ID NO: 616)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 617)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala --- Ala Ala Cys --- --- Cys (SEQ ID NO: 618)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 619)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 620)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 621)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr --- --- Cys --- Gly Cys (SEQ ID NO: 622)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr --- --- Cys Thr --- Cys (SEQ ID NO: 623)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 624)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys --- --- Cys (SEQ ID NO: 625)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 626)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 627)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 628)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys --- --- Cys (SEQ ID NO: 629)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 630)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 631)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 632)  
 Pro Gly --- Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 633)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 634)  
 Pro Gly Thr Cys --- --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 635)  
 Pro Gly Thr Cys --- --- --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 636)  
 Pro Gly Thr Cys --- --- --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 637)  
 Pro Gly Thr Cys --- --- --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 638)  
 Pro Gly Thr Cys --- --- --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 639)  
 Pro Gly Thr Cys --- --- --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 640)  
 Pro Gly Thr Cys --- --- --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 641)  
 Pro Gly Thr Cys --- --- --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 642)  
 Pro Gly Thr Cys --- --- --- Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 643)  
 Pro Gly Thr Cys --- --- --- Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 644)  
 Pro Gly Thr Cys --- --- --- Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 645)  
 Pro Gly Thr Cys --- --- --- Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 646)  
 Pro Gly Thr Cys --- --- --- Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 647)  
 Pro Gly Thr Cys --- --- --- Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 648)  
 Pro Gly Thr Cys --- --- --- Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 649)  
 Pro Gly Thr Cys --- --- --- Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 650)  
 Pro Gly Thr Cys --- --- --- Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 651)  
 Pro Gly Thr Cys --- --- --- Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 652)  
 Pro Gly Thr Cys --- --- --- Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 653)  
 Pro Gly Thr Cys --- --- --- Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 654)  
 Pro Gly Thr Cys --- --- --- Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 655)  
 Pro Gly Thr Cys --- --- --- Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 656)

**FIG. 1**  
 (sheet 12 of 17)

Pro Gly Thr Cys --- Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 657)  
Pro Gly Thr Cys --- Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 658)  
Pro Gly Thr Cys --- Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 659)  
Pro Gly Thr Cys --- Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 660)  
Pro Gly Thr Cys --- Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 661)  
Pro Gly Thr Cys --- Ile Cys Ala Tyr Ala Ala Cys --- Cys (SEQ ID NO: 662)  
Pro Gly Thr Cys --- Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 663)  
Pro Gly Thr Cys --- Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 664)  
Pro Gly Thr Cys --- Glu --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 665)  
Pro Gly Thr Cys --- Glu --- Cys --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 666)  
Pro Gly Thr Cys --- Glu --- Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 667)  
Pro Gly Thr Cys --- Glu --- Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 668)  
Pro Gly Thr Cys --- Glu --- Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 669)  
Pro Gly Thr Cys --- Glu --- Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 670)  
Pro Gly Thr Cys --- Glu --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 671)  
Pro Gly Thr Cys --- Glu --- Cys Ala --- Ala Cys Thr Gly Cys (SEQ ID NO: 672)  
Pro Gly Thr Cys --- Glu --- Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 673)  
Pro Gly Thr Cys --- Glu --- Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 674)  
Pro Gly Thr Cys --- Glu --- Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 675)  
Pro Gly Thr Cys --- Glu --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 676)  
Pro Gly Thr Cys --- Glu --- Cys Ala Tyr --- Cys Thr Gly Cys (SEQ ID NO: 677)  
Pro Gly Thr Cys --- Glu --- Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 678)  
Pro Gly Thr Cys --- Glu --- Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 679)  
Pro Gly Thr Cys --- Glu --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 680)  
Pro Gly Thr Cys --- Glu --- Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 681)  
Pro Gly Thr Cys --- Glu --- Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 682)  
Pro Gly Thr Cys --- Glu --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 683)  
Pro Gly Thr Cys --- Glu --- Cys Ala Tyr Ala Ala Cys --- Cys (SEQ ID NO: 684)  
Pro Gly Thr Cys --- Glu --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 685)  
Pro Gly Thr Cys --- Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 686)  
Pro Gly Thr Cys --- Glu Ile Cys --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 687)  
Pro Gly Thr Cys --- Glu Ile Cys --- Ala Cys Thr Gly Cys (SEQ ID NO: 688)  
Pro Gly Thr Cys --- Glu Ile Cys --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 689)  
Pro Gly Thr Cys --- Glu Ile Cys --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 690)  
Pro Gly Thr Cys --- Glu Ile Cys --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 691)  
Pro Gly Thr Cys --- Glu Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 692)  
Pro Gly Thr Cys --- Glu Ile Cys --- Tyr --- Cys Thr Gly Cys (SEQ ID NO: 693)  
Pro Gly Thr Cys --- Glu Ile Cys --- Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 694)  
Pro Gly Thr Cys --- Glu Ile Cys --- Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 695)  
Pro Gly Thr Cys --- Glu Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 696)  
Pro Gly Thr Cys --- Glu Ile Cys --- Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 697)  
Pro Gly Thr Cys --- Glu Ile Cys --- Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 698)  
Pro Gly Thr Cys --- Glu Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 699)  
Pro Gly Thr Cys --- Glu Ile Cys --- Tyr Ala Ala Cys --- Cys (SEQ ID NO: 700)  
Pro Gly Thr Cys --- Glu Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 701)  
Pro Gly Thr Cys --- Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 702)  
Pro Gly Thr Cys --- Glu Ile Cys Ala --- Ala Cys Thr Gly Cys (SEQ ID NO: 703)

FIG. 1  
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Pro Gly Thr Cys --- Glu Ile Cys Ala --- --- --- Cys Thr Gly Cys (SEQ ID NO: 704)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala --- --- Ala Cys --- Gly Cys (SEQ ID NO: 705)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala --- --- Ala Cys Thr --- Cys (SEQ ID NO: 706)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 707)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala --- Ala --- Cys --- Gly Cys (SEQ ID NO: 708)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala --- Ala --- Cys Thr --- Cys (SEQ ID NO: 709)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 710)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala --- Ala Ala Cys --- --- Cys (SEQ ID NO: 711)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 712)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 713)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 714)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr --- --- Cys --- Gly Cys (SEQ ID NO: 715)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr --- --- Cys Thr --- Cys (SEQ ID NO: 716)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 717)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr --- Ala Cys --- --- Cys (SEQ ID NO: 718)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 719)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 720)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 721)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala --- Cys --- --- Cys (SEQ ID NO: 722)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 723)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 724)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 725)  
 Pro Gly Thr Cys --- Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 726)  
 Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 727)  
 Pro Gly Thr Cys Gly --- --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 728)  
 Pro Gly Thr Cys Gly --- --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 729)  
 Pro Gly Thr Cys Gly --- --- Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 730)  
 Pro Gly Thr Cys Gly --- --- Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 731)  
 Pro Gly Thr Cys Gly --- --- Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 732)  
 Pro Gly Thr Cys Gly --- --- Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 733)  
 Pro Gly Thr Cys Gly --- --- Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 734)  
 Pro Gly Thr Cys Gly --- --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 735)  
 Pro Gly Thr Cys Gly --- --- Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 736)  
 Pro Gly Thr Cys Gly --- --- Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 737)  
 Pro Gly Thr Cys Gly --- --- Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 738)  
 Pro Gly Thr Cys Gly --- --- Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 739)  
 Pro Gly Thr Cys Gly --- --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 740)  
 Pro Gly Thr Cys Gly --- --- Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 741)  
 Pro Gly Thr Cys Gly --- --- Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 742)  
 Pro Gly Thr Cys Gly --- --- Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 743)  
 Pro Gly Thr Cys Gly --- --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 744)  
 Pro Gly Thr Cys Gly --- --- Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 745)  
 Pro Gly Thr Cys Gly --- --- Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 746)  
 Pro Gly Thr Cys Gly --- --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 747)  
 Pro Gly Thr Cys Gly --- --- Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 748)  
 Pro Gly Thr Cys Gly --- --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 749)  
 Pro Gly Thr Cys Gly --- Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 750)

**FIG. 1**  
 (sheet 14 of 17)

Pro Gly Thr Cys Gly --- Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 751)  
Pro Gly Thr Cys Gly --- Ile Cys --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 752)  
Pro Gly Thr Cys Gly --- Ile Cys --- --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 753)  
Pro Gly Thr Cys Gly --- Ile Cys --- --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 754)  
Pro Gly Thr Cys Gly --- Ile Cys --- --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 755)  
Pro Gly Thr Cys Gly --- Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 756)  
Pro Gly Thr Cys Gly --- Ile Cys --- Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 757)  
Pro Gly Thr Cys Gly --- Ile Cys --- Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 758)  
Pro Gly Thr Cys Gly --- Ile Cys --- Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 759)  
Pro Gly Thr Cys Gly --- Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 760)  
Pro Gly Thr Cys Gly --- Ile Cys --- Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 761)  
Pro Gly Thr Cys Gly --- Ile Cys --- Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 762)  
Pro Gly Thr Cys Gly --- Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 763)  
Pro Gly Thr Cys Gly --- Ile Cys --- Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 764)  
Pro Gly Thr Cys Gly --- Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 765)  
Pro Gly Thr Cys Gly --- Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 766)  
Pro Gly Thr Cys Gly --- Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 767)  
Pro Gly Thr Cys Gly --- Ile Cys Ala --- --- --- Cys Thr Gly Cys (SEQ ID NO: 768)  
Pro Gly Thr Cys Gly --- Ile Cys Ala --- --- Ala Cys --- Gly Cys (SEQ ID NO: 769)  
Pro Gly Thr Cys Gly --- Ile Cys Ala --- --- Ala Cys Thr --- Cys (SEQ ID NO: 770)  
Pro Gly Thr Cys Gly --- Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 771)  
Pro Gly Thr Cys Gly --- Ile Cys Ala --- Ala --- Cys --- Gly Cys (SEQ ID NO: 772)  
Pro Gly Thr Cys Gly --- Ile Cys Ala --- Ala --- Cys Thr --- Cys (SEQ ID NO: 773)  
Pro Gly Thr Cys Gly --- Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 774)  
Pro Gly Thr Cys Gly --- Ile Cys Ala --- Ala Ala Cys --- --- Cys (SEQ ID NO: 775)  
Pro Gly Thr Cys Gly --- Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 776)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 777)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 778)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr --- --- Cys --- Gly Cys (SEQ ID NO: 779)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr --- --- Cys Thr --- Cys (SEQ ID NO: 780)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 781)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr --- Ala Cys --- --- Cys (SEQ ID NO: 782)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 783)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 784)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 785)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala --- Cys --- --- Cys (SEQ ID NO: 786)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 787)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 788)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 789)  
Pro Gly Thr Cys Gly --- Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 790)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 791)  
Pro Gly Thr Cys Gly Glu --- Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 792)  
Pro Gly Thr Cys Gly Glu --- Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 793)  
Pro Gly Thr Cys Gly Glu --- Cys --- --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 794)  
Pro Gly Thr Cys Gly Glu --- Cys --- --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 795)  
Pro Gly Thr Cys Gly Glu --- Cys --- --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 796)  
Pro Gly Thr Cys Gly Glu --- Cys --- --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 797)

FIG. 1  
(sheet 15 of 17)

Pro Gly Thr Cys Gly Glu --- Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 798)  
Pro Gly Thr Cys Gly Glu --- Cys --- Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 799)  
Pro Gly Thr Cys Gly Glu --- Cys --- Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 800)  
Pro Gly Thr Cys Gly Glu --- Cys --- Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 801)  
Pro Gly Thr Cys Gly Glu --- Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 802)  
Pro Gly Thr Cys Gly Glu --- Cys --- Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 803)  
Pro Gly Thr Cys Gly Glu --- Cys --- Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 804)  
Pro Gly Thr Cys Gly Glu --- Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 805)  
Pro Gly Thr Cys Gly Glu --- Cys --- Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 806)  
Pro Gly Thr Cys Gly Glu --- Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 807)  
Pro Gly Thr Cys Gly Glu --- Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 808)  
Pro Gly Thr Cys Gly Glu --- Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 809)  
Pro Gly Thr Cys Gly Glu --- Cys Ala --- --- --- Cys Thr Gly Cys (SEQ ID NO: 810)  
Pro Gly Thr Cys Gly Glu --- Cys Ala --- --- Ala Cys --- Gly Cys (SEQ ID NO: 811)  
Pro Gly Thr Cys Gly Glu --- Cys Ala --- --- Ala Cys Thr --- Cys (SEQ ID NO: 812)  
Pro Gly Thr Cys Gly Glu --- Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 813)  
Pro Gly Thr Cys Gly Glu --- Cys Ala --- Ala --- Cys --- Gly Cys (SEQ ID NO: 814)  
Pro Gly Thr Cys Gly Glu --- Cys Ala --- Ala --- Cys Thr --- Cys (SEQ ID NO: 815)  
Pro Gly Thr Cys Gly Glu --- Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 816)  
Pro Gly Thr Cys Gly Glu --- Cys Ala --- Ala Ala Cys --- --- Cys (SEQ ID NO: 817)  
Pro Gly Thr Cys Gly Glu --- Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 818)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 819)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 820)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr --- --- Cys --- Gly Cys (SEQ ID NO: 821)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr --- --- Cys Thr --- Cys (SEQ ID NO: 822)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 823)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr --- Ala Cys --- --- Cys (SEQ ID NO: 824)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 825)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 826)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 827)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala --- Cys --- --- Cys (SEQ ID NO: 828)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 829)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 830)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 831)  
Pro Gly Thr Cys Gly Glu --- Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 832)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 833)  
Pro Gly Thr Cys Gly Glu Ile Cys --- --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 834)  
Pro Gly Thr Cys Gly Glu Ile Cys --- --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 835)  
Pro Gly Thr Cys Gly Glu Ile Cys --- --- --- --- Cys Thr Gly Cys (SEQ ID NO: 836)  
Pro Gly Thr Cys Gly Glu Ile Cys --- --- --- Ala Cys --- Gly Cys (SEQ ID NO: 837)  
Pro Gly Thr Cys Gly Glu Ile Cys --- --- --- Ala Cys Thr --- Cys (SEQ ID NO: 838)  
Pro Gly Thr Cys Gly Glu Ile Cys --- --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 839)  
Pro Gly Thr Cys Gly Glu Ile Cys --- --- Ala --- Cys --- Gly Cys (SEQ ID NO: 840)  
Pro Gly Thr Cys Gly Glu Ile Cys --- --- Ala --- Cys Thr --- Cys (SEQ ID NO: 841)  
Pro Gly Thr Cys Gly Glu Ile Cys --- --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 842)  
Pro Gly Thr Cys Gly Glu Ile Cys --- --- Ala Ala Cys --- --- Cys (SEQ ID NO: 843)  
Pro Gly Thr Cys Gly Glu Ile Cys --- --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 844)

**FIG. 1**  
(sheet 16 of 17)

Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 845)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 846)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr --- --- Cys --- Gly Cys (SEQ ID NO: 847)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr --- --- Cys Thr --- Cys (SEQ ID NO: 848)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 849)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr --- Ala Cys --- --- Cys (SEQ ID NO: 850)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 851)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 852)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 853)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala --- Cys --- --- Cys (SEQ ID NO: 854)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 855)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 856)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 857)  
Pro Gly Thr Cys Gly Glu Ile Cys --- Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 858)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr Gly Cys (SEQ ID NO: 859)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- --- Ala Cys Thr Gly Cys (SEQ ID NO: 860)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- --- --- Cys Thr Gly Cys (SEQ ID NO: 861)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- --- --- Cys --- Gly Cys (SEQ ID NO: 862)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- --- --- Cys Thr --- Cys (SEQ ID NO: 863)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- --- Ala Cys --- Gly Cys (SEQ ID NO: 864)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- --- Ala Cys --- --- Cys (SEQ ID NO: 865)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- --- Ala Cys Thr --- Cys (SEQ ID NO: 866)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- Ala --- Cys Thr Gly Cys (SEQ ID NO: 867)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- Ala --- Cys --- Gly Cys (SEQ ID NO: 868)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- Ala --- Cys --- --- Cys (SEQ ID NO: 869)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- Ala --- Cys Thr --- Cys (SEQ ID NO: 870)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys --- Gly Cys (SEQ ID NO: 871)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys --- --- Cys (SEQ ID NO: 872)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala --- Ala Ala Cys Thr --- Cys (SEQ ID NO: 873)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr Gly Cys (SEQ ID NO: 874)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- --- Cys Thr Gly Cys (SEQ ID NO: 875)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- --- Cys --- Gly Cys (SEQ ID NO: 876)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- --- Cys --- --- Cys (SEQ ID NO: 877)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- --- Cys Thr --- Cys (SEQ ID NO: 878)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys --- Gly Cys (SEQ ID NO: 879)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys --- --- Cys (SEQ ID NO: 880)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr --- Ala Cys Thr --- Cys (SEQ ID NO: 881)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr Gly Cys (SEQ ID NO: 882)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys --- Gly Cys (SEQ ID NO: 883)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys --- --- Cys (SEQ ID NO: 884)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala --- Cys Thr --- Cys (SEQ ID NO: 885)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- Gly Cys (SEQ ID NO: 886)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys --- --- Cys (SEQ ID NO: 887)  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr --- Cys (SEQ ID NO: 888)

FIG. 1  
(sheet 17 of 17)

Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 889)

Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 890)

Pro Gly Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 891)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 892)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 893)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 894)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 895)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 896)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 897)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 898)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 899)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQ ID NO: 900)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQ ID NO: 901)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQ ID NO: 902)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQ ID NO: 903)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQ ID NO: 904)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQ ID NO: 905)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQ ID NO: 906)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 907)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 908)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 909)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 910)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 911)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 912)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 913)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQ ID NO: 914)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQ ID NO: 915)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQ ID NO: 916)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQ ID NO: 917)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQ ID NO: 918)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys (SEQ ID NO: 919)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQ ID NO: 920)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQ ID NO: 921)

Pro Gly Xaa' Xaa' Xaa' Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQ ID NO: 922)

FIG. 2  
(sheet 1 of 114)

Pro Gly Xaa' Xaa' Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 923)  
 Pro Gly Xaa' Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 924)  
 Pro Gly Xaa' Xaa' Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 925)  
 Pro Gly Xaa' Xaa' Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 926)  
 Pro Gly Xaa' Xaa' Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 927)  
 Pro Gly Xaa' Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 928)  
 Pro Gly Xaa' Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 929)  
 Pro Gly Xaa' Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 930)  
 Pro Gly Xaa' Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 931)  
 Pro Gly Xaa' Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Xaa' Thr Gly Cys (SEQID NO: 932)  
 Pro Gly Xaa' Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys (SEQID NO: 933)  
 Pro Gly Xaa' Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys (SEQID NO: 934)  
 Pro Gly Xaa' Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 935)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 936)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 937)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 938)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 939)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 940)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Cys Thr Gly Cys (SEQID NO: 941)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Cys Thr Gly Cys (SEQID NO: 942)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 943)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 944)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Cys Xaa' Thr Gly Cys (SEQID NO: 945)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys (SEQID NO: 946)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys (SEQID NO: 947)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 948)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 949)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 950)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 951)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 952)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Cys Thr Gly Cys (SEQID NO: 953)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Cys Thr Gly Cys (SEQID NO: 954)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 955)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 956)

FIG. 2  
 (sheet 2 of 114)



Pro Gly Xaa' Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 957)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 958)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 959)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 960)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 961)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 962)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 963)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 964)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 965)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 966)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 967)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 968)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 969)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 970)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 971)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 972)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 973)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 974)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 975)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 976)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 977)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 978)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 979)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 980)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 981)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 982)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 983)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Cys Thr Gly Cys (SEQID NO: 984)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 985)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 986)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 987)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 988)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 989)  
 Pro Gly Xaa' Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 990)

FIG. 2  
(sheet 3 of 114)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 991)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr xaa' xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 992)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr xaa' Ala xaa' Ala Cys Thr Gly Cys (SEQID NO: 993)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr xaa' Ala Ala xaa' Cys Thr Gly Cys (SEQID NO: 994)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr xaa' Ala Ala Cys xaa' Thr Gly Cys (SEQID NO: 995)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr xaa' Ala Ala Cys Thr xaa' Gly Cys (SEQID NO: 996)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr xaa' Ala Ala Cys Thr Gly xaa' Cys (SEQID NO: 997)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr xaa' Ala Ala Cys Thr Gly Cys xaa' (SEQID NO: 998)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala xaa' Ala Cys Thr Gly Cys (SEQID NO: 999)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala xaa' xaa' Ala Cys Thr Gly Cys (SEQID NO: 1000)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala xaa' Ala xaa' Cys Thr Gly Cys (SEQID NO: 1001)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala xaa' Ala Cys xaa' Thr Gly Cys (SEQID NO: 1002)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala xaa' Ala Cys Thr xaa' Gly Cys (SEQID NO: 1003)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala xaa' Ala Cys Thr Gly xaa' Cys (SEQID NO: 1004)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala xaa' Ala Cys Thr Gly Cys xaa' (SEQID NO: 1005)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala xaa' Cys Thr Gly Cys (SEQID NO: 1006)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala xaa' xaa' Cys Thr Gly Cys (SEQID NO: 1007)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala xaa' Cys xaa' Thr Gly Cys (SEQID NO: 1008)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala xaa' Cys Thr xaa' Gly Cys (SEQID NO: 1009)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala xaa' Cys Thr Gly xaa' Cys (SEQID NO: 1010)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala xaa' Cys Thr Gly Cys xaa' (SEQID NO: 1011)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys xaa' Thr Gly Cys (SEQID NO: 1012)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys xaa' Thr Gly Cys (SEQID NO: 1013)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys xaa' Thr Gly Cys (SEQID NO: 1014)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys xaa' Thr Gly xaa' Cys (SEQID NO: 1015)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys xaa' Thr Gly Cys xaa' (SEQID NO: 1016)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr xaa' Gly Cys (SEQID NO: 1017)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr xaa' xaa' Gly Cys (SEQID NO: 1018)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr xaa' Gly xaa' Cys (SEQID NO: 1019)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr xaa' Gly Cys xaa' (SEQID NO: 1020)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly xaa' Cys (SEQID NO: 1021)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly xaa' xaa' Cys (SEQID NO: 1022)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly xaa' Cys xaa' (SEQID NO: 1023)

Pro Gly xaa' xaa' xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys xaa' (SEQID NO: 1024)

FIG. 2  
(sheet 4 of 114)

Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 1025 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1026 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1027 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1028 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1029 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1030 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1031 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Xaa' Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1032 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Cys Thr Gly Cys (SEQID NO: 1033 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1034 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1035 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1036 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1037 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1038 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1039 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1040 )  
Pro Gly Xaa' Thr Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1041 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1042 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1043 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1044 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1045 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1046 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1047 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Cys Thr Gly Cys (SEQID NO: 1048 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1049 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1050 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1051 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1052 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1053 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1054 )  
Pro Gly Xaa' Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1055 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1056 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1057 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1058 )

FIG. 2  
(sheet 5 of 114)

Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1059 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1060 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1061 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1062 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1063 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1064 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1065 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Thr Gly Cys (SEQID NO: 1066 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1067 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1068 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1069 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1070 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1071 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1072 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1073 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1074 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1075 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1076 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1077 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Thr Gly Cys (SEQID NO: 1078 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1079 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1080 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1081 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1082 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1083 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1084 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1085 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1086 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1087 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1088 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Thr Gly Cys (SEQID NO: 1089 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1090 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1091 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1092 )

**FIG. 2**  
 (sheet 6 of 114)

Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1093 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1094 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1095 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1096 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1097 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1098 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1099 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1100 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1101 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1102 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1103 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1104 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1105 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1106 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1107 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1108 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1109 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1110 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1111 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1112 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1113 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1114 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1115 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1116 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1117 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1118 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1119 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1120 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1121 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1122 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1123 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1124 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1125 )  
Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1126 )

FIG. 2  
(sheet 7 of 114)

Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 1127 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1128 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Thr Gly Cys (SEQID NO: 1129 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1130 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1131 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1132 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 1133 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Thr Gly Cys (SEQID NO: 1134 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 1135 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 1136 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1137 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 1138 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 1139 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 1140 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1141 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 1142 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 1143 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1144 )  
 Pro Gly Xaa' Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 1145 )  
 Pro Gly Xaa' Thr Cys Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1146 )  
 Pro Gly Xaa' Thr Cys Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1147 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1148 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1149 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1150 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1151 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1152 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1153 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1154 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1155 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1156 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1157 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1158 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1159 )  
 Pro Gly Xaa' Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1160 )

FIG. 2  
 (sheet 8 of 114)

Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1161 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1162 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1163 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1164 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1165 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1166 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1167 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1168 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1169 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1170 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1171 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1172 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1173 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1174 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1175 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1176 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1177 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1178 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1179 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1180 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1181 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1182 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1183 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1184 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1185 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1186 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1187 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1188 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1189 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1190 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1191 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1192 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1193 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1194 )

**FIG. 2**  
 (sheet 9 of 114)

Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1195 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1196 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1197 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1198 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1199 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1200 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1201 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1202 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1203 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1204 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1205 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1206 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1207 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1208 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1209 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1210 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1211 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1212 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1213 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1214 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1215 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1216 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1217 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1218 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1219 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1220 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1221 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1222 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1223 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1224 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1225 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1226 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1227 )  
 Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1228 )

FIG. 2  
 (sheet 10 of 114)



Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1229 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1230 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1231 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 1232 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1233 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 1234 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1235 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1236 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1237 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 1238 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 1239 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 1240 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 1241 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1242 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 1243 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 1244 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 1245 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1246 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 1247 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 1248 )  
Pro Gly Xaa' Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1249 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Gly Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1250 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1251 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1252 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1253 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1254 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1255 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1256 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1257 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1258 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1259 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1260 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1261 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1262 )

FIG. 2  
(sheet 11 of 114)

Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1263 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1264 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1265 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1266 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1267 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1268 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1269 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1270 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1271 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1272 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1273 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1274 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1275 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1276 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1277 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1278 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1279 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1280 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1281 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1282 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1283 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1284 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1285 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1286 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1287 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1288 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1289 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1290 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1291 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1292 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1293 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1294 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1295 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1296 )

FIG. 2  
 (sheet 12 of 114)

Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1297 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1298 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1299 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1300 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1301 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1302 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1303 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1304 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1305 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1306 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1307 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1308 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1309 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1310 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1311 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1312 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1313 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1314 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1315 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1316 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1317 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1318 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1319 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1320 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1321 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1322 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 1323 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1324 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 1325 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1326 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1327 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1328 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 1329 )  
 Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 1330 )

FIG. 2  
 (sheet 13 of 114)

Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 1331 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 1332 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1333 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 1334 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 1335 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 1336 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1337 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 1338 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 1339 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1340 )  
Pro Gly Xaa' Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 1341 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1342 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1343 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1344 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1345 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1346 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1347 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1348 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1349 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1350 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1351 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1352 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1353 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1354 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1355 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1356 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1357 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1358 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1359 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1360 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1361 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1362 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1363 )  
Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1364 )

FIG. 2  
(sheet 14 of 114)

Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1365 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1366 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1367 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1368 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1369 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1370 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1371 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1372 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1373 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1374 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1375 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1376 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1377 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1378 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1379 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1380 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1381 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1382 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1383 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1384 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1385 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1386 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1387 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1388 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1389 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1390 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1391 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1392 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1393 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1394 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1395 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1396 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1397 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1398 )

FIG. 2  
 (sheet 15 of 114)

Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1399 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1400 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 1401 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1402 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 1403 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1404 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1405 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1406 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1407 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 1408 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 1409 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 1410 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1411 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 1412 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 1413 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 1414 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1415 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 1416 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 1417 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1418 )  
 Pro Gly Xaa' Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 1419 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 1420 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1421 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1422 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1423 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1424 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1425 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1426 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1427 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1428 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1429 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1430 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1431 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1432 )

FIG. 2  
 (sheet 16 of 114)

Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1433 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1434 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1435 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1436 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1437 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1438 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1439 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1440 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1441 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1442 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1443 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1444 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1445 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1446 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1447 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1448 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1449 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1450 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1451 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1452 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1453 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1454 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1455 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1456 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1457 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1458 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1459 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1460 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1461 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1462 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1463 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1464 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1465 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1466 )

FIG. 2  
(sheet 17 of 114)

Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala xaa' xaa' Cys Thr Gly Cys (SEQID NO: 1467 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala xaa' Cys xaa' Thr Gly Cys (SEQID NO: 1468 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala xaa' Cys Thr xaa' Gly Cys (SEQID NO: 1469 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala xaa' Cys Thr Gly xaa' Cys (SEQID NO: 1470 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala xaa' Cys Thr Gly Cys xaa' (SEQID NO: 1471 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys xaa' Thr Gly Cys (SEQID NO: 1472 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys xaa' xaa' Thr Gly Cys (SEQID NO: 1473 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys xaa' Thr xaa' Gly Cys (SEQID NO: 1474 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys xaa' Thr Gly xaa' Cys (SEQID NO: 1475 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys xaa' Thr Gly Cys xaa' (SEQID NO: 1476 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys Thr xaa' Gly Cys (SEQID NO: 1477 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys Thr xaa' xaa' Gly Cys (SEQID NO: 1478 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys Thr xaa' Gly xaa' Cys (SEQID NO: 1479 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys Thr xaa' Gly Cys xaa' (SEQID NO: 1480 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys Thr Gly xaa' Cys (SEQID NO: 1481 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys Thr Gly xaa' xaa' Cys (SEQID NO: 1482 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys Thr Gly xaa' Cys xaa' (SEQID NO: 1483 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys xaa' (SEQID NO: 1484 )  
Pro Gly xaa' Thr Cys Gly Glu Ile xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys xaa' xaa' (SEQID NO: 1485 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1486 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1487 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' xaa' xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1488 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' xaa' Ala xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1489 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' xaa' Ala Tyr xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1490 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' xaa' Ala Tyr Ala xaa' Ala Cys Thr Gly Cys (SEQID NO: 1491 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' xaa' Ala Tyr Ala Ala xaa' Cys Thr Gly Cys (SEQID NO: 1492 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' xaa' Ala Tyr Ala Ala Cys xaa' Thr Gly Cys (SEQID NO: 1493 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' xaa' Ala Tyr Ala Ala Cys Thr xaa' Gly Cys (SEQID NO: 1494 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' xaa' Ala Tyr Ala Ala Cys Thr Gly xaa' Cys (SEQID NO: 1495 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' xaa' Ala Tyr Ala Ala Cys Thr Gly Cys xaa' (SEQID NO: 1496 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' Ala xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1497 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' Ala xaa' xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1498 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' Ala xaa' Tyr xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1499 )  
Pro Gly xaa' Thr Cys Gly Glu Ile Cys xaa' Ala xaa' Tyr Ala xaa' Ala Cys Thr Gly Cys (SEQID NO: 1500 )

FIG. 2  
(sheet 18 of 114)



Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1501 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1502 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1503 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1504 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1505 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1506 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1507 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1508 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1509 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1510 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1511 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1512 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1513 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1514 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1515 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1516 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1517 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1518 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1519 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1520 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1521 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 1522 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1523 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 1524 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1525 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1526 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1527 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 1528 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 1529 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 1530 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 1531 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1532 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 1533 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 1534 )

FIG. 2  
(sheet 19 of 114)

Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 1535 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1536 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 1537 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 1538 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1539 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 1540 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1541 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1542 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1543 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1544 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1545 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1546 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1547 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1548 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1549 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1550 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1551 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1552 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1553 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1554 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1555 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1556 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1557 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1558 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1559 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1560 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1561 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1562 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1563 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1564 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1565 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1566 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 1567 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1568 )

FIG. 2  
(sheet 20 of 114)

Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 1569 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1570 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1571 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1572 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 1573 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 1574 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 1575 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 1576 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1577 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 1578 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 1579 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 1580 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1581 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 1582 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 1583 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1584 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 1585 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1586 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1587 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1588 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1589 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1590 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1591 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1592 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1593 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1594 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1595 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1596 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1597 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1598 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1599 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1600 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1601 )  
Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1602 )

FIG. 2  
(sheet 21 of 114)

Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 1603 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1604 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 1605 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1606 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1607 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1608 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 1609 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 1610 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 1611 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 1612 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1613 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 1614 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 1615 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 1616 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1617 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 1618 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 1619 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1620 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 1621 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1622 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1623 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1624 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1625 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1626 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1627 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1628 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1629 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1630 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1631 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1632 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 1633 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1634 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1635 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1636 )

FIG. 2  
 (sheet 22 of 114)

Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 1637 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 1638 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 1639 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 1640 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1641 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 1642 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 1643 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 1644 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1645 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 1646 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 1647 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1648 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 1649 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1650 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 1651 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 1652 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1653 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 1654 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1655 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1656 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1657 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1658 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 1659 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 1660 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 1661 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 1662 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 1663 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 1664 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 1665 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1666 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 1667 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 1668 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1669 )  
 Pro Gly Xaa' Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 1670 )

**FIG. 2**  
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Pro Gly Thr Xaa' Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1739 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1740 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1741 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1742 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1743 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1744 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1745 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Thr Gly Cys (SEQID NO: 1746 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1747 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1748 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1749 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1750 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1751 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1752 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1753 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1754 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1755 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1756 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1757 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Thr Gly Cys (SEQID NO: 1758 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1759 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1760 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1761 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1762 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1763 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1764 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1765 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1766 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1767 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1768 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Thr Gly Cys (SEQID NO: 1769 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1770 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1771 )  
 Pro Gly Thr Xaa' Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1772 )

**FIG. 2**  
 (sheet 26 of 114)



Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1773 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1774 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1775 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1776 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1777 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1778 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1779 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1780 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1781 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1782 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1783 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1784 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1785 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1786 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1787 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1788 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1789 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1790 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1791 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1792 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1793 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1794 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1795 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1796 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1797 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1798 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1799 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1800 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1801 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1802 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1803 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1804 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1805 )  
 Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1806 )

FIG. 2  
 (sheet 27 of 114)

Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 1807 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1808 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 1809 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1810 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1811 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1812 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 1813 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 1814 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 1815 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 1816 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1817 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 1818 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 1819 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 1820 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1821 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 1822 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 1823 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1824 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 1825 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1826 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1827 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1828 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Xaa' Gly Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1829 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1830 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1831 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1832 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1833 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1834 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1835 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1836 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1837 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1838 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1839 )  
Pro Gly Thr Xaa' Xaa' Xaa' Cys Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1840 )

FIG. 2  
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Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1841 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1842 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Glu Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1843 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Glu Ile Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1844 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1845 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1846 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1847 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1848 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1849 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1850 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1851 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1852 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1853 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1854 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1855 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1856 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1857 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1858 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1859 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1860 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1861 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1862 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1863 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1864 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1865 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1866 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1867 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1868 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1869 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1870 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1871 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1872 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1873 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1874 )

FIG. 2  
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Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1875 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1876 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1877 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1878 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1879 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1880 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1881 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1882 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1883 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1884 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1885 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1886 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1887 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1888 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1889 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1890 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1891 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1892 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1893 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1894 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1895 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1896 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1897 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1898 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1899 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1900 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1901 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1902 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1903 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1904 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1905 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' xaa' Ala Cys Thr Gly Cys (SEQID NO: 1906 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1907 )  
 Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1908 )

FIG. 2  
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Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1909 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1910 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1911 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 1912 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 1913 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 1914 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1915 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1916 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 1917 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Thr Gly Cys (SEQID NO: 1918 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Cys (SEQID NO: 1919 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Thr Gly Xaa' Cys (SEQID NO: 1920 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Thr Gly Cys Xaa' (SEQID NO: 1921 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Cys (SEQID NO: 1922 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Gly Cys (SEQID NO: 1923 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Gly Xaa' Cys (SEQID NO: 1924 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 1925 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1926 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 1927 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 1928 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 1929 )  
Pro Gly Thr Xaa' Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 1930 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1931 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1932 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1933 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1934 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1935 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1936 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1937 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1938 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1939 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1940 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 1941 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Cys (SEQID NO: 1942 )

FIG. 2

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Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1943 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1944 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1945 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1946 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1947 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1948 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1949 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1950 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1951 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1952 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1953 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1954 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1955 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1956 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1957 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1958 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1959 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1960 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1961 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1962 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1963 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1964 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1965 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1966 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1967 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1968 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1969 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1970 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1971 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1972 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1973 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1974 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1975 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1976 )

FIG. 2  
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Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1977 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1978 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 1979 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1980 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1981 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1982 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1983 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1984 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1985 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1986 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1987 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 1988 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1989 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1990 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1991 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1992 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 1993 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 1994 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1995 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 1996 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 1997 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 1998 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 1999 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2000 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2001 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2002 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2003 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2004 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2005 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2006 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2007 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2008 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2009 )  
 Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2010 )

FIG. 2  
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Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2011 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2012 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2013 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2014 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2015 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2016 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2017 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2018 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2019 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2020 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2021 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2022 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2023 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2024 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2025 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2026 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2027 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2028 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2029 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2030 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2031 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2032 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2033 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2034 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2035 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2036 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2037 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2038 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2039 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2040 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2041 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2042 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2043 )  
Pro Gly Thr Xaa' Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2044 )

FIG. 2  
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Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2045)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2046)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2047)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2048)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2049)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2050)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2051)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2052)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2053)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2054)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2055)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2056)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2057)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2058)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2059)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2060)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2061)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2062)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2063)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2064)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2065)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2066)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2067)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2068)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2069)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2070)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2071)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2072)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2073)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2074)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2075)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2076)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2077)  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2078)

**FIG. 2**  
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Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2079 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2080 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2081 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2082 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2083 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2084 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2085 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2086 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2087 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2088 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2089 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2090 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2091 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2092 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2093 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2094 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2095 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2096 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2097 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2098 )  
 Pro Gly Thr Xaa' Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2099 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2100 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2101 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2102 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2103 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2104 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2105 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2106 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2107 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2108 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2109 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2110 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2111 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2112 )

FIG. 2  
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Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2113 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2114 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2115 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2116 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2117 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2118 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2119 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2120 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2121 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2122 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2123 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2124 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2125 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2126 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2127 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2128 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2129 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2130 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2131 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2132 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2133 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2134 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2135 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2136 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2137 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2138 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2139 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2140 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2141 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2142 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2143 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2144 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2145 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2146 )

FIG. 2  
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Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2147 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2148 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Thr Gly Cys (SEQID NO: 2149 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2150 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2151 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2152 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2153 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2154 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2155 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2156 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2157 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2158 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2159 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2160 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2161 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2162 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2163 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2164 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2165 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2166 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2167 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2168 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2169 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2170 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2171 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2172 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2173 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2174 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2175 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2176 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2177 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2178 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2179 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2180 )

FIG. 2  
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Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2181 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2182 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2183 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2184 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2185 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2186 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2187 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2188 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2189 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2190 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2191 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2192 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2193 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2194 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2195 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2196 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2197 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2198 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2199 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2200 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2201 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2202 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2203 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2204 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2205 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2206 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2207 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2208 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2209 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2210 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2211 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2212 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2213 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2214 )

FIG. 2  
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Pro Gly Thr xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2215 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2216 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2217 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2218 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2219 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2220 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2221 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2222 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2223 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2224 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2225 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2226 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2227 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2228 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2229 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2230 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2231 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2232 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2233 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2234 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2235 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2236 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2237 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2238 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2239 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2240 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2241 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2242 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2243 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2244 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2245 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2246 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2247 )  
Pro Gly Thr xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2248 )

FIG. 2  
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Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2249 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2250 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2251 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2252 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2253 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2254 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2255 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2256 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2257 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2258 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2259 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2260 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2261 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2262 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2263 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2264 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2265 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2266 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2267 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2268 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2269 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2270 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2271 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2272 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2273 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2274 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2275 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2276 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2277 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Xaa' Thr Gly Cys (SEQID NO: 2278 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2279 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2280 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2281 )  
Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2282 )

FIG. 2  
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Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2283 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2284 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2285 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2286 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2287 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2288 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2289 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2290 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2291 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2292 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2293 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2294 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2295 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2296 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2297 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2298 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2299 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2300 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2301 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2302 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2303 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2304 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2305 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2306 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2307 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2308 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2309 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2310 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2311 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2312 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2313 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2314 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2315 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2316 )

**FIG. 2**  
 (sheet 42 of 114)



Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2317 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2318 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2319 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2320 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2321 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2322 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2323 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2324 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2325 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2326 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2327 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2328 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2329 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2330 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2331 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2332 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2333 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2334 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2335 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2336 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2337 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2338 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2339 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2340 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2341 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2342 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2343 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2344 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2345 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2346 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2347 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2348 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2349 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2350 )

FIG. 2  
 (sheet 43 of 114)

Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2351 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2352 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2353 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 2354 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 2355 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 2356 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2357 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 2358 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 2359 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 2360 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2361 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 2362 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 2363 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2364 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 2365 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2366 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2367 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Xaa' Gly Cys (SEQID NO: 2368 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 2369 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 2370 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2371 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 2372 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 2373 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2374 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' Xaa' (SEQID NO: 2375 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2376 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2377 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Xaa' Cys (SEQID NO: 2378 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 2379 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2380 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 2381 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2382 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2383 )  
 Pro Gly Thr Xaa' Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 2384 )

FIG. 2  
 (sheet 44 of 114)

Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2385 )  
 Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2386 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2387 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2388 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2389 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2390 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2391 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2392 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2393 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2394 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2395 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2396 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2397 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2398 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2399 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2400 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2401 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2402 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2403 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2404 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2405 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2406 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2407 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2408 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2409 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2410 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2411 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2412 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2413 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 2414 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 2415 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 2416 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 2417 )  
 Pro Gly Thr Cys Xaa' Xaa' Xaa' Xaa' Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Cys Thr Gly Cys (SEQID NO: 2418 )

**FIG. 2**  
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Pro Gly Thr Cys Xaa' Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2419 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2420 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2421 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2422 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2423 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2424 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2425 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2426 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Ala Cys Thr Gly Cys (SEQID NO: 2427 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2428 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2429 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2430 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2431 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2432 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2433 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2434 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2435 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2436 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2437 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2438 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2439 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2440 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2441 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2442 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2443 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2444 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2445 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2446 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2447 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2448 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2449 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2450 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2451 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2452 )

FIG. 2  
(sheet 46 of 114)

Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2453 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2454 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2455 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2456 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Xaa' xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2457 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2458 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2459 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2460 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2461 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2462 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2463 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2464 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' xaa' Ala Cys Thr Gly Cys (SEQID NO: 2465 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala xaa' Cys Thr Gly Cys (SEQID NO: 2466 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2467 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2468 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2469 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2470 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2471 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' xaa' Cys Thr Gly Cys (SEQID NO: 2472 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2473 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2474 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2475 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2476 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2477 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2478 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2479 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2480 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2481 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2482 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2483 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2484 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2485 )  
Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2486 )

FIG. 2

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Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2487 )  
 Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2488 )  
 Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2489 )  
 Pro Gly Thr Cys Xaa' Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2490 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2491 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2492 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2493 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2494 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2495 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2496 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2497 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2498 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2499 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2500 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2501 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2502 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2503 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2504 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2505 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2506 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2507 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2508 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2509 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2510 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2511 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2512 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2513 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2514 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2515 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2516 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2517 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2518 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2519 )  
 Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2520 )

FIG. 2  
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Pro Gly Thr Cys xaa' Gly xaa' Glu Ile xaa' Cys Ala Tyr xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2521 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile xaa' Cys Ala Tyr Ala xaa' Ala Cys Thr Gly Cys (SEQID NO: 2522 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile xaa' Cys Ala Tyr Ala Ala xaa' Cys Thr Gly Cys (SEQID NO: 2523 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile xaa' Cys Ala Tyr Ala Ala Cys xaa' Thr Gly Cys (SEQID NO: 2524 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile xaa' Cys Ala Tyr Ala Ala Cys Thr xaa' Gly Cys (SEQID NO: 2525 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile xaa' Cys Ala Tyr Ala Ala Cys Thr Gly xaa' Cys (SEQID NO: 2526 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys xaa' (SEQID NO: 2527 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2528 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2529 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2530 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys xaa' Ala Tyr xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2531 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys xaa' Ala Tyr Ala xaa' Ala Cys Thr Gly Cys (SEQID NO: 2532 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys xaa' Ala Tyr Ala Ala xaa' Cys Thr Gly Cys (SEQID NO: 2533 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys xaa' Ala Tyr Ala Ala Cys xaa' Thr Gly Cys (SEQID NO: 2534 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys xaa' Ala Tyr Ala Ala Cys Thr xaa' Gly Cys (SEQID NO: 2535 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys xaa' Ala Tyr Ala Ala Cys Thr Gly xaa' Cys (SEQID NO: 2536 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys xaa' Ala Tyr Ala Ala Cys Thr Gly Cys xaa' (SEQID NO: 2537 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2538 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala xaa' xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2539 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala xaa' Tyr xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2540 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala xaa' Tyr Ala xaa' Ala Cys Thr Gly Cys (SEQID NO: 2541 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala xaa' Tyr Ala xaa' Ala Cys Thr Gly Cys (SEQID NO: 2542 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala xaa' Tyr Ala Ala xaa' Cys Thr Gly Cys (SEQID NO: 2543 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala xaa' Tyr Ala Ala Cys xaa' Thr Gly Cys (SEQID NO: 2544 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala xaa' Tyr Ala Ala Cys Thr xaa' Gly Cys (SEQID NO: 2545 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala xaa' Tyr Ala Ala Cys Thr Gly xaa' Cys (SEQID NO: 2546 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala Tyr xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2547 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala Tyr xaa' xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2548 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala Tyr xaa' Ala xaa' Ala Cys Thr Gly Cys (SEQID NO: 2549 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala Tyr xaa' Ala Ala xaa' Cys Thr Gly Cys (SEQID NO: 2550 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala Tyr xaa' Ala Ala Cys xaa' Thr Gly Cys (SEQID NO: 2551 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala Tyr xaa' Ala Ala Cys Thr xaa' Gly Cys (SEQID NO: 2552 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala Tyr xaa' Ala Ala Cys Thr Gly xaa' Cys (SEQID NO: 2553 )  
 Pro Gly Thr Cys xaa' Gly xaa' Glu Ile Cys Ala Tyr xaa' Ala Ala Cys Thr Gly Cys xaa' (SEQID NO: 2554 )

**FIG. 2**  
 (sheet 49 of 114)

Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2555 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2556 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2557 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2558 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2559 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2560 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2561 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2562 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2563 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2564 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2565 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2566 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2567 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2568 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2569 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Cys (SEQID NO: 2570 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Gly Xaa' Cys (SEQID NO: 2571 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Gly Cys Xaa' (SEQID NO: 2572 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Cys (SEQID NO: 2573 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Cys (SEQID NO: 2574 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 2575 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 2576 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Gly Xaa' Cys (SEQID NO: 2577 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 2578 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 2579 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Gly Cys Xaa' (SEQID NO: 2580 )  
Pro Gly Thr Cys Xaa' Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 2581 )  
Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 2582 )  
Pro Gly Thr Cys Xaa' Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 2583 )  
Pro Gly Thr Cys Xaa' Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 2584 )  
Pro Gly Thr Cys Xaa' Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 2585 )  
Pro Gly Thr Cys Xaa' Gly Glu Xaa' Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 2586 )  
Pro Gly Thr Cys Xaa' Gly Glu Xaa' Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 2587 )  
Pro Gly Thr Cys Xaa' Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Thr Gly Cys (SEQID NO: 2588 )

FIG. 2  
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Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2623 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2624 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2625 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2626 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2627 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2628 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2629 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2630 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2631 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2632 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2633 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2634 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2635 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2636 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2637 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2638 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2639 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2640 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2641 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2642 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2643 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2644 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2645 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2646 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2647 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2648 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2649 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2650 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2651 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2652 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2653 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2654 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2655 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2656 )

FIG. 2  
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Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2657 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2658 )  
 Pro Gly Thr Cys Xaa' Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2659 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2660 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2661 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2662 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2663 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2664 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2665 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2666 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2667 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2668 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2669 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2670 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2671 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2672 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2673 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2674 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2675 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2676 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2677 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2678 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Thr Gly Cys (SEQID NO: 2679 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2680 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2681 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2682 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2683 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2684 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2685 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2686 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2687 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2688 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2689 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2690 )

FIG. 2  
 (sheet 53 of 114)

Pro Gly Thr Cys xaa' Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2691 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2692 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2693 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2694 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2695 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2696 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2697 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2698 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2699 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2700 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2701 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2702 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2703 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2704 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2705 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2706 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2707 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2708 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2709 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2710 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2711 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2712 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 2713 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Thr Gly Cys (SEQID NO: 2714 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Cys (SEQID NO: 2715 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Thr Gly Xaa' Cys (SEQID NO: 2716 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Thr Gly Cys Xaa' (SEQID NO: 2717 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Cys (SEQID NO: 2718 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 2719 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 2720 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 2721 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Thr Gly Xaa' Cys (SEQID NO: 2722 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 2723 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 2724 )

**FIG. 2**  
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Pro Gly Thr Cys Xaa' Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2725 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2726 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2727 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2728 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2729 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2730 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2731 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2732 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2733 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2734 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2735 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2736 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2737 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2738 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2739 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2740 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2741 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2742 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2743 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2744 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2745 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2746 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2747 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2748 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2749 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2750 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2751 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2752 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2753 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2754 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2755 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2756 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2757 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2758 )

FIG. 2  
 (sheet 55 of 114)

Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2759 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2760 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2761 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2762 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2763 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2764 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2765 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2766 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2767 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2768 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2769 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2770 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2771 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2772 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2773 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2774 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2775 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2776 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2777 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2778 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2779 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2780 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2781 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2782 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2783 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2784 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2785 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2786 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2787 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2788 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2789 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2790 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2791 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2792 )

FIG. 2  
 (sheet 56 of 114)

Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2793 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2794 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2795 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2796 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2797 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2798 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2799 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2800 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2801 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2802 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Xaa' Thr Gly Cys (SEQID NO: 2803 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2804 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2805 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2806 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2807 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2808 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2809 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2810 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2811 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2812 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2813 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2814 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2815 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2816 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2817 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2818 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2819 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2820 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2821 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2822 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2823 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2824 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2825 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2826 )

FIG. 2  
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Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2827 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2828 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2829 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2830 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2831 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2832 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2833 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2834 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2835 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2836 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2837 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2838 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2839 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2840 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2841 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2842 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2843 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2844 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2845 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2846 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2847 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2848 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2849 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2850 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2851 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2852 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2853 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2854 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2855 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2856 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2857 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2858 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2859 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2860 )

FIG. 2  
 (sheet 58 of 114)



Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr xaa' Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2861 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2862 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2863 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2864 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2865 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2866 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2867 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2868 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2869 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2870 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2871 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2872 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2873 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2874 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2875 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2876 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2877 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2878 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2879 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2880 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2881 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2882 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2883 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2884 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2885 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2886 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2887 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2888 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2889 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2890 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2891 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 2892 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2893 )  
Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2894 )

FIG. 2  
(sheet 59 of 114)

Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2895 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2896 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 2897 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2898 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2899 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2900 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2901 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2902 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2903 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 2904 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 2905 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 2906 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2907 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2908 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 2909 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2910 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2911 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2912 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 2913 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 2914 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 2915 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 2916 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 2917 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 2918 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 2919 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 2920 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 2921 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 2922 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 2923 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 2924 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 2925 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2926 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 2927 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Xaa' Gly Cys (SEQID NO: 2928 )

FIG. 2  
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Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 2929 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 2930 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 2931 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 2932 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 2933 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 2934 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 2935 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2936 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 2937 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Xaa' Cys (SEQID NO: 2938 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 2939 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 2940 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 2941 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2942 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 2943 )  
 Pro Gly Thr Cys Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 2944 )  
 Pro Gly Thr Cys Gly Xaa' Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2945 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Gly Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2946 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2947 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2948 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2949 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2950 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2951 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2952 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2953 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2954 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2955 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2956 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2957 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2958 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2959 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2960 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2961 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2962 )

FIG. 2  
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Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2963 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2964 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2965 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2966 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2967 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2968 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2969 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2970 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2971 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2972 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2973 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2974 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2975 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2976 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2977 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2978 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2979 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2980 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2981 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2982 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2983 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2984 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2985 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2986 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2987 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2988 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 2989 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 2990 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 2991 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 2992 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2993 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 2994 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 2995 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 2996 )

FIG. 2  
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Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2997 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 2998 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 2999 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3000 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3001 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3002 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3003 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3004 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3005 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3006 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3007 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3008 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3009 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3010 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3011 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3012 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3013 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3014 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3015 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3016 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3017 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3018 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3019 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3020 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3021 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3022 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3023 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3024 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3025 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3026 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3027 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3028 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3029 )  
Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3030 )

FIG. 2  
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Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3031 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3032 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3033 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3034 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3035 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Glu Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3036 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 3037 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 3038 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3039 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3040 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3041 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3042 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3043 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3044 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3045 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3046 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3047 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3048 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3049 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3050 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3051 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3052 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3053 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3054 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3055 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3056 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3057 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Thr Gly Cys (SEQID NO: 3058 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3059 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3060 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3061 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3062 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3063 )  
 Pro Gly Thr Cys Gly Xaa' Xaa' Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3064 )

FIG. 2  
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Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3065)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3066)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3067)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3068)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3069)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3070)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3071)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3072)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3073)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3074)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3075)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3076)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3077)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3078)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3079)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3080)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3081)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3082)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3083)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3084)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3085)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3086)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3087)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3088)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3089)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3090)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3091)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3092)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3093)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3094)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3095)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3096)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3097)  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3098)

FIG. 2  
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Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3099 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3100 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3101 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3102 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3103 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3104 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3105 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3106 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3107 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3108 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3109 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3110 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3111 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3112 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3113 )  
 Pro Gly Thr Cys Gly Xaa' Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3114 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3115 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3116 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3117 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3118 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3119 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3120 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3121 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3122 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3123 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3124 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3125 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3126 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3127 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3128 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3129 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3130 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3131 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3132 )

FIG. 2  
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Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3133 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3134 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3135 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3136 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3137 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3138 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3139 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3140 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3141 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3142 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3143 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3144 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3145 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3146 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3147 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3148 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3149 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3150 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3151 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3152 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3153 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3154 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3155 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3156 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3157 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3158 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3159 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3160 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3161 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3162 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3163 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3164 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3165 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3166 )

FIG. 2  
(sheet 67 of 114)

Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3167 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3168 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3169 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3170 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3171 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3172 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3173 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3174 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3175 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3176 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3177 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3178 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3179 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3180 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3181 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3182 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3183 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3184 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3185 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3186 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3187 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3188 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3189 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3190 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3191 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3192 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3193 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3194 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3195 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3196 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3197 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3198 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3199 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3200 )

FIG. 2  
(sheet 68 of 114)

Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3201 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3202 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Tyr Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3203 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Tyr Xaa' Cys Thr Gly Cys (SEQID NO: 3204 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3205 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3206 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3207 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3208 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3209 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3210 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3211 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3212 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3213 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3214 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3215 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3216 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3217 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3218 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3219 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3220 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3221 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3222 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3223 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3224 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3225 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3226 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3227 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3228 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3229 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3230 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3231 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3232 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3233 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3234 )

**FIG. 2**  
 (sheet 69 of 114)

Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3235 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3236 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3237 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3238 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3239 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3240 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3241 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3242 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3243 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3244 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3245 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3246 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3247 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3248 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3249 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3250 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3251 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3252 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3253 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3254 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3255 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3256 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3257 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3258 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3259 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3260 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3261 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3262 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3263 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3264 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3265 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3266 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3267 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3268 )

FIG. 2  
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Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3269 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3270 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3271 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3272 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3273 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3274 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3275 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3276 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3277 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3278 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3279 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3280 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3281 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3282 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3283 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3284 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3285 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3286 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3287 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3288 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3289 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3290 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3291 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3292 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Thr Gly Cys (SEQID NO: 3293 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Thr Gly Cys (SEQID NO: 3294 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3295 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3296 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3297 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3298 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3299 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3300 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3301 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3302 )

FIG. 2  
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Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3303 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3304 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3305 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3306 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3307 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3308 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3309 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3310 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3311 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3312 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3313 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3314 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3315 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3316 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3317 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3318 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3319 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3320 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3321 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3322 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3323 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3324 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3325 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3326 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3327 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3328 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3329 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3330 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3331 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3332 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3333 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3334 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3335 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3336 )

**FIG. 2**  
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Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3337 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3338 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3339 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3340 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3341 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3342 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3343 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3344 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3345 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3346 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3347 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3348 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3349 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3350 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3351 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3352 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3353 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3354 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3355 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3356 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3357 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3358 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3359 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3360 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3361 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3362 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3363 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3364 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3365 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3366 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3367 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3368 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 3369 )  
Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 3370 )

FIG. 2  
(sheet 73 of 114)

Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 3371 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3372 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 3373 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 3374 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 3375 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3376 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 3377 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 3378 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3379 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 3380 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3381 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3382 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Xaa' Gly Cys (SEQID NO: 3383 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 3384 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 3385 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3386 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 3387 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 3388 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3389 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' Xaa' (SEQID NO: 3390 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3391 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3392 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Xaa' Cys (SEQID NO: 3393 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 3394 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3395 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 3396 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3397 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3398 )  
 Pro Gly Thr Cys Gly Xaa' Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 3399 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3400 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3401 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3402 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3403 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Xaa' Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3404 )

FIG. 2  
(sheet 74 of 114)



Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3405 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3406 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3407 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3408 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3409 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3410 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3411 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3412 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3413 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3414 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3415 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3416 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3417 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3418 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3419 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3420 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3421 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3422 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3423 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3424 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3425 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3426 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3427 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3428 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3429 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3430 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3431 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3432 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3433 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3434 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3435 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3436 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3437 )  
Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3438 )

FIG. 2  
(sheet 75 of 114)

Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3439 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3440 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3441 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3442 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3443 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3444 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3445 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3446 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3447 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3448 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3449 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3450 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3451 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3452 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3453 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3454 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3455 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3456 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3457 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3458 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3459 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3460 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3461 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3462 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3463 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3464 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 3465 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Thr Gly Cys (SEQID NO: 3466 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3467 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3468 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3469 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3470 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3471 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3472 )

**FIG. 2**  
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Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3473 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3474 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3475 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3476 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3477 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3478 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 3479 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 3480 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3481 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3482 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3483 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3484 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3485 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3486 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3487 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3488 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3489 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3490 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Xaa' Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 3491 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3492 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3493 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3494 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3495 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3496 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3497 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Xaa' Ala Tyr Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3498 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3499 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Xaa' Ala Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3500 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3501 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3502 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3503 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3504 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3505 )  
 Pro Gly Thr Cys Gly Glu Xaa' Xaa' Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3506 )

FIG. 2  
(sheet 77 of 114)

Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3507 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3508 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3509 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3510 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3511 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3512 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3513 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3514 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3515 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3516 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3517 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3518 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3519 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3520 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3521 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3522 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3523 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3524 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3525 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3526 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3527 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3528 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3529 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3530 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3531 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3532 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3533 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3534 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3535 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3536 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3537 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3538 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3539 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3540 )

FIG. 2  
(sheet 78 of 114)

Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3541 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3542 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3543 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3544 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3545 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3546 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3547 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3548 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3549 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3550 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3551 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3552 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3553 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3554 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3555 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3556 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3557 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3558 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3559 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3560 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3561 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3562 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3563 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3564 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Xaa' Tyr Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3565 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3566 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3567 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3568 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3569 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3570 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3571 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3572 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3573 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3574 )

**FIG. 2**  
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Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3575 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3576 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3577 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3578 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3579 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3580 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3581 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3582 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3583 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3584 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3585 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 3586 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Xaa' Thr Gly Cys (SEQID NO: 3587 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Thr Xaa' Gly Cys (SEQID NO: 3588 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Thr Gly Xaa' Cys (SEQID NO: 3589 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Thr Gly Cys Xaa' (SEQID NO: 3590 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Gly Cys (SEQID NO: 3591 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Xaa' Gly Cys (SEQID NO: 3592 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Gly Xaa' Cys (SEQID NO: 3593 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Gly Xaa' Cys (SEQID NO: 3594 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Gly Cys Xaa' (SEQID NO: 3595 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Gly Xaa' Cys (SEQID NO: 3596 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 3597 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Thr Gly Cys Xaa' (SEQID NO: 3598 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ala Tyr Ala Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 3599 )  
 Pro Gly Thr Cys Gly Glu Xaa' Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 3600 )  
 Pro Gly Thr Cys Gly Glu Xaa' Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 3601 )  
 Pro Gly Thr Cys Gly Glu Xaa' Tyr Ala Xaa' Thr Gly Cys (SEQID NO: 3602 )  
 Pro Gly Thr Cys Gly Glu Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3603 )  
 Pro Gly Thr Cys Gly Glu Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3604 )  
 Pro Gly Thr Cys Gly Glu Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3605 )  
 Pro Gly Thr Cys Gly Glu Xaa' Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3606 )  
 Pro Gly Thr Cys Gly Glu Xaa' Tyr Ala Xaa' Thr Xaa' Gly Cys (SEQID NO: 3607 )  
 Pro Gly Thr Cys Gly Glu Xaa' Tyr Ala Xaa' Thr Gly Xaa' Cys (SEQID NO: 3608 )

FIG. 2  
 (sheet 80 of 114)

Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3609 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3610 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3611 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3612 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3613 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3614 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3615 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3616 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3617 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3618 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3619 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3620 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3621 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3622 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr gly Xaa' Cys (SEQID NO: 3623 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr gly Cys Xaa' (SEQID NO: 3624 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3625 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3626 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3627 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3628 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3629 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3630 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3631 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3632 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3633 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3634 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3635 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3636 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3637 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3638 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3639 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3640 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3641 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3642 )

FIG. 2  
(sheet 81 of 114)

Pro Gly Thr Cys Gly Glu xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3643 )  
 Pro Gly Thr Cys Gly Glu xaa' Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3644 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3645 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3646 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3647 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3648 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3649 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3650 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3651 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3652 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3653 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3654 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3655 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3656 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3657 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3658 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3659 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3660 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3661 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3662 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3663 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3664 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3665 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3666 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3667 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3668 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3669 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3670 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3671 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3672 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3673 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3674 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3675 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3676 )

FIG. 2  
(sheet 82 of 114)



Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3677 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3678 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3679 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3680 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3681 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3682 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3683 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3684 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3685 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3686 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3687 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3688 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3689 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3690 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3691 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3692 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3693 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3694 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3695 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3696 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3697 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3698 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3699 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3700 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3701 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3702 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3703 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3704 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3705 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3706 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3707 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3708 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3709 )  
Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3710 )

FIG. 2  
(sheet 83 of 114)

Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3711 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3712 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3713 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3714 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3715 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3716 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3717 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3718 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3719 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3720 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3721 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3722 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3723 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3724 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3725 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3726 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3727 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3728 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3729 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3730 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3731 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3732 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 3733 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 3734 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 3735 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3736 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3737 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 3738 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 3739 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3740 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 3741 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 3742 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3743 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 3744 )

FIG. 2  
 (sheet 84 of 114)

Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3745 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3746 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Xaa' Gly Cys (SEQID NO: 3747 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 3748 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 3749 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3750 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 3751 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 3752 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3753 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' Xaa' (SEQID NO: 3754 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3755 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3756 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Xaa' Cys (SEQID NO: 3757 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 3758 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3759 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 3760 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3761 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3762 )  
 Pro Gly Thr Cys Gly Glu Xaa' Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 3763 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3764 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3765 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3766 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3767 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Xaa' Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3768 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Xaa' Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3769 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Xaa' Xaa' Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3770 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Xaa' Xaa' Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3771 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Xaa' Xaa' Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3772 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Xaa' Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3773 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Xaa' Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3774 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Xaa' Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3775 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Xaa' Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3776 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3777 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3778 )

FIG. 2  
 (sheet 85 of 114)

Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3779 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3780 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3781 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3782 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3783 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3784 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3785 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3786 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3787 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3788 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3789 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3790 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3791 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3792 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3793 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3794 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3795 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3796 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3797 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3798 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3799 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3800 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3801 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3802 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3803 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3804 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3805 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3806 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3807 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3808 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3809 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3810 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3811 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3812 )

FIG. 2  
(sheet 86 of 114)

Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3813 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3814 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3815 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3816 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3817 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3818 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3819 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3820 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3821 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3822 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3823 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3824 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3825 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3826 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3827 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3828 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3829 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3830 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3831 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3832 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3833 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3834 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3835 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3836 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3837 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3838 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3839 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3840 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3841 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Tyr Ala Xaa' Tyr Ala Cys Thr Gly Cys (SEQID NO: 3842 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Tyr Ala Xaa' Xaa' Tyr Ala Cys Thr Gly Cys (SEQID NO: 3843 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Tyr Xaa' Tyr Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3844 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Tyr Ala Xaa' Tyr Ala Cys Thr Gly Cys (SEQID NO: 3845 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Xaa' Cys Xaa' Xaa' Tyr Ala Xaa' Tyr Ala Cys Thr Gly Cys (SEQID NO: 3846 )

**FIG. 2**  
 (sheet 87 of 114)

Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3847 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3848 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3849 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3850 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3851 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3852 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3853 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3854 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3855 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3856 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3857 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3858 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3859 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3860 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3861 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3862 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3863 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3864 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3865 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3866 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3867 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3868 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3869 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3870 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3871 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3872 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3873 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3874 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3875 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3876 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3877 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3878 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3879 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3880 )

**FIG. 2**  
 (sheet 88 of 114)

Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3881 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3882 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3883 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3884 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3885 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3886 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3887 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 3888 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3889 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3890 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3891 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3892 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3893 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3894 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3895 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3896 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3897 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3898 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3899 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3900 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3901 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3902 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3903 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3904 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3905 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3906 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3907 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3908 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3909 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3910 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3911 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3912 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3913 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Xaa' Tyr Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3914 )

**FIG. 2**  
 (sheet 89 of 114)

Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Ala Xaa' Cys Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3915)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3916)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3917)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Xaa' Thr Gly Cys (SEQID NO: 3918)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3919)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3920)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3921)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3922)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Xaa' Gly Cys (SEQID NO: 3923)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 3924)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 3925)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3926)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3927)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Cys Xaa' Cys (SEQID NO: 3928)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3929)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3930)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3931)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3932)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3933)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3934)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Cys Thr Gly Cys (SEQID NO: 3935)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Cys Thr Gly Cys (SEQID NO: 3936)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3937)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3938)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3939)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3940)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3941)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3942)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3943)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3944)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3945)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3946)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3947)  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Tyr Ala Xaa' Cys Ala Xaa' Cys Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3948)

**FIG. 2**  
 (sheet 90 of 114)



Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3949 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3950 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3951 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3952 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3953 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3954 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3955 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3956 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3957 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3958 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3959 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3960 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3961 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3962 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3963 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3964 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3965 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3966 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 3967 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3968 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3969 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 3970 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3971 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3972 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3973 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3974 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3975 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3976 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3977 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3978 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 3979 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 3980 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 3981 )  
Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 3982 )

FIG. 2  
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Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 3983 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 3984 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 3985 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 3986 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 3987 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 3988 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 3989 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 3990 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 3991 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 3992 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 3993 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 3994 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 3995 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3996 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 3997 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 3998 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 3999 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4000 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4001 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4002 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4003 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4004 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4005 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4006 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4007 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4008 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4009 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4010 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4011 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4012 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4013 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4014 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4015 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4016 )

**FIG. 2**  
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Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4017 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4018 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 4019 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 4020 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 4021 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4022 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 4023 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 4024 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 4025 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4026 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 4027 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 4028 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4029 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 4030 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4031 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4032 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4033 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 4034 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 4035 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4036 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 4037 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 4038 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4039 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' Xaa' (SEQID NO: 4040 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4041 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4042 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Xaa' Cys (SEQID NO: 4043 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 4044 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4045 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 4046 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4047 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4048 )  
 Pro Gly Thr Cys Gly Glu Ile Xaa' Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 4049 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4050 )

**FIG. 2**  
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Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4051 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4052 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4053 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4054 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4055 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4056 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4057 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4058 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4059 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4060 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4061 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4062 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Tyr Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4063 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Tyr Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4064 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Tyr Ala Xaa' Tyr Ala Cys Thr Gly Cys (SEQID NO: 4065 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Tyr Ala Xaa' Tyr Ala Cys Thr Gly Cys (SEQID NO: 4066 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Tyr Ala Xaa' Tyr Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4067 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Tyr Ala Xaa' Tyr Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4068 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Tyr Ala Xaa' Tyr Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4069 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Tyr Ala Xaa' Tyr Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4070 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4071 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4072 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4073 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4074 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4075 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4076 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4077 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4078 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4079 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Ala xaa' xaa' Ala Cys Thr Gly Cys (SEQID NO: 4080 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Ala xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4081 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Ala xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4082 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Ala xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4083 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Xaa' Xaa' Xaa' Ala Tyr Ala xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4084 )

**FIG. 2**  
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Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4085 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4086 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4087 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4088 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4089 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4090 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4091 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4092 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4093 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4094 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4095 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4096 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4097 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4098 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4099 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4100 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4101 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4102 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4103 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4104 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4105 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Xaa' Ala Tyr Ala Cys Thr Gly Cys (SEQID NO: 4106 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4107 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4108 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4109 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4110 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4111 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4112 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4113 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4114 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4115 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4116 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4117 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4118 )

FIG. 2  
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Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4119 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4120 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4121 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4122 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4123 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4124 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4125 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4126 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4127 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4128 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4129 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4130 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4131 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4132 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4133 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4134 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4135 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4136 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4137 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4138 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4139 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4140 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4141 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4142 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4143 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4144 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4145 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4146 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4147 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4148 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4149 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4150 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4151 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4152 )

FIG. 2  
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Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4153 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4154 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4155 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4156 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4157 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4158 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4159 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4160 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4161 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4162 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4163 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4164 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4165 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4166 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4167 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4168 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4169 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4170 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4171 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4172 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4173 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4174 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4175 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4176 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4177 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4178 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4179 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4180 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4181 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4182 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4183 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4184 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4185 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4186 )

**FIG. 2**  
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Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4187 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4188 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4189 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4190 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4191 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4192 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4193 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4194 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4195 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4196 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4197 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4198 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4199 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4200 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4201 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4202 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4203 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4204 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4205 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4206 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4207 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4208 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4209 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4210 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4211 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4212 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4213 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4214 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4215 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4216 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4217 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4218 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4219 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4220 )

FIG. 2  
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Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4221 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4222 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4223 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Xaa' Thr Gly Cys (SEQID NO: 4224 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4225 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4226 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Thr Gly Cys (SEQID NO: 4227 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4228 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4229 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4230 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4231 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4232 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4233 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4234 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4235 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4236 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4237 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Xaa' Xaa' Thr Gly Cys (SEQID NO: 4238 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Xaa' Thr Gly Cys (SEQID NO: 4239 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 4240 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 4241 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Thr Gly Cys (SEQID NO: 4242 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 4243 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 4244 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 4245 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4246 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 4247 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 4248 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4249 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 4250 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Thr Gly Cys (SEQID NO: 4251 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4252 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Xaa' Gly Cys (SEQID NO: 4253 )  
Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 4254 )

FIG. 2  
(sheet 99 of 114)

Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 4255 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4256 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 4257 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 4258 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4259 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' Xaa' (SEQID NO: 4260 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4261 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4262 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4263 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 4264 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4265 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 4266 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4267 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4268 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Xaa' Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 4269 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4270 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4271 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4272 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4273 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys (SEQID NO: 4274 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4275 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4276 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4277 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4278 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4279 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4280 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4281 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4282 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4283 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4284 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4285 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4286 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4287 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4288 )

FIG. 2  
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Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4289 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4290 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4291 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4292 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4293 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4294 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4295 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4296 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4297 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4298 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4299 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4300 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4301 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4302 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4303 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4304 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4305 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4306 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4307 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4308 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4309 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4310 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4311 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4312 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4313 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4314 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4315 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4316 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4317 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4318 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4319 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4320 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4321 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Xaa' Tyr Xaa' Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4322 )

FIG. 2  
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Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4323 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4324 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4325 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4326 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4327 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4328 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4329 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4330 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4331 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4332 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4333 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4334 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4335 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4336 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4337 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4338 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4339 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4340 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4341 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4342 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4343 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4344 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4345 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4346 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4347 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4348 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4349 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4350 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4351 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4352 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4353 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4354 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4355 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4356 )

FIG. 2  
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Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4357 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4358 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4359 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4360 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4361 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4362 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4363 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4364 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4365 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Gly Cys (SEQID NO: 4366 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Gly Cys (SEQID NO: 4367 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 4368 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 4369 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 4370 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 4371 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 4372 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 4373 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 4374 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 4375 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 4376 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 4377 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 4378 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 4379 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4380 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4381 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4382 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4383 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4384 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4385 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4386 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4387 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4388 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4389 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4390 )

FIG. 2  
 (sheet 103 of 114)

Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4391 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4392 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4393 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4394 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4395 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4396 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4397 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4398 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4399 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4400 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4401 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4402 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4403 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 4404 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 4405 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 4406 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4407 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 4408 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 4409 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 4410 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4411 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 4412 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 4413 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4414 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 4415 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4416 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4417 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4418 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 4419 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 4420 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4421 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 4422 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 4423 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4424 )

FIG. 2  
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Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' Xaa' (SEQID NO: 4425 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4426 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4427 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4428 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 4429 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4430 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 4431 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4432 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4433 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Xaa' Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 4434 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4435 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4436 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4437 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4438 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4439 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4440 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4441 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4442 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4443 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4444 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4445 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4446 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4447 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4448 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4449 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4450 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4451 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4452 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4453 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4454 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4455 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4456 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4457 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4458 )

**FIG. 2**  
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Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4459 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4460 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4461 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4462 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4463 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4464 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4465 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4466 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4467 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4468 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4469 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4470 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4471 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4472 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4473 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4474 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4475 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4476 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4477 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4478 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4479 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4480 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4481 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4482 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4483 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4484 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4485 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4486 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4487 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4488 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4489 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4490 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4491 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4492 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys

**FIG. 2**  
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Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4493 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4494 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4495 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4496 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4497 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4498 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Xaa' Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4499 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4500 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4501 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4502 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4503 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4504 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4505 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4506 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4507 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4508 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4509 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4510 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4511 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4512 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4513 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4514 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4515 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4516 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4517 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4518 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4519 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4520 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4521 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4522 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4523 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 4524 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 4525 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 4526 )

FIG. 2  
(sheet 107 of 114)

Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4527 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 4528 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 4529 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 4530 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4531 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 4532 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 4533 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4534 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 4535 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4536 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4537 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Xaa' Xaa' Gly Cys (SEQID NO: 4538 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 4539 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 4540 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4541 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 4542 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 4543 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4544 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Xaa' Gly Cys Xaa' Xaa' (SEQID NO: 4545 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4546 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4547 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Xaa' Xaa' Cys (SEQID NO: 4548 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 4549 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4550 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 4551 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4552 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4553 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 4554 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 4555 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Ala Ala Cys Thr Gly Cys (SEQID NO: 4556 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4557 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4558 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4559 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Xaa' Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4560 )

FIG. 2  
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Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4561 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4562 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4563 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4564 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4565 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4566 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Cys Thr Xaa' Thr Gly Cys (SEQID NO: 4567 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4568 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4569 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4570 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4571 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4572 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4573 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4574 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4575 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4576 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4577 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4578 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4579 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4580 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4581 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4582 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4583 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4584 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Cys Thr Gly Cys (SEQID NO: 4585 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4586 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4587 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4588 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4589 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4590 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4591 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4592 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4593 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4594 )

FIG. 2  
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Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4595 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4596 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4597 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4598 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4599 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4600 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4601 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4602 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4603 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4604 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4605 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4606 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4607 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 4608 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 4609 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 4610 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4611 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 4612 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 4613 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 4614 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4615 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 4616 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 4617 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4618 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 4619 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys (SEQID NO: 4620 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4621 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4622 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 4623 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 4624 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4625 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 4626 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 4627 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4628 )

FIG. 2  
 (sheet 110 of 114)

Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Xaa' Gly Cys Xaa' Xaa' (SEQID NO: 4629 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4630 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4631 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4632 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 4633 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4634 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 4635 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' (SEQID NO: 4636 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4637 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4638 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Cys Thr Gly Cys (SEQID NO: 4639 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4641 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Xaa' Cys Thr Gly Cys (SEQID NO: 4642 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4643 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4644 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4645 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4646 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4647 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4648 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4649 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4650 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4651 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4652 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4653 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4654 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4655 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4656 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4657 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4658 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4659 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4660 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Xaa' Thr Gly Cys (SEQID NO: 4661 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Xaa' Xaa' Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4662 )

**FIG. 2**  
 (sheet 111 of 114)

Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Xaa' Xaa' Thr Gly Cys (SEQID NO: 4663 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 4664 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 4665 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 4666 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4667 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 4668 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 4669 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 4670 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4671 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 4672 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 4673 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4674 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 4675 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys (SEQID NO: 4676 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4677 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Xaa' Xaa' Gly Cys (SEQID NO: 4678 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 4679 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 4680 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4681 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 4682 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 4683 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4684 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Xaa' Gly Cys Xaa' Xaa' (SEQID NO: 4685 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys (SEQID NO: 4686 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4687 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Xaa' Xaa' Cys (SEQID NO: 4688 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 4689 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4690 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 4691 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' (SEQID NO: 4692 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4693 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Xaa' Cys Thr Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 4694 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys (SEQID NO: 4695 )  
Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4696 )

FIG. 2  
(sheet 112 of 114)

Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4697 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys (SEQID NO: 4698 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 4699 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 4700 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 4701 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Xaa' Gly Cys (SEQID NO: 4702 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 4703 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 4704 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 4705 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Xaa' Cys (SEQID NO: 4706 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 4707 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 4708 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys Xaa' (SEQID NO: 4709 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 4710 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4711 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 4712 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Xaa' Gly Cys (SEQID NO: 4713 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 4714 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 4715 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Xaa' Cys (SEQID NO: 4716 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 4717 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 4718 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys Xaa' (SEQID NO: 4719 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys Xaa' Xaa' (SEQID NO: 4720 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys (SEQID NO: 4721 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 4722 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Xaa' Cys (SEQID NO: 4723 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 4724 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys Xaa' (SEQID NO: 4725 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 4726 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' (SEQID NO: 4727 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' Xaa' (SEQID NO: 4728 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 4729 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Xaa' Thr Xaa' Gly Cys (SEQID NO: 4730 )

**FIG. 2**  
 (sheet 113 of 114)

Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys (SEQID NO: 4731 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Xaa' Gly Cys (SEQID NO: 4732 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Xaa' Xaa' Gly Cys (SEQID NO: 4733 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Xaa' Xaa' Gly Cys (SEQID NO: 4734 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 4735 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys (SEQID NO: 4736 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 4737 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 4738 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' (SEQID NO: 4739 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Xaa' Gly Cys Xaa' Xaa' (SEQID NO: 4740 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys (SEQID NO: 4741 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 4742 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Xaa' Cys (SEQID NO: 4743 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 4744 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys Xaa' (SEQID NO: 4745 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 4746 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' (SEQID NO: 4747 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' Xaa' (SEQID NO: 4748 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Xaa' Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 4749 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys (SEQID NO: 4750 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys (SEQID NO: 4751 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Xaa' Cys (SEQID NO: 4752 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Xaa' Cys (SEQID NO: 4753 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Xaa' Cys Xaa' (SEQID NO: 4754 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys Xaa' (SEQID NO: 4755 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Xaa' Cys Xaa' Xaa' (SEQID NO: 4756 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' Xaa' (SEQID NO: 4757 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' (SEQID NO: 4758 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' Xaa' Xaa' (SEQID NO: 4759 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Xaa' Cys Xaa' Xaa' Xaa' (SEQID NO: 4760 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' (SEQID NO: 4761 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' Xaa' (SEQID NO: 4762 )  
 Pro Gly Thr Cys Gly Glu Ile Cys Ala Tyr Ala Ala Cys Thr Gly Cys Xaa' Xaa' Xaa' Xaa' (SEQID NO: 4763 )

**FIG. 2**  
 (sheet 114 of 114)



(SEQ ID NO: 4764 ) Cys Glu Tyr Cys Ala Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4765 ) Cys Glu Tyr Cys Ala Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4766 ) Cys Glu Tyr Cys Ala Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4767 ) Cys Glu Tyr Cys Ala Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4768 ) Cys Glu Tyr Cys Ala Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4769 ) Cys Glu Tyr Cys Ala Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4770 ) Cys Glu Tyr Cys Ala Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4771 ) Cys Glu Tyr Cys Ala Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4772 ) Cys Glu Tyr Cys Ala Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4773 ) Cys Glu Tyr Cys Ala Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4774 ) Cys Glu Tyr Cys Ala Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4775 ) Cys Glu Tyr Cys Ala Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4776 ) Cys Glu Tyr Cys Ala Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4777 ) Cys Glu Tyr Cys Ala Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4778 ) Cys Glu Tyr Cys Ala Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4779 ) Cys Glu Tyr Cys Ala Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4780 ) Cys Glu Tyr Cys Ala Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4781 ) Cys Glu Tyr Cys Ala Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4782 ) Cys Glu Tyr Cys Ala Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4783 ) Cys Glu Tyr Cys Ala Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4784 ) Cys Glu Tyr Cys Ala Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4785 ) Cys Glu Tyr Cys Ala Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4786 ) Cys Glu Tyr Cys Ala Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4787 ) Cys Glu Tyr Cys Ala Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4788 ) Cys Glu Tyr Cys Arg Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4789 ) Cys Glu Tyr Cys Arg Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4790 ) Cys Glu Tyr Cys Arg Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4791 ) Cys Glu Tyr Cys Arg Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4792 ) Cys Glu Tyr Cys Arg Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4793 ) Cys Glu Tyr Cys Arg Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4794 ) Cys Glu Tyr Cys Arg Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4795 ) Cys Glu Tyr Cys Arg Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4796 ) Cys Glu Tyr Cys Arg Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4797 ) Cys Glu Tyr Cys Arg Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4798 ) Cys Glu Tyr Cys Arg Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4799 ) Cys Glu Tyr Cys Arg Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4800 ) Cys Glu Tyr Cys Arg Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4801 ) Cys Glu Tyr Cys Arg Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4802 ) Cys Glu Tyr Cys Arg Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4803 ) Cys Glu Tyr Cys Arg Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4804 ) Cys Glu Tyr Cys Arg Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4805 ) Cys Glu Tyr Cys Arg Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4806 ) Cys Glu Tyr Cys Arg Asn Gly Thr Cys Thr Gly Cys Tyr

FIG. 3  
(sheet 1 of 90)

(SEQ ID NO: 4807 ) Cys Glu Tyr Cys Arg Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4808 ) Cys Glu Tyr Cys Arg Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4809 ) Cys Glu Tyr Cys Arg Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4810 ) Cys Glu Tyr Cys Arg Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4811 ) Cys Glu Tyr Cys Arg Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4812 ) Cys Glu Tyr Cys Asn Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4813 ) Cys Glu Tyr Cys Asn Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4814 ) Cys Glu Tyr Cys Asn Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4815 ) Cys Glu Tyr Cys Asn Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4816 ) Cys Glu Tyr Cys Asn Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4817 ) Cys Glu Tyr Cys Asn Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4818 ) Cys Glu Tyr Cys Asn Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4819 ) Cys Glu Tyr Cys Asn Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4820 ) Cys Glu Tyr Cys Asn Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4821 ) Cys Glu Tyr Cys Asn Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4822 ) Cys Glu Tyr Cys Asn Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4823 ) Cys Glu Tyr Cys Asn Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4824 ) Cys Glu Tyr Cys Asn Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4825 ) Cys Glu Tyr Cys Asn Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4826 ) Cys Glu Tyr Cys Asn Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4827 ) Cys Glu Tyr Cys Asn Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4828 ) Cys Glu Tyr Cys Asn Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4829 ) Cys Glu Tyr Cys Asn Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4830 ) Cys Glu Tyr Cys Asn Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4831 ) Cys Glu Tyr Cys Asn Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4832 ) Cys Glu Tyr Cys Asn Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4833 ) Cys Glu Tyr Cys Asn Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4834 ) Cys Glu Tyr Cys Asn Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4835 ) Cys Glu Tyr Cys Asn Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4836 ) Cys Glu Tyr Cys Asp Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4837 ) Cys Glu Tyr Cys Asp Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4838 ) Cys Glu Tyr Cys Asp Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4839 ) Cys Glu Tyr Cys Asp Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4840 ) Cys Glu Tyr Cys Asp Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4841 ) Cys Glu Tyr Cys Asp Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4842 ) Cys Glu Tyr Cys Asp Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4843 ) Cys Glu Tyr Cys Asp Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4844 ) Cys Glu Tyr Cys Asp Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4845 ) Cys Glu Tyr Cys Asp Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4846 ) Cys Glu Tyr Cys Asp Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4847 ) Cys Glu Tyr Cys Asp Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4848 ) Cys Glu Tyr Cys Asp Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4849 ) Cys Glu Tyr Cys Asp Asn Gly Ala Cys Thr Ala Cys Tyr

FIG. 3  
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(SEQ ID NO: 4850 ) Cys Glu Tyr Cys Asp Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4851 ) Cys Glu Tyr Cys Asp Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4852 ) Cys Glu Tyr Cys Asp Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4853 ) Cys Glu Tyr Cys Asp Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4854 ) Cys Glu Tyr Cys Asp Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4855 ) Cys Glu Tyr Cys Asp Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4856 ) Cys Glu Tyr Cys Asp Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4857 ) Cys Glu Tyr Cys Asp Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4858 ) Cys Glu Tyr Cys Asp Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4859 ) Cys Glu Tyr Cys Asp Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4860 ) Cys Glu Tyr Cys Gln Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4861 ) Cys Glu Tyr Cys Gln Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4862 ) Cys Glu Tyr Cys Gln Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4863 ) Cys Glu Tyr Cys Gln Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4864 ) Cys Glu Tyr Cys Gln Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4865 ) Cys Glu Tyr Cys Gln Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4866 ) Cys Glu Tyr Cys Gln Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4867 ) Cys Glu Tyr Cys Gln Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4868 ) Cys Glu Tyr Cys Gln Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4869 ) Cys Glu Tyr Cys Gln Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4870 ) Cys Glu Tyr Cys Gln Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4871 ) Cys Glu Tyr Cys Gln Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4872 ) Cys Glu Tyr Cys Gln Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4873 ) Cys Glu Tyr Cys Gln Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4874 ) Cys Glu Tyr Cys Gln Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4875 ) Cys Glu Tyr Cys Gln Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4876 ) Cys Glu Tyr Cys Gln Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4877 ) Cys Glu Tyr Cys Gln Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4878 ) Cys Glu Tyr Cys Gln Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4879 ) Cys Glu Tyr Cys Gln Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4880 ) Cys Glu Tyr Cys Gln Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4881 ) Cys Glu Tyr Cys Gln Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4882 ) Cys Glu Tyr Cys Gln Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4883 ) Cys Glu Tyr Cys Gln Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4884 ) Cys Glu Tyr Cys Glu Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4885 ) Cys Glu Tyr Cys Glu Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4886 ) Cys Glu Tyr Cys Glu Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4887 ) Cys Glu Tyr Cys Glu Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4888 ) Cys Glu Tyr Cys Glu Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4889 ) Cys Glu Tyr Cys Glu Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4890 ) Cys Glu Tyr Cys Glu Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4891 ) Cys Glu Tyr Cys Glu Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4892 ) Cys Glu Tyr Cys Glu Asn Pro Thr Cys Val Gly Cys Tyr

FIG. 3  
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(SEQ ID NO: 4893 ) Cys Glu Tyr Cys Glu Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4894 ) Cys Glu Tyr Cys Glu Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4895 ) Cys Glu Tyr Cys Glu Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4896 ) Cys Glu Tyr Cys Glu Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4897 ) Cys Glu Tyr Cys Glu Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4898 ) Cys Glu Tyr Cys Glu Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4899 ) Cys Glu Tyr Cys Glu Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4900 ) Cys Glu Tyr Cys Glu Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4901 ) Cys Glu Tyr Cys Glu Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4902 ) Cys Glu Tyr Cys Glu Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4903 ) Cys Glu Tyr Cys Glu Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4904 ) Cys Glu Tyr Cys Glu Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4905 ) Cys Glu Tyr Cys Glu Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4906 ) Cys Glu Tyr Cys Glu Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4907 ) Cys Glu Tyr Cys Glu Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4908 ) Cys Glu Tyr Cys Gly Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4909 ) Cys Glu Tyr Cys Gly Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4910 ) Cys Glu Tyr Cys Gly Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4911 ) Cys Glu Tyr Cys Gly Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4912 ) Cys Glu Tyr Cys Gly Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4913 ) Cys Glu Tyr Cys Gly Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4914 ) Cys Glu Tyr Cys Gly Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4915 ) Cys Glu Tyr Cys Gly Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4916 ) Cys Glu Tyr Cys Gly Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4917 ) Cys Glu Tyr Cys Gly Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4918 ) Cys Glu Tyr Cys Gly Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4919 ) Cys Glu Tyr Cys Gly Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4920 ) Cys Glu Tyr Cys Gly Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4921 ) Cys Glu Tyr Cys Gly Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4922 ) Cys Glu Tyr Cys Gly Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4923 ) Cys Glu Tyr Cys Gly Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4924 ) Cys Glu Tyr Cys Gly Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4925 ) Cys Glu Tyr Cys Gly Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4926 ) Cys Glu Tyr Cys Gly Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4927 ) Cys Glu Tyr Cys Gly Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4928 ) Cys Glu Tyr Cys Gly Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4929 ) Cys Glu Tyr Cys Gly Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4930 ) Cys Glu Tyr Cys Gly Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4931 ) Cys Glu Tyr Cys Gly Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4932 ) Cys Glu Tyr Cys His Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4933 ) Cys Glu Tyr Cys His Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4934 ) Cys Glu Tyr Cys His Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4935 ) Cys Glu Tyr Cys His Asn Pro Ala Cys Val Ala Cys Tyr

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(SEQ ID NO: 4936 ) Cys Glu Tyr Cys His Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 4937 ) Cys Glu Tyr Cys His Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 4938 ) Cys Glu Tyr Cys His Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 4939 ) Cys Glu Tyr Cys His Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 4940 ) Cys Glu Tyr Cys His Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 4941 ) Cys Glu Tyr Cys His Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 4942 ) Cys Glu Tyr Cys His Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 4943 ) Cys Glu Tyr Cys His Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 4944 ) Cys Glu Tyr Cys His Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 4945 ) Cys Glu Tyr Cys His Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 4946 ) Cys Glu Tyr Cys His Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 4947 ) Cys Glu Tyr Cys His Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 4948 ) Cys Glu Tyr Cys His Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 4949 ) Cys Glu Tyr Cys His Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 4950 ) Cys Glu Tyr Cys His Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 4951 ) Cys Glu Tyr Cys His Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 4952 ) Cys Glu Tyr Cys His Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 4953 ) Cys Glu Tyr Cys His Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 4954 ) Cys Glu Tyr Cys His Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 4955 ) Cys Glu Tyr Cys His Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 4956 ) Cys Glu Tyr Cys Ile Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 4957 ) Cys Glu Tyr Cys Ile Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 4958 ) Cys Glu Tyr Cys Ile Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 4959 ) Cys Glu Tyr Cys Ile Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 4960 ) Cys Glu Tyr Cys Ile Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 4961 ) Cys Glu Tyr Cys Ile Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 4962 ) Cys Glu Tyr Cys Ile Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 4963 ) Cys Glu Tyr Cys Ile Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 4964 ) Cys Glu Tyr Cys Ile Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 4965 ) Cys Glu Tyr Cys Ile Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 4966 ) Cys Glu Tyr Cys Ile Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 4967 ) Cys Glu Tyr Cys Ile Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 4968 ) Cys Glu Tyr Cys Ile Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 4969 ) Cys Glu Tyr Cys Ile Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 4970 ) Cys Glu Tyr Cys Ile Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 4971 ) Cys Glu Tyr Cys Ile Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 4972 ) Cys Glu Tyr Cys Ile Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 4973 ) Cys Glu Tyr Cys Ile Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 4974 ) Cys Glu Tyr Cys Ile Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 4975 ) Cys Glu Tyr Cys Ile Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 4976 ) Cys Glu Tyr Cys Ile Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 4977 ) Cys Glu Tyr Cys Ile Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 4978 ) Cys Glu Tyr Cys Ile Asn Gly Thr Cys Gly Gly Cys Tyr

**FIG. 3**  
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(SEQ ID NO: 4979 ) Cys Glu Tyr Cys Ile Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4980 ) Cys Glu Tyr Cys Leu Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4981 ) Cys Glu Tyr Cys Leu Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4982 ) Cys Glu Tyr Cys Leu Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4983 ) Cys Glu Tyr Cys Leu Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4984 ) Cys Glu Tyr Cys Leu Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4985 ) Cys Glu Tyr Cys Leu Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4986 ) Cys Glu Tyr Cys Leu Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4987 ) Cys Glu Tyr Cys Leu Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4988 ) Cys Glu Tyr Cys Leu Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 4989 ) Cys Glu Tyr Cys Leu Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 4990 ) Cys Glu Tyr Cys Leu Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4991 ) Cys Glu Tyr Cys Leu Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4992 ) Cys Glu Tyr Cys Leu Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4993 ) Cys Glu Tyr Cys Leu Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 4994 ) Cys Glu Tyr Cys Leu Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 4995 ) Cys Glu Tyr Cys Leu Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 4996 ) Cys Glu Tyr Cys Leu Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 4997 ) Cys Glu Tyr Cys Leu Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 4998 ) Cys Glu Tyr Cys Leu Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 4999 ) Cys Glu Tyr Cys Leu Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5000 ) Cys Glu Tyr Cys Leu Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5001 ) Cys Glu Tyr Cys Leu Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5002 ) Cys Glu Tyr Cys Leu Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5003 ) Cys Glu Tyr Cys Leu Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5004 ) Cys Glu Tyr Cys Lys Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5005 ) Cys Glu Tyr Cys Lys Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5006 ) Cys Glu Tyr Cys Lys Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5007 ) Cys Glu Tyr Cys Lys Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5008 ) Cys Glu Tyr Cys Lys Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5009 ) Cys Glu Tyr Cys Lys Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5010 ) Cys Glu Tyr Cys Lys Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5011 ) Cys Glu Tyr Cys Lys Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5012 ) Cys Glu Tyr Cys Lys Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5013 ) Cys Glu Tyr Cys Lys Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5014 ) Cys Glu Tyr Cys Lys Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5015 ) Cys Glu Tyr Cys Lys Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5016 ) Cys Glu Tyr Cys Lys Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5017 ) Cys Glu Tyr Cys Lys Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5018 ) Cys Glu Tyr Cys Lys Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5019 ) Cys Glu Tyr Cys Lys Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5020 ) Cys Glu Tyr Cys Lys Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5021 ) Cys Glu Tyr Cys Lys Asn Gly Ala Cys Gly Ala Cys Tyr

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(SEQ ID NO: 5022 ) Cys Glu Tyr Cys Lys Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5023 ) Cys Glu Tyr Cys Lys Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5024 ) Cys Glu Tyr Cys Lys Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5025 ) Cys Glu Tyr Cys Lys Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5026 ) Cys Glu Tyr Cys Lys Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5027 ) Cys Glu Tyr Cys Lys Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5028 ) Cys Glu Tyr Cys Met Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5029 ) Cys Glu Tyr Cys Met Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5030 ) Cys Glu Tyr Cys Met Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5031 ) Cys Glu Tyr Cys Met Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5032 ) Cys Glu Tyr Cys Met Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5033 ) Cys Glu Tyr Cys Met Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5034 ) Cys Glu Tyr Cys Met Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5035 ) Cys Glu Tyr Cys Met Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5036 ) Cys Glu Tyr Cys Met Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5037 ) Cys Glu Tyr Cys Met Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5038 ) Cys Glu Tyr Cys Met Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5039 ) Cys Glu Tyr Cys Met Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5040 ) Cys Glu Tyr Cys Met Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5041 ) Cys Glu Tyr Cys Met Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5042 ) Cys Glu Tyr Cys Met Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5043 ) Cys Glu Tyr Cys Met Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5044 ) Cys Glu Tyr Cys Met Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5045 ) Cys Glu Tyr Cys Met Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5046 ) Cys Glu Tyr Cys Met Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5047 ) Cys Glu Tyr Cys Met Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5048 ) Cys Glu Tyr Cys Met Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5049 ) Cys Glu Tyr Cys Met Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5050 ) Cys Glu Tyr Cys Met Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5051 ) Cys Glu Tyr Cys Met Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5052 ) Cys Glu Tyr Cys Phe Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5053 ) Cys Glu Tyr Cys Phe Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5054 ) Cys Glu Tyr Cys Phe Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5055 ) Cys Glu Tyr Cys Phe Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5056 ) Cys Glu Tyr Cys Phe Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5057 ) Cys Glu Tyr Cys Phe Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5058 ) Cys Glu Tyr Cys Phe Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5059 ) Cys Glu Tyr Cys Phe Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5060 ) Cys Glu Tyr Cys Phe Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5061 ) Cys Glu Tyr Cys Phe Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5062 ) Cys Glu Tyr Cys Phe Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5063 ) Cys Glu Tyr Cys Phe Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5064 ) Cys Glu Tyr Cys Phe Asn Gly Ala Cys Thr Gly Cys Tyr

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(SEQ ID NO: 5065 ) Cys Glu Tyr Cys Phe Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5066 ) Cys Glu Tyr Cys Phe Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5067 ) Cys Glu Tyr Cys Phe Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5068 ) Cys Glu Tyr Cys Phe Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5069 ) Cys Glu Tyr Cys Phe Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5070 ) Cys Glu Tyr Cys Phe Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5071 ) Cys Glu Tyr Cys Phe Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5072 ) Cys Glu Tyr Cys Phe Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5073 ) Cys Glu Tyr Cys Phe Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5074 ) Cys Glu Tyr Cys Phe Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5075 ) Cys Glu Tyr Cys Phe Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5076 ) Cys Glu Tyr Cys Pro Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5077 ) Cys Glu Tyr Cys Pro Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5078 ) Cys Glu Tyr Cys Pro Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5079 ) Cys Glu Tyr Cys Pro Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5080 ) Cys Glu Tyr Cys Pro Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5081 ) Cys Glu Tyr Cys Pro Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5082 ) Cys Glu Tyr Cys Pro Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5083 ) Cys Glu Tyr Cys Pro Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5084 ) Cys Glu Tyr Cys Pro Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5085 ) Cys Glu Tyr Cys Pro Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5086 ) Cys Glu Tyr Cys Pro Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5087 ) Cys Glu Tyr Cys Pro Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5088 ) Cys Glu Tyr Cys Pro Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5089 ) Cys Glu Tyr Cys Pro Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5090 ) Cys Glu Tyr Cys Pro Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5091 ) Cys Glu Tyr Cys Pro Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5092 ) Cys Glu Tyr Cys Pro Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5093 ) Cys Glu Tyr Cys Pro Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5094 ) Cys Glu Tyr Cys Pro Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5095 ) Cys Glu Tyr Cys Pro Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5096 ) Cys Glu Tyr Cys Pro Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5097 ) Cys Glu Tyr Cys Pro Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5098 ) Cys Glu Tyr Cys Pro Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5099 ) Cys Glu Tyr Cys Pro Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5100 ) Cys Glu Tyr Cys Ser Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5101 ) Cys Glu Tyr Cys Ser Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5102 ) Cys Glu Tyr Cys Ser Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5103 ) Cys Glu Tyr Cys Ser Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5104 ) Cys Glu Tyr Cys Ser Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5105 ) Cys Glu Tyr Cys Ser Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5106 ) Cys Glu Tyr Cys Ser Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5107 ) Cys Glu Tyr Cys Ser Asn Pro Thr Cys Thr Ala Cys Tyr

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(SEQ ID NO: 5108 ) Cys Glu Tyr Cys Ser Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5109 ) Cys Glu Tyr Cys Ser Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5110 ) Cys Glu Tyr Cys Ser Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5111 ) Cys Glu Tyr Cys Ser Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5112 ) Cys Glu Tyr Cys Ser Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5113 ) Cys Glu Tyr Cys Ser Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5114 ) Cys Glu Tyr Cys Ser Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5115 ) Cys Glu Tyr Cys Ser Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5116 ) Cys Glu Tyr Cys Ser Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5117 ) Cys Glu Tyr Cys Ser Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5118 ) Cys Glu Tyr Cys Ser Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5119 ) Cys Glu Tyr Cys Ser Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5120 ) Cys Glu Tyr Cys Ser Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5121 ) Cys Glu Tyr Cys Ser Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5122 ) Cys Glu Tyr Cys Ser Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5123 ) Cys Glu Tyr Cys Ser Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5124 ) Cys Glu Tyr Cys Thr Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5125 ) Cys Glu Tyr Cys Thr Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5126 ) Cys Glu Tyr Cys Thr Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5127 ) Cys Glu Tyr Cys Thr Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5128 ) Cys Glu Tyr Cys Thr Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5129 ) Cys Glu Tyr Cys Thr Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5130 ) Cys Glu Tyr Cys Thr Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5131 ) Cys Glu Tyr Cys Thr Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5132 ) Cys Glu Tyr Cys Thr Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5133 ) Cys Glu Tyr Cys Thr Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5134 ) Cys Glu Tyr Cys Thr Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5135 ) Cys Glu Tyr Cys Thr Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5136 ) Cys Glu Tyr Cys Thr Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5137 ) Cys Glu Tyr Cys Thr Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5138 ) Cys Glu Tyr Cys Thr Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5139 ) Cys Glu Tyr Cys Thr Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5140 ) Cys Glu Tyr Cys Thr Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5141 ) Cys Glu Tyr Cys Thr Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5142 ) Cys Glu Tyr Cys Thr Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5143 ) Cys Glu Tyr Cys Thr Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5144 ) Cys Glu Tyr Cys Thr Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5145 ) Cys Glu Tyr Cys Thr Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5146 ) Cys Glu Tyr Cys Thr Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5147 ) Cys Glu Tyr Cys Thr Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5148 ) Cys Glu Tyr Cys Trp Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5149 ) Cys Glu Tyr Cys Trp Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5150 ) Cys Glu Tyr Cys Trp Asn Pro Ala Cys Val Gly Cys Tyr

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(SEQ ID NO: 5151 ) Cys Glu Tyr Cys Trp Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5152 ) Cys Glu Tyr Cys Trp Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5153 ) Cys Glu Tyr Cys Trp Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5154 ) Cys Glu Tyr Cys Trp Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5155 ) Cys Glu Tyr Cys Trp Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5156 ) Cys Glu Tyr Cys Trp Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5157 ) Cys Glu Tyr Cys Trp Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5158 ) Cys Glu Tyr Cys Trp Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5159 ) Cys Glu Tyr Cys Trp Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5160 ) Cys Glu Tyr Cys Trp Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5161 ) Cys Glu Tyr Cys Trp Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5162 ) Cys Glu Tyr Cys Trp Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5163 ) Cys Glu Tyr Cys Trp Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5164 ) Cys Glu Tyr Cys Trp Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5165 ) Cys Glu Tyr Cys Trp Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5166 ) Cys Glu Tyr Cys Trp Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5167 ) Cys Glu Tyr Cys Trp Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5168 ) Cys Glu Tyr Cys Trp Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5169 ) Cys Glu Tyr Cys Trp Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5170 ) Cys Glu Tyr Cys Trp Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5171 ) Cys Glu Tyr Cys Trp Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5172 ) Cys Glu Tyr Cys Tyr Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5173 ) Cys Glu Tyr Cys Tyr Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5174 ) Cys Glu Tyr Cys Tyr Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5175 ) Cys Glu Tyr Cys Tyr Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5176 ) Cys Glu Tyr Cys Tyr Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5177 ) Cys Glu Tyr Cys Tyr Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5178 ) Cys Glu Tyr Cys Tyr Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5179 ) Cys Glu Tyr Cys Tyr Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5180 ) Cys Glu Tyr Cys Tyr Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5181 ) Cys Glu Tyr Cys Tyr Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5182 ) Cys Glu Tyr Cys Tyr Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5183 ) Cys Glu Tyr Cys Tyr Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5184 ) Cys Glu Tyr Cys Tyr Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5185 ) Cys Glu Tyr Cys Tyr Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5186 ) Cys Glu Tyr Cys Tyr Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5187 ) Cys Glu Tyr Cys Tyr Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5188 ) Cys Glu Tyr Cys Tyr Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5189 ) Cys Glu Tyr Cys Tyr Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5190 ) Cys Glu Tyr Cys Tyr Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5191 ) Cys Glu Tyr Cys Tyr Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5192 ) Cys Glu Tyr Cys Tyr Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5193 ) Cys Glu Tyr Cys Tyr Asn Gly Thr Cys Val Ala Cys Tyr

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(SEQ ID NO: 5194 ) Cys Glu Tyr Cys Tyr Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5195 ) Cys Glu Tyr Cys Tyr Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5196 ) Cys Glu Tyr Cys Val Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5197 ) Cys Glu Tyr Cys Val Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5198 ) Cys Glu Tyr Cys Val Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5199 ) Cys Glu Tyr Cys Val Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5200 ) Cys Glu Tyr Cys Val Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5201 ) Cys Glu Tyr Cys Val Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5202 ) Cys Glu Tyr Cys Val Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5203 ) Cys Glu Tyr Cys Val Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5204 ) Cys Glu Tyr Cys Val Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5205 ) Cys Glu Tyr Cys Val Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5206 ) Cys Glu Tyr Cys Val Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5207 ) Cys Glu Tyr Cys Val Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5208 ) Cys Glu Tyr Cys Val Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5209 ) Cys Glu Tyr Cys Val Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5210 ) Cys Glu Tyr Cys Val Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5211 ) Cys Glu Tyr Cys Val Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5212 ) Cys Glu Tyr Cys Val Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5213 ) Cys Glu Tyr Cys Val Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5214 ) Cys Glu Tyr Cys Val Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5215 ) Cys Glu Tyr Cys Val Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5216 ) Cys Glu Tyr Cys Val Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5217 ) Cys Glu Tyr Cys Val Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5218 ) Cys Glu Tyr Cys Val Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5219 ) Cys Glu Tyr Cys Val Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5220 ) Cys Glu Tyr Cys --- Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5221 ) Cys Glu Tyr Cys --- Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5222 ) Cys Glu Tyr Cys --- Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5223 ) Cys Glu Tyr Cys --- Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5224 ) Cys Glu Tyr Cys --- Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5225 ) Cys Glu Tyr Cys --- Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5226 ) Cys Glu Tyr Cys --- Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5227 ) Cys Glu Tyr Cys --- Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5228 ) Cys Glu Tyr Cys --- Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5229 ) Cys Glu Tyr Cys --- Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5230 ) Cys Glu Tyr Cys --- Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5231 ) Cys Glu Tyr Cys --- Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5232 ) Cys Glu Tyr Cys --- Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5233 ) Cys Glu Tyr Cys --- Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5234 ) Cys Glu Tyr Cys --- Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5235 ) Cys Glu Tyr Cys --- Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5236 ) Cys Glu Tyr Cys --- Asn Gly Ala Cys Gly Gly Cys Tyr

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(SEQ ID NO: 5237 ) Cys Glu Tyr Cys --- Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5238 ) Cys Glu Tyr Cys --- Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5239 ) Cys Glu Tyr Cys --- Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5240 ) Cys Glu Tyr Cys --- Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5241 ) Cys Glu Tyr Cys --- Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5242 ) Cys Glu Tyr Cys --- Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5243 ) Cys Glu Tyr Cys --- Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5244 ) Cys Glu Trp Cys Ala Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5245 ) Cys Glu Trp Cys Ala Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5246 ) Cys Glu Trp Cys Ala Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5247 ) Cys Glu Trp Cys Ala Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5248 ) Cys Glu Trp Cys Ala Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5249 ) Cys Glu Trp Cys Ala Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5250 ) Cys Glu Trp Cys Ala Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5251 ) Cys Glu Trp Cys Ala Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5252 ) Cys Glu Trp Cys Ala Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5253 ) Cys Glu Trp Cys Ala Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5254 ) Cys Glu Trp Cys Ala Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5255 ) Cys Glu Trp Cys Ala Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5256 ) Cys Glu Trp Cys Ala Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5257 ) Cys Glu Trp Cys Ala Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5258 ) Cys Glu Trp Cys Ala Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5259 ) Cys Glu Trp Cys Ala Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5260 ) Cys Glu Trp Cys Ala Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5261 ) Cys Glu Trp Cys Ala Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5262 ) Cys Glu Trp Cys Ala Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5263 ) Cys Glu Trp Cys Ala Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5264 ) Cys Glu Trp Cys Ala Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5265 ) Cys Glu Trp Cys Ala Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5266 ) Cys Glu Trp Cys Ala Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5267 ) Cys Glu Trp Cys Ala Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5268 ) Cys Glu Trp Cys Arg Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5269 ) Cys Glu Trp Cys Arg Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5270 ) Cys Glu Trp Cys Arg Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5271 ) Cys Glu Trp Cys Arg Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5272 ) Cys Glu Trp Cys Arg Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5273 ) Cys Glu Trp Cys Arg Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5274 ) Cys Glu Trp Cys Arg Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5275 ) Cys Glu Trp Cys Arg Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5276 ) Cys Glu Trp Cys Arg Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5277 ) Cys Glu Trp Cys Arg Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5278 ) Cys Glu Trp Cys Arg Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5279 ) Cys Glu Trp Cys Arg Asn Pro Thr Cys Gly Ala Cys Tyr

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(SEQ ID NO: 5280 ) Cys Glu Trp Cys Arg Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5281 ) Cys Glu Trp Cys Arg Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5282 ) Cys Glu Trp Cys Arg Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5283 ) Cys Glu Trp Cys Arg Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5284 ) Cys Glu Trp Cys Arg Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5285 ) Cys Glu Trp Cys Arg Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5286 ) Cys Glu Trp Cys Arg Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5287 ) Cys Glu Trp Cys Arg Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5288 ) Cys Glu Trp Cys Arg Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5289 ) Cys Glu Trp Cys Arg Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5290 ) Cys Glu Trp Cys Arg Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5291 ) Cys Glu Trp Cys Arg Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5292 ) Cys Glu Trp Cys Asn Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5293 ) Cys Glu Trp Cys Asn Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5294 ) Cys Glu Trp Cys Asn Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5295 ) Cys Glu Trp Cys Asn Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5296 ) Cys Glu Trp Cys Asn Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5297 ) Cys Glu Trp Cys Asn Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5298 ) Cys Glu Trp Cys Asn Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5299 ) Cys Glu Trp Cys Asn Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5300 ) Cys Glu Trp Cys Asn Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5301 ) Cys Glu Trp Cys Asn Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5302 ) Cys Glu Trp Cys Asn Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5303 ) Cys Glu Trp Cys Asn Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5304 ) Cys Glu Trp Cys Asn Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5305 ) Cys Glu Trp Cys Asn Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5306 ) Cys Glu Trp Cys Asn Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5307 ) Cys Glu Trp Cys Asn Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5308 ) Cys Glu Trp Cys Asn Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5309 ) Cys Glu Trp Cys Asn Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5310 ) Cys Glu Trp Cys Asn Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5311 ) Cys Glu Trp Cys Asn Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5312 ) Cys Glu Trp Cys Asn Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5313 ) Cys Glu Trp Cys Asn Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5314 ) Cys Glu Trp Cys Asn Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5315 ) Cys Glu Trp Cys Asn Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5316 ) Cys Glu Trp Cys Asp Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5317 ) Cys Glu Trp Cys Asp Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5318 ) Cys Glu Trp Cys Asp Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5319 ) Cys Glu Trp Cys Asp Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5320 ) Cys Glu Trp Cys Asp Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5321 ) Cys Glu Trp Cys Asp Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5322 ) Cys Glu Trp Cys Asp Asn Pro Thr Cys Thr Gly Cys Tyr

**FIG. 3**  
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(SEQ ID NO: 5323 ) Cys Glu Trp Cys Asp Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5324 ) Cys Glu Trp Cys Asp Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5325 ) Cys Glu Trp Cys Asp Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5326 ) Cys Glu Trp Cys Asp Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5327 ) Cys Glu Trp Cys Asp Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5328 ) Cys Glu Trp Cys Asp Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5329 ) Cys Glu Trp Cys Asp Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5330 ) Cys Glu Trp Cys Asp Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5331 ) Cys Glu Trp Cys Asp Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5332 ) Cys Glu Trp Cys Asp Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5333 ) Cys Glu Trp Cys Asp Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5334 ) Cys Glu Trp Cys Asp Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5335 ) Cys Glu Trp Cys Asp Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5336 ) Cys Glu Trp Cys Asp Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5337 ) Cys Glu Trp Cys Asp Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5338 ) Cys Glu Trp Cys Asp Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5339 ) Cys Glu Trp Cys Asp Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5340 ) Cys Glu Trp Cys Gln Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5341 ) Cys Glu Trp Cys Gln Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5342 ) Cys Glu Trp Cys Gln Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5343 ) Cys Glu Trp Cys Gln Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5344 ) Cys Glu Trp Cys Gln Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5345 ) Cys Glu Trp Cys Gln Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5346 ) Cys Glu Trp Cys Gln Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5347 ) Cys Glu Trp Cys Gln Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5348 ) Cys Glu Trp Cys Gln Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5349 ) Cys Glu Trp Cys Gln Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5350 ) Cys Glu Trp Cys Gln Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5351 ) Cys Glu Trp Cys Gln Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5352 ) Cys Glu Trp Cys Gln Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5353 ) Cys Glu Trp Cys Gln Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5354 ) Cys Glu Trp Cys Gln Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5355 ) Cys Glu Trp Cys Gln Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5356 ) Cys Glu Trp Cys Gln Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5357 ) Cys Glu Trp Cys Gln Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5358 ) Cys Glu Trp Cys Gln Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5359 ) Cys Glu Trp Cys Gln Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5360 ) Cys Glu Trp Cys Gln Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5361 ) Cys Glu Trp Cys Gln Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5362 ) Cys Glu Trp Cys Gln Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5363 ) Cys Glu Trp Cys Gln Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5364 ) Cys Glu Trp Cys Glu Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5365 ) Cys Glu Trp Cys Glu Asn Pro Ala Cys Thr Ala Cys Tyr

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(SEQ ID NO: 5366 ) Cys Glu Trp Cys Glu Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5367 ) Cys Glu Trp Cys Glu Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5368 ) Cys Glu Trp Cys Glu Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5369 ) Cys Glu Trp Cys Glu Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5370 ) Cys Glu Trp Cys Glu Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5371 ) Cys Glu Trp Cys Glu Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5372 ) Cys Glu Trp Cys Glu Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5373 ) Cys Glu Trp Cys Glu Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5374 ) Cys Glu Trp Cys Glu Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5375 ) Cys Glu Trp Cys Glu Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5376 ) Cys Glu Trp Cys Glu Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5377 ) Cys Glu Trp Cys Glu Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5378 ) Cys Glu Trp Cys Glu Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5379 ) Cys Glu Trp Cys Glu Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5380 ) Cys Glu Trp Cys Glu Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5381 ) Cys Glu Trp Cys Glu Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5382 ) Cys Glu Trp Cys Glu Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5383 ) Cys Glu Trp Cys Glu Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5384 ) Cys Glu Trp Cys Glu Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5385 ) Cys Glu Trp Cys Glu Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5386 ) Cys Glu Trp Cys Glu Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5387 ) Cys Glu Trp Cys Glu Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5388 ) Cys Glu Trp Cys Gly Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5389 ) Cys Glu Trp Cys Gly Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5390 ) Cys Glu Trp Cys Gly Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5391 ) Cys Glu Trp Cys Gly Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5392 ) Cys Glu Trp Cys Gly Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5393 ) Cys Glu Trp Cys Gly Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5394 ) Cys Glu Trp Cys Gly Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5395 ) Cys Glu Trp Cys Gly Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5396 ) Cys Glu Trp Cys Gly Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5397 ) Cys Glu Trp Cys Gly Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5398 ) Cys Glu Trp Cys Gly Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5399 ) Cys Glu Trp Cys Gly Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5400 ) Cys Glu Trp Cys Gly Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5401 ) Cys Glu Trp Cys Gly Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5402 ) Cys Glu Trp Cys Gly Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5403 ) Cys Glu Trp Cys Gly Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5404 ) Cys Glu Trp Cys Gly Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5405 ) Cys Glu Trp Cys Gly Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5406 ) Cys Glu Trp Cys Gly Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5407 ) Cys Glu Trp Cys Gly Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5408 ) Cys Glu Trp Cys Gly Asn Gly Thr Cys Val Gly Cys Tyr

FIG. 3  
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(SEQ ID NO: 5409 ) Cys Glu Trp Cys Gly Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5410 ) Cys Glu Trp Cys Gly Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5411 ) Cys Glu Trp Cys Gly Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5412 ) Cys Glu Trp Cys His Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5413 ) Cys Glu Trp Cys His Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5414 ) Cys Glu Trp Cys His Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5415 ) Cys Glu Trp Cys His Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5416 ) Cys Glu Trp Cys His Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5417 ) Cys Glu Trp Cys His Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5418 ) Cys Glu Trp Cys His Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5419 ) Cys Glu Trp Cys His Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5420 ) Cys Glu Trp Cys His Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5421 ) Cys Glu Trp Cys His Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5422 ) Cys Glu Trp Cys His Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5423 ) Cys Glu Trp Cys His Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5424 ) Cys Glu Trp Cys His Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5425 ) Cys Glu Trp Cys His Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5426 ) Cys Glu Trp Cys His Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5427 ) Cys Glu Trp Cys His Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5428 ) Cys Glu Trp Cys His Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5429 ) Cys Glu Trp Cys His Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5430 ) Cys Glu Trp Cys His Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5431 ) Cys Glu Trp Cys His Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5432 ) Cys Glu Trp Cys His Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5433 ) Cys Glu Trp Cys His Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5434 ) Cys Glu Trp Cys His Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5435 ) Cys Glu Trp Cys His Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5436 ) Cys Glu Trp Cys Ile Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5437 ) Cys Glu Trp Cys Ile Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5438 ) Cys Glu Trp Cys Ile Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5439 ) Cys Glu Trp Cys Ile Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5440 ) Cys Glu Trp Cys Ile Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5441 ) Cys Glu Trp Cys Ile Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5442 ) Cys Glu Trp Cys Ile Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5443 ) Cys Glu Trp Cys Ile Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5444 ) Cys Glu Trp Cys Ile Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5445 ) Cys Glu Trp Cys Ile Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5446 ) Cys Glu Trp Cys Ile Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5447 ) Cys Glu Trp Cys Ile Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5448 ) Cys Glu Trp Cys Ile Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5449 ) Cys Glu Trp Cys Ile Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5450 ) Cys Glu Trp Cys Ile Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5451 ) Cys Glu Trp Cys Ile Asn Gly Ala Cys Val Ala Cys Tyr

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(SEQ ID NO: 5452 ) Cys Glu Trp Cys Ile Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5453 ) Cys Glu Trp Cys Ile Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5454 ) Cys Glu Trp Cys Ile Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5455 ) Cys Glu Trp Cys Ile Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5456 ) Cys Glu Trp Cys Ile Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5457 ) Cys Glu Trp Cys Ile Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5458 ) Cys Glu Trp Cys Ile Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5459 ) Cys Glu Trp Cys Ile Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5460 ) Cys Glu Trp Cys Leu Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5461 ) Cys Glu Trp Cys Leu Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5462 ) Cys Glu Trp Cys Leu Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5463 ) Cys Glu Trp Cys Leu Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5464 ) Cys Glu Trp Cys Leu Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5465 ) Cys Glu Trp Cys Leu Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5466 ) Cys Glu Trp Cys Leu Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5467 ) Cys Glu Trp Cys Leu Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5468 ) Cys Glu Trp Cys Leu Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5469 ) Cys Glu Trp Cys Leu Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5470 ) Cys Glu Trp Cys Leu Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5471 ) Cys Glu Trp Cys Leu Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5472 ) Cys Glu Trp Cys Leu Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5473 ) Cys Glu Trp Cys Leu Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5474 ) Cys Glu Trp Cys Leu Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5475 ) Cys Glu Trp Cys Leu Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5476 ) Cys Glu Trp Cys Leu Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5477 ) Cys Glu Trp Cys Leu Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5478 ) Cys Glu Trp Cys Leu Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5479 ) Cys Glu Trp Cys Leu Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5480 ) Cys Glu Trp Cys Leu Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5481 ) Cys Glu Trp Cys Leu Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5482 ) Cys Glu Trp Cys Leu Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5483 ) Cys Glu Trp Cys Leu Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5484 ) Cys Glu Trp Cys Lys Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5485 ) Cys Glu Trp Cys Lys Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5486 ) Cys Glu Trp Cys Lys Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5487 ) Cys Glu Trp Cys Lys Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5488 ) Cys Glu Trp Cys Lys Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5489 ) Cys Glu Trp Cys Lys Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5490 ) Cys Glu Trp Cys Lys Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5491 ) Cys Glu Trp Cys Lys Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5492 ) Cys Glu Trp Cys Lys Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5493 ) Cys Glu Trp Cys Lys Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5494 ) Cys Glu Trp Cys Lys Asn Pro Thr Cys Gly Gly Cys Tyr

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(SEQ ID NO: 5495 ) Cys Glu Trp Cys Lys Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5496 ) Cys Glu Trp Cys Lys Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5497 ) Cys Glu Trp Cys Lys Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5498 ) Cys Glu Trp Cys Lys Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5499 ) Cys Glu Trp Cys Lys Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5500 ) Cys Glu Trp Cys Lys Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5501 ) Cys Glu Trp Cys Lys Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5502 ) Cys Glu Trp Cys Lys Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5503 ) Cys Glu Trp Cys Lys Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5504 ) Cys Glu Trp Cys Lys Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5505 ) Cys Glu Trp Cys Lys Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5506 ) Cys Glu Trp Cys Lys Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5507 ) Cys Glu Trp Cys Lys Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5508 ) Cys Glu Trp Cys Met Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5509 ) Cys Glu Trp Cys Met Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5510 ) Cys Glu Trp Cys Met Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5511 ) Cys Glu Trp Cys Met Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5512 ) Cys Glu Trp Cys Met Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5513 ) Cys Glu Trp Cys Met Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5514 ) Cys Glu Trp Cys Met Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5515 ) Cys Glu Trp Cys Met Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5516 ) Cys Glu Trp Cys Met Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5517 ) Cys Glu Trp Cys Met Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5518 ) Cys Glu Trp Cys Met Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5519 ) Cys Glu Trp Cys Met Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5520 ) Cys Glu Trp Cys Met Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5521 ) Cys Glu Trp Cys Met Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5522 ) Cys Glu Trp Cys Met Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5523 ) Cys Glu Trp Cys Met Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5524 ) Cys Glu Trp Cys Met Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5525 ) Cys Glu Trp Cys Met Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5526 ) Cys Glu Trp Cys Met Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5527 ) Cys Glu Trp Cys Met Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5528 ) Cys Glu Trp Cys Met Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5529 ) Cys Glu Trp Cys Met Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5530 ) Cys Glu Trp Cys Met Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5531 ) Cys Glu Trp Cys Met Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5532 ) Cys Glu Trp Cys Phe Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5533 ) Cys Glu Trp Cys Phe Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5534 ) Cys Glu Trp Cys Phe Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5535 ) Cys Glu Trp Cys Phe Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5536 ) Cys Glu Trp Cys Phe Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5537 ) Cys Glu Trp Cys Phe Asn Pro Ala Cys Gly Ala Cys Tyr

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(SEQ ID NO: 5538 ) Cys Glu Trp Cys Phe Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5539 ) Cys Glu Trp Cys Phe Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5540 ) Cys Glu Trp Cys Phe Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5541 ) Cys Glu Trp Cys Phe Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5542 ) Cys Glu Trp Cys Phe Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5543 ) Cys Glu Trp Cys Phe Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5544 ) Cys Glu Trp Cys Phe Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5545 ) Cys Glu Trp Cys Phe Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5546 ) Cys Glu Trp Cys Phe Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5547 ) Cys Glu Trp Cys Phe Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5548 ) Cys Glu Trp Cys Phe Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5549 ) Cys Glu Trp Cys Phe Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5550 ) Cys Glu Trp Cys Phe Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5551 ) Cys Glu Trp Cys Phe Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5552 ) Cys Glu Trp Cys Phe Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5553 ) Cys Glu Trp Cys Phe Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5554 ) Cys Glu Trp Cys Phe Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5555 ) Cys Glu Trp Cys Phe Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5556 ) Cys Glu Trp Cys Pro Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5557 ) Cys Glu Trp Cys Pro Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5558 ) Cys Glu Trp Cys Pro Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5559 ) Cys Glu Trp Cys Pro Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5560 ) Cys Glu Trp Cys Pro Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5561 ) Cys Glu Trp Cys Pro Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5562 ) Cys Glu Trp Cys Pro Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5563 ) Cys Glu Trp Cys Pro Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5564 ) Cys Glu Trp Cys Pro Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5565 ) Cys Glu Trp Cys Pro Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5566 ) Cys Glu Trp Cys Pro Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5567 ) Cys Glu Trp Cys Pro Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5568 ) Cys Glu Trp Cys Pro Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5569 ) Cys Glu Trp Cys Pro Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5570 ) Cys Glu Trp Cys Pro Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5571 ) Cys Glu Trp Cys Pro Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5572 ) Cys Glu Trp Cys Pro Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5573 ) Cys Glu Trp Cys Pro Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5574 ) Cys Glu Trp Cys Pro Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5575 ) Cys Glu Trp Cys Pro Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5576 ) Cys Glu Trp Cys Pro Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5577 ) Cys Glu Trp Cys Pro Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5578 ) Cys Glu Trp Cys Pro Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5579 ) Cys Glu Trp Cys Pro Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5580 ) Cys Glu Trp Cys Ser Asn Pro Ala Cys Thr Gly Cys Tyr

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(SEQ ID NO: 5581 ) Cys Glu Trp Cys Ser Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5582 ) Cys Glu Trp Cys Ser Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5583 ) Cys Glu Trp Cys Ser Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5584 ) Cys Glu Trp Cys Ser Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5585 ) Cys Glu Trp Cys Ser Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5586 ) Cys Glu Trp Cys Ser Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5587 ) Cys Glu Trp Cys Ser Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5588 ) Cys Glu Trp Cys Ser Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5589 ) Cys Glu Trp Cys Ser Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5590 ) Cys Glu Trp Cys Ser Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5591 ) Cys Glu Trp Cys Ser Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5592 ) Cys Glu Trp Cys Ser Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5593 ) Cys Glu Trp Cys Ser Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5594 ) Cys Glu Trp Cys Ser Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5595 ) Cys Glu Trp Cys Ser Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5596 ) Cys Glu Trp Cys Ser Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5597 ) Cys Glu Trp Cys Ser Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5598 ) Cys Glu Trp Cys Ser Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5599 ) Cys Glu Trp Cys Ser Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5600 ) Cys Glu Trp Cys Ser Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5601 ) Cys Glu Trp Cys Ser Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5602 ) Cys Glu Trp Cys Ser Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5603 ) Cys Glu Trp Cys Ser Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5604 ) Cys Glu Trp Cys Thr Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5605 ) Cys Glu Trp Cys Thr Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5606 ) Cys Glu Trp Cys Thr Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5607 ) Cys Glu Trp Cys Thr Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5608 ) Cys Glu Trp Cys Thr Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5609 ) Cys Glu Trp Cys Thr Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5610 ) Cys Glu Trp Cys Thr Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5611 ) Cys Glu Trp Cys Thr Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5612 ) Cys Glu Trp Cys Thr Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5613 ) Cys Glu Trp Cys Thr Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5614 ) Cys Glu Trp Cys Thr Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5615 ) Cys Glu Trp Cys Thr Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5616 ) Cys Glu Trp Cys Thr Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5617 ) Cys Glu Trp Cys Thr Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5618 ) Cys Glu Trp Cys Thr Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5619 ) Cys Glu Trp Cys Thr Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5620 ) Cys Glu Trp Cys Thr Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5621 ) Cys Glu Trp Cys Thr Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5622 ) Cys Glu Trp Cys Thr Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5623 ) Cys Glu Trp Cys Thr Asn Gly Thr Cys Thr Ala Cys Tyr

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(SEQ ID NO: 5624 ) Cys Glu Trp Cys Thr Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5625 ) Cys Glu Trp Cys Thr Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5626 ) Cys Glu Trp Cys Thr Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5627 ) Cys Glu Trp Cys Thr Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5628 ) Cys Glu Trp Cys Trp Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5629 ) Cys Glu Trp Cys Trp Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5630 ) Cys Glu Trp Cys Trp Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5631 ) Cys Glu Trp Cys Trp Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5632 ) Cys Glu Trp Cys Trp Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5633 ) Cys Glu Trp Cys Trp Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5634 ) Cys Glu Trp Cys Trp Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5635 ) Cys Glu Trp Cys Trp Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5636 ) Cys Glu Trp Cys Trp Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5637 ) Cys Glu Trp Cys Trp Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5638 ) Cys Glu Trp Cys Trp Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5639 ) Cys Glu Trp Cys Trp Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5640 ) Cys Glu Trp Cys Trp Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5641 ) Cys Glu Trp Cys Trp Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5642 ) Cys Glu Trp Cys Trp Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5643 ) Cys Glu Trp Cys Trp Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5644 ) Cys Glu Trp Cys Trp Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5645 ) Cys Glu Trp Cys Trp Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5646 ) Cys Glu Trp Cys Trp Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5647 ) Cys Glu Trp Cys Trp Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5648 ) Cys Glu Trp Cys Trp Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5649 ) Cys Glu Trp Cys Trp Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5650 ) Cys Glu Trp Cys Trp Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5651 ) Cys Glu Trp Cys Trp Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5652 ) Cys Glu Trp Cys Tyr Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5653 ) Cys Glu Trp Cys Tyr Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5654 ) Cys Glu Trp Cys Tyr Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5655 ) Cys Glu Trp Cys Tyr Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5656 ) Cys Glu Trp Cys Tyr Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5657 ) Cys Glu Trp Cys Tyr Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5658 ) Cys Glu Trp Cys Tyr Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5659 ) Cys Glu Trp Cys Tyr Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5660 ) Cys Glu Trp Cys Tyr Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5661 ) Cys Glu Trp Cys Tyr Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5662 ) Cys Glu Trp Cys Tyr Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5663 ) Cys Glu Trp Cys Tyr Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5664 ) Cys Glu Trp Cys Tyr Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5665 ) Cys Glu Trp Cys Tyr Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5666 ) Cys Glu Trp Cys Tyr Asn Gly Ala Cys Val Gly Cys Tyr

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(SEQ ID NO: 5667 ) Cys Glu Trp Cys Tyr Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5668 ) Cys Glu Trp Cys Tyr Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5669 ) Cys Glu Trp Cys Tyr Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5670 ) Cys Glu Trp Cys Tyr Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5671 ) Cys Glu Trp Cys Tyr Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5672 ) Cys Glu Trp Cys Tyr Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5673 ) Cys Glu Trp Cys Tyr Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5674 ) Cys Glu Trp Cys Tyr Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5675 ) Cys Glu Trp Cys Tyr Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5676 ) Cys Glu Trp Cys Val Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5677 ) Cys Glu Trp Cys Val Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5678 ) Cys Glu Trp Cys Val Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5679 ) Cys Glu Trp Cys Val Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5680 ) Cys Glu Trp Cys Val Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5681 ) Cys Glu Trp Cys Val Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5682 ) Cys Glu Trp Cys Val Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5683 ) Cys Glu Trp Cys Val Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5684 ) Cys Glu Trp Cys Val Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5685 ) Cys Glu Trp Cys Val Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5686 ) Cys Glu Trp Cys Val Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5687 ) Cys Glu Trp Cys Val Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5688 ) Cys Glu Trp Cys Val Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5689 ) Cys Glu Trp Cys Val Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5690 ) Cys Glu Trp Cys Val Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5691 ) Cys Glu Trp Cys Val Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5692 ) Cys Glu Trp Cys Val Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5693 ) Cys Glu Trp Cys Val Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5694 ) Cys Glu Trp Cys Val Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5695 ) Cys Glu Trp Cys Val Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5696 ) Cys Glu Trp Cys Val Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5697 ) Cys Glu Trp Cys Val Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5698 ) Cys Glu Trp Cys Val Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5699 ) Cys Glu Trp Cys Val Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5700 ) Cys Glu Trp Cys --- Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5701 ) Cys Glu Trp Cys --- Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5702 ) Cys Glu Trp Cys --- Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5703 ) Cys Glu Trp Cys --- Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5704 ) Cys Glu Trp Cys --- Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5705 ) Cys Glu Trp Cys --- Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5706 ) Cys Glu Trp Cys --- Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5707 ) Cys Glu Trp Cys --- Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5708 ) Cys Glu Trp Cys --- Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5709 ) Cys Glu Trp Cys --- Asn Pro Thr Cys Val Ala Cys Tyr

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(SEQ ID NO: 5710 ) Cys Glu Trp Cys --- Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5711 ) Cys Glu Trp Cys --- Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5712 ) Cys Glu Trp Cys --- Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5713 ) Cys Glu Trp Cys --- Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5714 ) Cys Glu Trp Cys --- Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5715 ) Cys Glu Trp Cys --- Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5716 ) Cys Glu Trp Cys --- Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5717 ) Cys Glu Trp Cys --- Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5718 ) Cys Glu Trp Cys --- Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5719 ) Cys Glu Trp Cys --- Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5720 ) Cys Glu Trp Cys --- Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5721 ) Cys Glu Trp Cys --- Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5722 ) Cys Glu Trp Cys --- Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5723 ) Cys Glu Trp Cys --- Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5724 ) Cys Glu Phe Cys Ala Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5725 ) Cys Glu Phe Cys Ala Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5726 ) Cys Glu Phe Cys Ala Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5727 ) Cys Glu Phe Cys Ala Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5728 ) Cys Glu Phe Cys Ala Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5729 ) Cys Glu Phe Cys Ala Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5730 ) Cys Glu Phe Cys Ala Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5731 ) Cys Glu Phe Cys Ala Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5732 ) Cys Glu Phe Cys Ala Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5733 ) Cys Glu Phe Cys Ala Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5734 ) Cys Glu Phe Cys Ala Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5735 ) Cys Glu Phe Cys Ala Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5736 ) Cys Glu Phe Cys Ala Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5737 ) Cys Glu Phe Cys Ala Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5738 ) Cys Glu Phe Cys Ala Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5739 ) Cys Glu Phe Cys Ala Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5740 ) Cys Glu Phe Cys Ala Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5741 ) Cys Glu Phe Cys Ala Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5742 ) Cys Glu Phe Cys Ala Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5743 ) Cys Glu Phe Cys Ala Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5744 ) Cys Glu Phe Cys Ala Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5745 ) Cys Glu Phe Cys Ala Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5746 ) Cys Glu Phe Cys Ala Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5747 ) Cys Glu Phe Cys Ala Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5748 ) Cys Glu Phe Cys Arg Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5749 ) Cys Glu Phe Cys Arg Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5750 ) Cys Glu Phe Cys Arg Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5751 ) Cys Glu Phe Cys Arg Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5752 ) Cys Glu Phe Cys Arg Asn Pro Ala Cys Gly Gly Cys Tyr

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(SEQ ID NO: 5753 ) Cys Glu Phe Cys Arg Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5754 ) Cys Glu Phe Cys Arg Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5755 ) Cys Glu Phe Cys Arg Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5756 ) Cys Glu Phe Cys Arg Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5757 ) Cys Glu Phe Cys Arg Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5758 ) Cys Glu Phe Cys Arg Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5759 ) Cys Glu Phe Cys Arg Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5760 ) Cys Glu Phe Cys Arg Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5761 ) Cys Glu Phe Cys Arg Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5762 ) Cys Glu Phe Cys Arg Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5763 ) Cys Glu Phe Cys Arg Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5764 ) Cys Glu Phe Cys Arg Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5765 ) Cys Glu Phe Cys Arg Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5766 ) Cys Glu Phe Cys Arg Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5767 ) Cys Glu Phe Cys Arg Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5768 ) Cys Glu Phe Cys Arg Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5769 ) Cys Glu Phe Cys Arg Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5770 ) Cys Glu Phe Cys Arg Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5771 ) Cys Glu Phe Cys Arg Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5772 ) Cys Glu Phe Cys Asn Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5773 ) Cys Glu Phe Cys Asn Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5774 ) Cys Glu Phe Cys Asn Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5775 ) Cys Glu Phe Cys Asn Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5776 ) Cys Glu Phe Cys Asn Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5777 ) Cys Glu Phe Cys Asn Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5778 ) Cys Glu Phe Cys Asn Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5779 ) Cys Glu Phe Cys Asn Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5780 ) Cys Glu Phe Cys Asn Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5781 ) Cys Glu Phe Cys Asn Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5782 ) Cys Glu Phe Cys Asn Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5783 ) Cys Glu Phe Cys Asn Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5784 ) Cys Glu Phe Cys Asn Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5785 ) Cys Glu Phe Cys Asn Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5786 ) Cys Glu Phe Cys Asn Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5787 ) Cys Glu Phe Cys Asn Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5788 ) Cys Glu Phe Cys Asn Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5789 ) Cys Glu Phe Cys Asn Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5790 ) Cys Glu Phe Cys Asn Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5791 ) Cys Glu Phe Cys Asn Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5792 ) Cys Glu Phe Cys Asn Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5793 ) Cys Glu Phe Cys Asn Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5794 ) Cys Glu Phe Cys Asn Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5795 ) Cys Glu Phe Cys Asn Asn Gly Thr Cys Gly Ala Cys Tyr

FIG. 3  
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(SEQ ID NO: 5796 ) Cys Glu Phe Cys Asp Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5797 ) Cys Glu Phe Cys Asp Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5798 ) Cys Glu Phe Cys Asp Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5799 ) Cys Glu Phe Cys Asp Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5800 ) Cys Glu Phe Cys Asp Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5801 ) Cys Glu Phe Cys Asp Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5802 ) Cys Glu Phe Cys Asp Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5803 ) Cys Glu Phe Cys Asp Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5804 ) Cys Glu Phe Cys Asp Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5805 ) Cys Glu Phe Cys Asp Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5806 ) Cys Glu Phe Cys Asp Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5807 ) Cys Glu Phe Cys Asp Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5808 ) Cys Glu Phe Cys Asp Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5809 ) Cys Glu Phe Cys Asp Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5810 ) Cys Glu Phe Cys Asp Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5811 ) Cys Glu Phe Cys Asp Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5812 ) Cys Glu Phe Cys Asp Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5813 ) Cys Glu Phe Cys Asp Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5814 ) Cys Glu Phe Cys Asp Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5815 ) Cys Glu Phe Cys Asp Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5816 ) Cys Glu Phe Cys Asp Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5817 ) Cys Glu Phe Cys Asp Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5818 ) Cys Glu Phe Cys Asp Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5819 ) Cys Glu Phe Cys Asp Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5820 ) Cys Glu Phe Cys Gln Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5821 ) Cys Glu Phe Cys Gln Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5822 ) Cys Glu Phe Cys Gln Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5823 ) Cys Glu Phe Cys Gln Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5824 ) Cys Glu Phe Cys Gln Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5825 ) Cys Glu Phe Cys Gln Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5826 ) Cys Glu Phe Cys Gln Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5827 ) Cys Glu Phe Cys Gln Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5828 ) Cys Glu Phe Cys Gln Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5829 ) Cys Glu Phe Cys Gln Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5830 ) Cys Glu Phe Cys Gln Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5831 ) Cys Glu Phe Cys Gln Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5832 ) Cys Glu Phe Cys Gln Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5833 ) Cys Glu Phe Cys Gln Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5834 ) Cys Glu Phe Cys Gln Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5835 ) Cys Glu Phe Cys Gln Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5836 ) Cys Glu Phe Cys Gln Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5837 ) Cys Glu Phe Cys Gln Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5838 ) Cys Glu Phe Cys Gln Asn Gly Thr Cys Thr Gly Cys Tyr

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(SEQ ID NO: 5839 ) Cys Glu Phe Cys Gln Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5840 ) Cys Glu Phe Cys Gln Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5841 ) Cys Glu Phe Cys Gln Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5842 ) Cys Glu Phe Cys Gln Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5843 ) Cys Glu Phe Cys Gln Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5844 ) Cys Glu Phe Cys Glu Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5845 ) Cys Glu Phe Cys Glu Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5846 ) Cys Glu Phe Cys Glu Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5847 ) Cys Glu Phe Cys Glu Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5848 ) Cys Glu Phe Cys Glu Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5849 ) Cys Glu Phe Cys Glu Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5850 ) Cys Glu Phe Cys Glu Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5851 ) Cys Glu Phe Cys Glu Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5852 ) Cys Glu Phe Cys Glu Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5853 ) Cys Glu Phe Cys Glu Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5854 ) Cys Glu Phe Cys Glu Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5855 ) Cys Glu Phe Cys Glu Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5856 ) Cys Glu Phe Cys Glu Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5857 ) Cys Glu Phe Cys Glu Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5858 ) Cys Glu Phe Cys Glu Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5859 ) Cys Glu Phe Cys Glu Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5860 ) Cys Glu Phe Cys Glu Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5861 ) Cys Glu Phe Cys Glu Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5862 ) Cys Glu Phe Cys Glu Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5863 ) Cys Glu Phe Cys Glu Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5864 ) Cys Glu Phe Cys Glu Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5865 ) Cys Glu Phe Cys Glu Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5866 ) Cys Glu Phe Cys Glu Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5867 ) Cys Glu Phe Cys Glu Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5868 ) Cys Glu Phe Cys Gly Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5869 ) Cys Glu Phe Cys Gly Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5870 ) Cys Glu Phe Cys Gly Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5871 ) Cys Glu Phe Cys Gly Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5872 ) Cys Glu Phe Cys Gly Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5873 ) Cys Glu Phe Cys Gly Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5874 ) Cys Glu Phe Cys Gly Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5875 ) Cys Glu Phe Cys Gly Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5876 ) Cys Glu Phe Cys Gly Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5877 ) Cys Glu Phe Cys Gly Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5878 ) Cys Glu Phe Cys Gly Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5879 ) Cys Glu Phe Cys Gly Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5880 ) Cys Glu Phe Cys Gly Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5881 ) Cys Glu Phe Cys Gly Asn Gly Ala Cys Thr Ala Cys Tyr

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(SEQ ID NO: 5882 ) Cys Glu Phe Cys Gly Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5883 ) Cys Glu Phe Cys Gly Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5884 ) Cys Glu Phe Cys Gly Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5885 ) Cys Glu Phe Cys Gly Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5886 ) Cys Glu Phe Cys Gly Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5887 ) Cys Glu Phe Cys Gly Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5888 ) Cys Glu Phe Cys Gly Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5889 ) Cys Glu Phe Cys Gly Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5890 ) Cys Glu Phe Cys Gly Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5891 ) Cys Glu Phe Cys Gly Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5892 ) Cys Glu Phe Cys His Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5893 ) Cys Glu Phe Cys His Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5894 ) Cys Glu Phe Cys His Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5895 ) Cys Glu Phe Cys His Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5896 ) Cys Glu Phe Cys His Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5897 ) Cys Glu Phe Cys His Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5898 ) Cys Glu Phe Cys His Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5899 ) Cys Glu Phe Cys His Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5900 ) Cys Glu Phe Cys His Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5901 ) Cys Glu Phe Cys His Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5902 ) Cys Glu Phe Cys His Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5903 ) Cys Glu Phe Cys His Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5904 ) Cys Glu Phe Cys His Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5905 ) Cys Glu Phe Cys His Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5906 ) Cys Glu Phe Cys His Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5907 ) Cys Glu Phe Cys His Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5908 ) Cys Glu Phe Cys His Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5909 ) Cys Glu Phe Cys His Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5910 ) Cys Glu Phe Cys His Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5911 ) Cys Glu Phe Cys His Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5912 ) Cys Glu Phe Cys His Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5913 ) Cys Glu Phe Cys His Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5914 ) Cys Glu Phe Cys His Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5915 ) Cys Glu Phe Cys His Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5916 ) Cys Glu Phe Cys Ile Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5917 ) Cys Glu Phe Cys Ile Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5918 ) Cys Glu Phe Cys Ile Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5919 ) Cys Glu Phe Cys Ile Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5920 ) Cys Glu Phe Cys Ile Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5921 ) Cys Glu Phe Cys Ile Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5922 ) Cys Glu Phe Cys Ile Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5923 ) Cys Glu Phe Cys Ile Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5924 ) Cys Glu Phe Cys Ile Asn Pro Thr Cys Val Gly Cys Tyr

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(SEQ ID NO: 5925 ) Cys Glu Phe Cys Ile Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5926 ) Cys Glu Phe Cys Ile Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5927 ) Cys Glu Phe Cys Ile Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5928 ) Cys Glu Phe Cys Ile Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5929 ) Cys Glu Phe Cys Ile Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5930 ) Cys Glu Phe Cys Ile Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5931 ) Cys Glu Phe Cys Ile Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5932 ) Cys Glu Phe Cys Ile Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5933 ) Cys Glu Phe Cys Ile Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5934 ) Cys Glu Phe Cys Ile Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5935 ) Cys Glu Phe Cys Ile Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5936 ) Cys Glu Phe Cys Ile Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5937 ) Cys Glu Phe Cys Ile Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5938 ) Cys Glu Phe Cys Ile Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5939 ) Cys Glu Phe Cys Ile Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5940 ) Cys Glu Phe Cys Leu Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5941 ) Cys Glu Phe Cys Leu Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5942 ) Cys Glu Phe Cys Leu Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5943 ) Cys Glu Phe Cys Leu Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5944 ) Cys Glu Phe Cys Leu Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5945 ) Cys Glu Phe Cys Leu Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5946 ) Cys Glu Phe Cys Leu Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5947 ) Cys Glu Phe Cys Leu Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5948 ) Cys Glu Phe Cys Leu Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5949 ) Cys Glu Phe Cys Leu Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5950 ) Cys Glu Phe Cys Leu Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5951 ) Cys Glu Phe Cys Leu Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5952 ) Cys Glu Phe Cys Leu Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5953 ) Cys Glu Phe Cys Leu Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5954 ) Cys Glu Phe Cys Leu Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5955 ) Cys Glu Phe Cys Leu Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5956 ) Cys Glu Phe Cys Leu Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5957 ) Cys Glu Phe Cys Leu Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5958 ) Cys Glu Phe Cys Leu Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5959 ) Cys Glu Phe Cys Leu Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5960 ) Cys Glu Phe Cys Leu Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5961 ) Cys Glu Phe Cys Leu Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 5962 ) Cys Glu Phe Cys Leu Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 5963 ) Cys Glu Phe Cys Leu Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 5964 ) Cys Glu Phe Cys Lys Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 5965 ) Cys Glu Phe Cys Lys Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 5966 ) Cys Glu Phe Cys Lys Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 5967 ) Cys Glu Phe Cys Lys Asn Pro Ala Cys Val Ala Cys Tyr

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(SEQ ID NO: 5968 ) Cys Glu Phe Cys Lys Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5969 ) Cys Glu Phe Cys Lys Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5970 ) Cys Glu Phe Cys Lys Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5971 ) Cys Glu Phe Cys Lys Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5972 ) Cys Glu Phe Cys Lys Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5973 ) Cys Glu Phe Cys Lys Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5974 ) Cys Glu Phe Cys Lys Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5975 ) Cys Glu Phe Cys Lys Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5976 ) Cys Glu Phe Cys Lys Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5977 ) Cys Glu Phe Cys Lys Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5978 ) Cys Glu Phe Cys Lys Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5979 ) Cys Glu Phe Cys Lys Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5980 ) Cys Glu Phe Cys Lys Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5981 ) Cys Glu Phe Cys Lys Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5982 ) Cys Glu Phe Cys Lys Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5983 ) Cys Glu Phe Cys Lys Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5984 ) Cys Glu Phe Cys Lys Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5985 ) Cys Glu Phe Cys Lys Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5986 ) Cys Glu Phe Cys Lys Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5987 ) Cys Glu Phe Cys Lys Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5988 ) Cys Glu Phe Cys Met Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5989 ) Cys Glu Phe Cys Met Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5990 ) Cys Glu Phe Cys Met Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 5991 ) Cys Glu Phe Cys Met Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 5992 ) Cys Glu Phe Cys Met Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5993 ) Cys Glu Phe Cys Met Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 5994 ) Cys Glu Phe Cys Met Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 5995 ) Cys Glu Phe Cys Met Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 5996 ) Cys Glu Phe Cys Met Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 5997 ) Cys Glu Phe Cys Met Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 5998 ) Cys Glu Phe Cys Met Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 5999 ) Cys Glu Phe Cys Met Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6000 ) Cys Glu Phe Cys Met Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6001 ) Cys Glu Phe Cys Met Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6002 ) Cys Glu Phe Cys Met Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6003 ) Cys Glu Phe Cys Met Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6004 ) Cys Glu Phe Cys Met Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6005 ) Cys Glu Phe Cys Met Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6006 ) Cys Glu Phe Cys Met Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6007 ) Cys Glu Phe Cys Met Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6008 ) Cys Glu Phe Cys Met Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6009 ) Cys Glu Phe Cys Met Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6010 ) Cys Glu Phe Cys Met Asn Gly Thr Cys Gly Gly Cys Tyr

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(SEQ ID NO: 6011 ) Cys Glu Phe Cys Met Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6012 ) Cys Glu Phe Cys Phe Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6013 ) Cys Glu Phe Cys Phe Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6014 ) Cys Glu Phe Cys Phe Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6015 ) Cys Glu Phe Cys Phe Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6016 ) Cys Glu Phe Cys Phe Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6017 ) Cys Glu Phe Cys Phe Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6018 ) Cys Glu Phe Cys Phe Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6019 ) Cys Glu Phe Cys Phe Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6020 ) Cys Glu Phe Cys Phe Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6021 ) Cys Glu Phe Cys Phe Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6022 ) Cys Glu Phe Cys Phe Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6023 ) Cys Glu Phe Cys Phe Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6024 ) Cys Glu Phe Cys Phe Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6025 ) Cys Glu Phe Cys Phe Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6026 ) Cys Glu Phe Cys Phe Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6027 ) Cys Glu Phe Cys Phe Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6028 ) Cys Glu Phe Cys Phe Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6029 ) Cys Glu Phe Cys Phe Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6030 ) Cys Glu Phe Cys Phe Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6031 ) Cys Glu Phe Cys Phe Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6032 ) Cys Glu Phe Cys Phe Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6033 ) Cys Glu Phe Cys Phe Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6034 ) Cys Glu Phe Cys Phe Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6035 ) Cys Glu Phe Cys Phe Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6036 ) Cys Glu Phe Cys Pro Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6037 ) Cys Glu Phe Cys Pro Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6038 ) Cys Glu Phe Cys Pro Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6039 ) Cys Glu Phe Cys Pro Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6040 ) Cys Glu Phe Cys Pro Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6041 ) Cys Glu Phe Cys Pro Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6042 ) Cys Glu Phe Cys Pro Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6043 ) Cys Glu Phe Cys Pro Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6044 ) Cys Glu Phe Cys Pro Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6045 ) Cys Glu Phe Cys Pro Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6046 ) Cys Glu Phe Cys Pro Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6047 ) Cys Glu Phe Cys Pro Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6048 ) Cys Glu Phe Cys Pro Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6049 ) Cys Glu Phe Cys Pro Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6050 ) Cys Glu Phe Cys Pro Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6051 ) Cys Glu Phe Cys Pro Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6052 ) Cys Glu Phe Cys Pro Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6053 ) Cys Glu Phe Cys Pro Asn Gly Ala Cys Gly Ala Cys Tyr

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(SEQ ID NO: 6054 ) Cys Glu Phe Cys Pro Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6055 ) Cys Glu Phe Cys Pro Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6056 ) Cys Glu Phe Cys Pro Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6057 ) Cys Glu Phe Cys Pro Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6058 ) Cys Glu Phe Cys Pro Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6059 ) Cys Glu Phe Cys Pro Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6060 ) Cys Glu Phe Cys Ser Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6061 ) Cys Glu Phe Cys Ser Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6062 ) Cys Glu Phe Cys Ser Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6063 ) Cys Glu Phe Cys Ser Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6064 ) Cys Glu Phe Cys Ser Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6065 ) Cys Glu Phe Cys Ser Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6066 ) Cys Glu Phe Cys Ser Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6067 ) Cys Glu Phe Cys Ser Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6068 ) Cys Glu Phe Cys Ser Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6069 ) Cys Glu Phe Cys Ser Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6070 ) Cys Glu Phe Cys Ser Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6071 ) Cys Glu Phe Cys Ser Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6072 ) Cys Glu Phe Cys Ser Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6073 ) Cys Glu Phe Cys Ser Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6074 ) Cys Glu Phe Cys Ser Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6075 ) Cys Glu Phe Cys Ser Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6076 ) Cys Glu Phe Cys Ser Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6077 ) Cys Glu Phe Cys Ser Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6078 ) Cys Glu Phe Cys Ser Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6079 ) Cys Glu Phe Cys Ser Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6080 ) Cys Glu Phe Cys Ser Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6081 ) Cys Glu Phe Cys Ser Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6082 ) Cys Glu Phe Cys Ser Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6083 ) Cys Glu Phe Cys Ser Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6084 ) Cys Glu Phe Cys Thr Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6085 ) Cys Glu Phe Cys Thr Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6086 ) Cys Glu Phe Cys Thr Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6087 ) Cys Glu Phe Cys Thr Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6088 ) Cys Glu Phe Cys Thr Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6089 ) Cys Glu Phe Cys Thr Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6090 ) Cys Glu Phe Cys Thr Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6091 ) Cys Glu Phe Cys Thr Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6092 ) Cys Glu Phe Cys Thr Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6093 ) Cys Glu Phe Cys Thr Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6094 ) Cys Glu Phe Cys Thr Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6095 ) Cys Glu Phe Cys Thr Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6096 ) Cys Glu Phe Cys Thr Asn Gly Ala Cys Thr Gly Cys Tyr

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(SEQ ID NO: 6097 ) Cys Glu Phe Cys Thr Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6098 ) Cys Glu Phe Cys Thr Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6099 ) Cys Glu Phe Cys Thr Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6100 ) Cys Glu Phe Cys Thr Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6101 ) Cys Glu Phe Cys Thr Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6102 ) Cys Glu Phe Cys Thr Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6103 ) Cys Glu Phe Cys Thr Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6104 ) Cys Glu Phe Cys Thr Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6105 ) Cys Glu Phe Cys Thr Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6106 ) Cys Glu Phe Cys Thr Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6107 ) Cys Glu Phe Cys Thr Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6108 ) Cys Glu Phe Cys Trp Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6109 ) Cys Glu Phe Cys Trp Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6110 ) Cys Glu Phe Cys Trp Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6111 ) Cys Glu Phe Cys Trp Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6112 ) Cys Glu Phe Cys Trp Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6113 ) Cys Glu Phe Cys Trp Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6114 ) Cys Glu Phe Cys Trp Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6115 ) Cys Glu Phe Cys Trp Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6116 ) Cys Glu Phe Cys Trp Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6117 ) Cys Glu Phe Cys Trp Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6118 ) Cys Glu Phe Cys Trp Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6119 ) Cys Glu Phe Cys Trp Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6120 ) Cys Glu Phe Cys Trp Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6121 ) Cys Glu Phe Cys Trp Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6122 ) Cys Glu Phe Cys Trp Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6123 ) Cys Glu Phe Cys Trp Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6124 ) Cys Glu Phe Cys Trp Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6125 ) Cys Glu Phe Cys Trp Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6126 ) Cys Glu Phe Cys Trp Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6127 ) Cys Glu Phe Cys Trp Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6128 ) Cys Glu Phe Cys Trp Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6129 ) Cys Glu Phe Cys Trp Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6130 ) Cys Glu Phe Cys Trp Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6131 ) Cys Glu Phe Cys Trp Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6132 ) Cys Glu Phe Cys Tyr Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6133 ) Cys Glu Phe Cys Tyr Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6134 ) Cys Glu Phe Cys Tyr Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6135 ) Cys Glu Phe Cys Tyr Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6136 ) Cys Glu Phe Cys Tyr Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6137 ) Cys Glu Phe Cys Tyr Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6138 ) Cys Glu Phe Cys Tyr Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6139 ) Cys Glu Phe Cys Tyr Asn Pro Thr Cys Thr Ala Cys Tyr

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(SEQ ID NO: 6140 ) Cys Glu Phe Cys Tyr Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6141 ) Cys Glu Phe Cys Tyr Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6142 ) Cys Glu Phe Cys Tyr Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6143 ) Cys Glu Phe Cys Tyr Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6144 ) Cys Glu Phe Cys Tyr Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6145 ) Cys Glu Phe Cys Tyr Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6146 ) Cys Glu Phe Cys Tyr Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6147 ) Cys Glu Phe Cys Tyr Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6148 ) Cys Glu Phe Cys Tyr Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6149 ) Cys Glu Phe Cys Tyr Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6150 ) Cys Glu Phe Cys Tyr Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6151 ) Cys Glu Phe Cys Tyr Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6152 ) Cys Glu Phe Cys Tyr Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6153 ) Cys Glu Phe Cys Tyr Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6154 ) Cys Glu Phe Cys Tyr Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6155 ) Cys Glu Phe Cys Tyr Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6156 ) Cys Glu Phe Cys Val Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6157 ) Cys Glu Phe Cys Val Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6158 ) Cys Glu Phe Cys Val Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6159 ) Cys Glu Phe Cys Val Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6160 ) Cys Glu Phe Cys Val Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6161 ) Cys Glu Phe Cys Val Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6162 ) Cys Glu Phe Cys Val Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6163 ) Cys Glu Phe Cys Val Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6164 ) Cys Glu Phe Cys Val Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6165 ) Cys Glu Phe Cys Val Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6166 ) Cys Glu Phe Cys Val Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6167 ) Cys Glu Phe Cys Val Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6168 ) Cys Glu Phe Cys Val Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6169 ) Cys Glu Phe Cys Val Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6170 ) Cys Glu Phe Cys Val Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6171 ) Cys Glu Phe Cys Val Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6172 ) Cys Glu Phe Cys Val Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6173 ) Cys Glu Phe Cys Val Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6174 ) Cys Glu Phe Cys Val Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6175 ) Cys Glu Phe Cys Val Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6176 ) Cys Glu Phe Cys Val Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6177 ) Cys Glu Phe Cys Val Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6178 ) Cys Glu Phe Cys Val Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6179 ) Cys Glu Phe Cys Val Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6180 ) Cys Glu Phe Cys --- Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6181 ) Cys Glu Phe Cys --- Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6182 ) Cys Glu Phe Cys --- Asn Pro Ala Cys Val Gly Cys Tyr

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(SEQ ID NO: 6183 ) Cys Glu Phe Cys --- Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6184 ) Cys Glu Phe Cys --- Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6185 ) Cys Glu Phe Cys --- Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6186 ) Cys Glu Phe Cys --- Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6187 ) Cys Glu Phe Cys --- Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6188 ) Cys Glu Phe Cys --- Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6189 ) Cys Glu Phe Cys --- Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6190 ) Cys Glu Phe Cys --- Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6191 ) Cys Glu Phe Cys --- Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6192 ) Cys Glu Phe Cys --- Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6193 ) Cys Glu Phe Cys --- Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6194 ) Cys Glu Phe Cys --- Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6195 ) Cys Glu Phe Cys --- Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6196 ) Cys Glu Phe Cys --- Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6197 ) Cys Glu Phe Cys --- Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6198 ) Cys Glu Phe Cys --- Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6199 ) Cys Glu Phe Cys --- Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6200 ) Cys Glu Phe Cys --- Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6201 ) Cys Glu Phe Cys --- Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6202 ) Cys Glu Phe Cys --- Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6203 ) Cys Glu Phe Cys --- Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6204 ) Cys Glu Leu Cys Ala Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6205 ) Cys Glu Leu Cys Ala Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6206 ) Cys Glu Leu Cys Ala Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6207 ) Cys Glu Leu Cys Ala Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6208 ) Cys Glu Leu Cys Ala Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6209 ) Cys Glu Leu Cys Ala Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6210 ) Cys Glu Leu Cys Ala Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6211 ) Cys Glu Leu Cys Ala Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6212 ) Cys Glu Leu Cys Ala Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6213 ) Cys Glu Leu Cys Ala Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6214 ) Cys Glu Leu Cys Ala Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6215 ) Cys Glu Leu Cys Ala Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6216 ) Cys Glu Leu Cys Ala Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6217 ) Cys Glu Leu Cys Ala Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6218 ) Cys Glu Leu Cys Ala Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6219 ) Cys Glu Leu Cys Ala Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6220 ) Cys Glu Leu Cys Ala Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6221 ) Cys Glu Leu Cys Ala Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6222 ) Cys Glu Leu Cys Ala Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6223 ) Cys Glu Leu Cys Ala Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6224 ) Cys Glu Leu Cys Ala Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6225 ) Cys Glu Leu Cys Ala Asn Gly Thr Cys Val Ala Cys Tyr

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(SEQ ID NO: 6226 ) Cys Glu Leu Cys Ala Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6227 ) Cys Glu Leu Cys Ala Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6228 ) Cys Glu Leu Cys Arg Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6229 ) Cys Glu Leu Cys Arg Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6230 ) Cys Glu Leu Cys Arg Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6231 ) Cys Glu Leu Cys Arg Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6232 ) Cys Glu Leu Cys Arg Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6233 ) Cys Glu Leu Cys Arg Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6234 ) Cys Glu Leu Cys Arg Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6235 ) Cys Glu Leu Cys Arg Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6236 ) Cys Glu Leu Cys Arg Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6237 ) Cys Glu Leu Cys Arg Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6238 ) Cys Glu Leu Cys Arg Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6239 ) Cys Glu Leu Cys Arg Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6240 ) Cys Glu Leu Cys Arg Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6241 ) Cys Glu Leu Cys Arg Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6242 ) Cys Glu Leu Cys Arg Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6243 ) Cys Glu Leu Cys Arg Asn Gly Ala Cys Gly Val Ala Cys Tyr  
(SEQ ID NO: 6244 ) Cys Glu Leu Cys Arg Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6245 ) Cys Glu Leu Cys Arg Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6246 ) Cys Glu Leu Cys Arg Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6247 ) Cys Glu Leu Cys Arg Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6248 ) Cys Glu Leu Cys Arg Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6249 ) Cys Glu Leu Cys Arg Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6250 ) Cys Glu Leu Cys Arg Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6251 ) Cys Glu Leu Cys Arg Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6252 ) Cys Glu Leu Cys Asn Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6253 ) Cys Glu Leu Cys Asn Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6254 ) Cys Glu Leu Cys Asn Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6255 ) Cys Glu Leu Cys Asn Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6256 ) Cys Glu Leu Cys Asn Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6257 ) Cys Glu Leu Cys Asn Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6258 ) Cys Glu Leu Cys Asn Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6259 ) Cys Glu Leu Cys Asn Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6260 ) Cys Glu Leu Cys Asn Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6261 ) Cys Glu Leu Cys Asn Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6262 ) Cys Glu Leu Cys Asn Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6263 ) Cys Glu Leu Cys Asn Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6264 ) Cys Glu Leu Cys Asn Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6265 ) Cys Glu Leu Cys Asn Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6266 ) Cys Glu Leu Cys Asn Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6267 ) Cys Glu Leu Cys Asn Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6268 ) Cys Glu Leu Cys Asn Asn Gly Ala Cys Gly Gly Cys Tyr

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(SEQ ID NO: 6269 ) Cys Glu Leu Cys Asn Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6270 ) Cys Glu Leu Cys Asn Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6271 ) Cys Glu Leu Cys Asn Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6272 ) Cys Glu Leu Cys Asn Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6273 ) Cys Glu Leu Cys Asn Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6274 ) Cys Glu Leu Cys Asn Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6275 ) Cys Glu Leu Cys Asn Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6276 ) Cys Glu Leu Cys Asp Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6277 ) Cys Glu Leu Cys Asp Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6278 ) Cys Glu Leu Cys Asp Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6279 ) Cys Glu Leu Cys Asp Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6280 ) Cys Glu Leu Cys Asp Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6281 ) Cys Glu Leu Cys Asp Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6282 ) Cys Glu Leu Cys Asp Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6283 ) Cys Glu Leu Cys Asp Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6284 ) Cys Glu Leu Cys Asp Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6285 ) Cys Glu Leu Cys Asp Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6286 ) Cys Glu Leu Cys Asp Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6287 ) Cys Glu Leu Cys Asp Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6288 ) Cys Glu Leu Cys Asp Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6289 ) Cys Glu Leu Cys Asp Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6290 ) Cys Glu Leu Cys Asp Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6291 ) Cys Glu Leu Cys Asp Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6292 ) Cys Glu Leu Cys Asp Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6293 ) Cys Glu Leu Cys Asp Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6294 ) Cys Glu Leu Cys Asp Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6295 ) Cys Glu Leu Cys Asp Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6296 ) Cys Glu Leu Cys Asp Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6297 ) Cys Glu Leu Cys Asp Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6298 ) Cys Glu Leu Cys Asp Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6299 ) Cys Glu Leu Cys Asp Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6300 ) Cys Glu Leu Cys Gln Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6301 ) Cys Glu Leu Cys Gln Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6302 ) Cys Glu Leu Cys Gln Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6303 ) Cys Glu Leu Cys Gln Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6304 ) Cys Glu Leu Cys Gln Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6305 ) Cys Glu Leu Cys Gln Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6306 ) Cys Glu Leu Cys Gln Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6307 ) Cys Glu Leu Cys Gln Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6308 ) Cys Glu Leu Cys Gln Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6309 ) Cys Glu Leu Cys Gln Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6310 ) Cys Glu Leu Cys Gln Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6311 ) Cys Glu Leu Cys Gln Asn Pro Thr Cys Gly Ala Cys Tyr

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(SEQ ID NO: 6312 ) Cys Glu Leu Cys Gln Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6313 ) Cys Glu Leu Cys Gln Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6314 ) Cys Glu Leu Cys Gln Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6315 ) Cys Glu Leu Cys Gln Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6316 ) Cys Glu Leu Cys Gln Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6317 ) Cys Glu Leu Cys Gln Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6318 ) Cys Glu Leu Cys Gln Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6319 ) Cys Glu Leu Cys Gln Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6320 ) Cys Glu Leu Cys Gln Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6321 ) Cys Glu Leu Cys Gln Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6322 ) Cys Glu Leu Cys Gln Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6323 ) Cys Glu Leu Cys Gln Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6324 ) Cys Glu Leu Cys Glu Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6325 ) Cys Glu Leu Cys Glu Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6326 ) Cys Glu Leu Cys Glu Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6327 ) Cys Glu Leu Cys Glu Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6328 ) Cys Glu Leu Cys Glu Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6329 ) Cys Glu Leu Cys Glu Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6330 ) Cys Glu Leu Cys Glu Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6331 ) Cys Glu Leu Cys Glu Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6332 ) Cys Glu Leu Cys Glu Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6333 ) Cys Glu Leu Cys Glu Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6334 ) Cys Glu Leu Cys Glu Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6335 ) Cys Glu Leu Cys Glu Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6336 ) Cys Glu Leu Cys Glu Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6337 ) Cys Glu Leu Cys Glu Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6338 ) Cys Glu Leu Cys Glu Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6339 ) Cys Glu Leu Cys Glu Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6340 ) Cys Glu Leu Cys Glu Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6341 ) Cys Glu Leu Cys Glu Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6342 ) Cys Glu Leu Cys Glu Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6343 ) Cys Glu Leu Cys Glu Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6344 ) Cys Glu Leu Cys Glu Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6345 ) Cys Glu Leu Cys Glu Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6346 ) Cys Glu Leu Cys Glu Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6347 ) Cys Glu Leu Cys Glu Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6348 ) Cys Glu Leu Cys Gly Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6349 ) Cys Glu Leu Cys Gly Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6350 ) Cys Glu Leu Cys Gly Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6351 ) Cys Glu Leu Cys Gly Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6352 ) Cys Glu Leu Cys Gly Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6353 ) Cys Glu Leu Cys Gly Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6354 ) Cys Glu Leu Cys Gly Asn Pro Thr Cys Thr Gly Cys Tyr

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(SEQ ID NO: 6355 ) Cys Glu Leu Cys Gly Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6356 ) Cys Glu Leu Cys Gly Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6357 ) Cys Glu Leu Cys Gly Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6358 ) Cys Glu Leu Cys Gly Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6359 ) Cys Glu Leu Cys Gly Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6360 ) Cys Glu Leu Cys Gly Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6361 ) Cys Glu Leu Cys Gly Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6362 ) Cys Glu Leu Cys Gly Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6363 ) Cys Glu Leu Cys Gly Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6364 ) Cys Glu Leu Cys Gly Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6365 ) Cys Glu Leu Cys Gly Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6366 ) Cys Glu Leu Cys Gly Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6367 ) Cys Glu Leu Cys Gly Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6368 ) Cys Glu Leu Cys Gly Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6369 ) Cys Glu Leu Cys Gly Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6370 ) Cys Glu Leu Cys Gly Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6371 ) Cys Glu Leu Cys Gly Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6372 ) Cys Glu Leu Cys His Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6373 ) Cys Glu Leu Cys His Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6374 ) Cys Glu Leu Cys His Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6375 ) Cys Glu Leu Cys His Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6376 ) Cys Glu Leu Cys His Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6377 ) Cys Glu Leu Cys His Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6378 ) Cys Glu Leu Cys His Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6379 ) Cys Glu Leu Cys His Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6380 ) Cys Glu Leu Cys His Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6381 ) Cys Glu Leu Cys His Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6382 ) Cys Glu Leu Cys His Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6383 ) Cys Glu Leu Cys His Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6384 ) Cys Glu Leu Cys His Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6385 ) Cys Glu Leu Cys His Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6386 ) Cys Glu Leu Cys His Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6387 ) Cys Glu Leu Cys His Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6388 ) Cys Glu Leu Cys His Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6389 ) Cys Glu Leu Cys His Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6390 ) Cys Glu Leu Cys His Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6391 ) Cys Glu Leu Cys His Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6392 ) Cys Glu Leu Cys His Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6393 ) Cys Glu Leu Cys His Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6394 ) Cys Glu Leu Cys His Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6395 ) Cys Glu Leu Cys His Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6396 ) Cys Glu Leu Cys Ile Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6397 ) Cys Glu Leu Cys Ile Asn Pro Ala Cys Thr Ala Cys Tyr

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(SEQ ID NO: 6398 ) Cys Glu Leu Cys Ile Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6399 ) Cys Glu Leu Cys Ile Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6400 ) Cys Glu Leu Cys Ile Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6401 ) Cys Glu Leu Cys Ile Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6402 ) Cys Glu Leu Cys Ile Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6403 ) Cys Glu Leu Cys Ile Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6404 ) Cys Glu Leu Cys Ile Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6405 ) Cys Glu Leu Cys Ile Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6406 ) Cys Glu Leu Cys Ile Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6407 ) Cys Glu Leu Cys Ile Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6408 ) Cys Glu Leu Cys Ile Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6409 ) Cys Glu Leu Cys Ile Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6410 ) Cys Glu Leu Cys Ile Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6411 ) Cys Glu Leu Cys Ile Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6412 ) Cys Glu Leu Cys Ile Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6413 ) Cys Glu Leu Cys Ile Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6414 ) Cys Glu Leu Cys Ile Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6415 ) Cys Glu Leu Cys Ile Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6416 ) Cys Glu Leu Cys Ile Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6417 ) Cys Glu Leu Cys Ile Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6418 ) Cys Glu Leu Cys Ile Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6419 ) Cys Glu Leu Cys Ile Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6420 ) Cys Glu Leu Cys Leu Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6421 ) Cys Glu Leu Cys Leu Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6422 ) Cys Glu Leu Cys Leu Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6423 ) Cys Glu Leu Cys Leu Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6424 ) Cys Glu Leu Cys Leu Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6425 ) Cys Glu Leu Cys Leu Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6426 ) Cys Glu Leu Cys Leu Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6427 ) Cys Glu Leu Cys Leu Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6428 ) Cys Glu Leu Cys Leu Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6429 ) Cys Glu Leu Cys Leu Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6430 ) Cys Glu Leu Cys Leu Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6431 ) Cys Glu Leu Cys Leu Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6432 ) Cys Glu Leu Cys Leu Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6433 ) Cys Glu Leu Cys Leu Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6434 ) Cys Glu Leu Cys Leu Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6435 ) Cys Glu Leu Cys Leu Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6436 ) Cys Glu Leu Cys Leu Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6437 ) Cys Glu Leu Cys Leu Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6438 ) Cys Glu Leu Cys Leu Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6439 ) Cys Glu Leu Cys Leu Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6440 ) Cys Glu Leu Cys Leu Asn Gly Thr Cys Val Gly Cys Tyr

FIG. 3  
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(SEQ ID NO: 6441 ) Cys Glu Leu Cys Leu Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6442 ) Cys Glu Leu Cys Leu Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6443 ) Cys Glu Leu Cys Leu Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6444 ) Cys Glu Leu Cys Lys Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6445 ) Cys Glu Leu Cys Lys Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6446 ) Cys Glu Leu Cys Lys Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6447 ) Cys Glu Leu Cys Lys Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6448 ) Cys Glu Leu Cys Lys Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6449 ) Cys Glu Leu Cys Lys Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6450 ) Cys Glu Leu Cys Lys Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6451 ) Cys Glu Leu Cys Lys Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6452 ) Cys Glu Leu Cys Lys Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6453 ) Cys Glu Leu Cys Lys Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6454 ) Cys Glu Leu Cys Lys Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6455 ) Cys Glu Leu Cys Lys Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6456 ) Cys Glu Leu Cys Lys Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6457 ) Cys Glu Leu Cys Lys Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6458 ) Cys Glu Leu Cys Lys Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6459 ) Cys Glu Leu Cys Lys Asn Gly Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6460 ) Cys Glu Leu Cys Lys Asn Gly Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6461 ) Cys Glu Leu Cys Lys Asn Gly Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6462 ) Cys Glu Leu Cys Lys Asn Gly Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6463 ) Cys Glu Leu Cys Lys Asn Gly Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6464 ) Cys Glu Leu Cys Lys Asn Gly Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6465 ) Cys Glu Leu Cys Lys Asn Gly Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6466 ) Cys Glu Leu Cys Lys Asn Gly Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6467 ) Cys Glu Leu Cys Lys Asn Gly Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6468 ) Cys Glu Leu Cys Met Asn Pro Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6469 ) Cys Glu Leu Cys Met Asn Pro Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6470 ) Cys Glu Leu Cys Met Asn Pro Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6471 ) Cys Glu Leu Cys Met Asn Pro Ala Cys Val Ala Cys Tyr  
(SEQ ID NO: 6472 ) Cys Glu Leu Cys Met Asn Pro Ala Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6473 ) Cys Glu Leu Cys Met Asn Pro Ala Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6474 ) Cys Glu Leu Cys Met Asn Pro Thr Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6475 ) Cys Glu Leu Cys Met Asn Pro Thr Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6476 ) Cys Glu Leu Cys Met Asn Pro Thr Cys Val Gly Cys Tyr  
(SEQ ID NO: 6477 ) Cys Glu Leu Cys Met Asn Pro Thr Cys Val Ala Cys Tyr  
(SEQ ID NO: 6478 ) Cys Glu Leu Cys Met Asn Pro Thr Cys Gly Gly Cys Tyr  
(SEQ ID NO: 6479 ) Cys Glu Leu Cys Met Asn Pro Thr Cys Gly Ala Cys Tyr  
(SEQ ID NO: 6480 ) Cys Glu Leu Cys Met Asn Gly Ala Cys Thr Gly Cys Tyr  
(SEQ ID NO: 6481 ) Cys Glu Leu Cys Met Asn Gly Ala Cys Thr Ala Cys Tyr  
(SEQ ID NO: 6482 ) Cys Glu Leu Cys Met Asn Gly Ala Cys Val Gly Cys Tyr  
(SEQ ID NO: 6483 ) Cys Glu Leu Cys Met Asn Gly Ala Cys Val Ala Cys Tyr

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(SEQ ID NO: 6484 ) Cys Glu Leu Cys Met Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6485 ) Cys Glu Leu Cys Met Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6486 ) Cys Glu Leu Cys Met Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6487 ) Cys Glu Leu Cys Met Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6488 ) Cys Glu Leu Cys Met Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6489 ) Cys Glu Leu Cys Met Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6490 ) Cys Glu Leu Cys Met Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6491 ) Cys Glu Leu Cys Met Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6492 ) Cys Glu Leu Cys Phe Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6493 ) Cys Glu Leu Cys Phe Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6494 ) Cys Glu Leu Cys Phe Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6495 ) Cys Glu Leu Cys Phe Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6496 ) Cys Glu Leu Cys Phe Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6497 ) Cys Glu Leu Cys Phe Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6498 ) Cys Glu Leu Cys Phe Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6499 ) Cys Glu Leu Cys Phe Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6500 ) Cys Glu Leu Cys Phe Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6501 ) Cys Glu Leu Cys Phe Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6502 ) Cys Glu Leu Cys Phe Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6503 ) Cys Glu Leu Cys Phe Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6504 ) Cys Glu Leu Cys Phe Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6505 ) Cys Glu Leu Cys Phe Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6506 ) Cys Glu Leu Cys Phe Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6507 ) Cys Glu Leu Cys Phe Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6508 ) Cys Glu Leu Cys Phe Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6509 ) Cys Glu Leu Cys Phe Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6510 ) Cys Glu Leu Cys Phe Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6511 ) Cys Glu Leu Cys Phe Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6512 ) Cys Glu Leu Cys Phe Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6513 ) Cys Glu Leu Cys Phe Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6514 ) Cys Glu Leu Cys Phe Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6515 ) Cys Glu Leu Cys Phe Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6516 ) Cys Glu Leu Cys Pro Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6517 ) Cys Glu Leu Cys Pro Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6518 ) Cys Glu Leu Cys Pro Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6519 ) Cys Glu Leu Cys Pro Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6520 ) Cys Glu Leu Cys Pro Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6521 ) Cys Glu Leu Cys Pro Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6522 ) Cys Glu Leu Cys Pro Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6523 ) Cys Glu Leu Cys Pro Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6524 ) Cys Glu Leu Cys Pro Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6525 ) Cys Glu Leu Cys Pro Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6526 ) Cys Glu Leu Cys Pro Asn Pro Thr Cys Gly Gly Cys Tyr

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(SEQ ID NO: 6527 ) Cys Glu Leu Cys Pro Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6528 ) Cys Glu Leu Cys Pro Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6529 ) Cys Glu Leu Cys Pro Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6530 ) Cys Glu Leu Cys Pro Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6531 ) Cys Glu Leu Cys Pro Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6532 ) Cys Glu Leu Cys Pro Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6533 ) Cys Glu Leu Cys Pro Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6534 ) Cys Glu Leu Cys Pro Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6535 ) Cys Glu Leu Cys Pro Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6536 ) Cys Glu Leu Cys Pro Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6537 ) Cys Glu Leu Cys Pro Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6538 ) Cys Glu Leu Cys Pro Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6539 ) Cys Glu Leu Cys Pro Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6540 ) Cys Glu Leu Cys Ser Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6541 ) Cys Glu Leu Cys Ser Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6542 ) Cys Glu Leu Cys Ser Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6543 ) Cys Glu Leu Cys Ser Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6544 ) Cys Glu Leu Cys Ser Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6545 ) Cys Glu Leu Cys Ser Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6546 ) Cys Glu Leu Cys Ser Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6547 ) Cys Glu Leu Cys Ser Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6548 ) Cys Glu Leu Cys Ser Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6549 ) Cys Glu Leu Cys Ser Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6550 ) Cys Glu Leu Cys Ser Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6551 ) Cys Glu Leu Cys Ser Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6552 ) Cys Glu Leu Cys Ser Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6553 ) Cys Glu Leu Cys Ser Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6554 ) Cys Glu Leu Cys Ser Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6555 ) Cys Glu Leu Cys Ser Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6556 ) Cys Glu Leu Cys Ser Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6557 ) Cys Glu Leu Cys Ser Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6558 ) Cys Glu Leu Cys Ser Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6559 ) Cys Glu Leu Cys Ser Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6560 ) Cys Glu Leu Cys Ser Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6561 ) Cys Glu Leu Cys Ser Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6562 ) Cys Glu Leu Cys Ser Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6563 ) Cys Glu Leu Cys Ser Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6564 ) Cys Glu Leu Cys Thr Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6565 ) Cys Glu Leu Cys Thr Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6566 ) Cys Glu Leu Cys Thr Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6567 ) Cys Glu Leu Cys Thr Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6568 ) Cys Glu Leu Cys Thr Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6569 ) Cys Glu Leu Cys Thr Asn Pro Ala Cys Gly Ala Cys Tyr

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(SEQ ID NO: 6570 ) Cys Glu Leu Cys Thr Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6571 ) Cys Glu Leu Cys Thr Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6572 ) Cys Glu Leu Cys Thr Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6573 ) Cys Glu Leu Cys Thr Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6574 ) Cys Glu Leu Cys Thr Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6575 ) Cys Glu Leu Cys Thr Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6576 ) Cys Glu Leu Cys Thr Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6577 ) Cys Glu Leu Cys Thr Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6578 ) Cys Glu Leu Cys Thr Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6579 ) Cys Glu Leu Cys Thr Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6580 ) Cys Glu Leu Cys Thr Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6581 ) Cys Glu Leu Cys Thr Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6582 ) Cys Glu Leu Cys Thr Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6583 ) Cys Glu Leu Cys Thr Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6584 ) Cys Glu Leu Cys Thr Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6585 ) Cys Glu Leu Cys Thr Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6586 ) Cys Glu Leu Cys Thr Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6587 ) Cys Glu Leu Cys Thr Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6588 ) Cys Glu Leu Cys Trp Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6589 ) Cys Glu Leu Cys Trp Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6590 ) Cys Glu Leu Cys Trp Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6591 ) Cys Glu Leu Cys Trp Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6592 ) Cys Glu Leu Cys Trp Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6593 ) Cys Glu Leu Cys Trp Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6594 ) Cys Glu Leu Cys Trp Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6595 ) Cys Glu Leu Cys Trp Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6596 ) Cys Glu Leu Cys Trp Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6597 ) Cys Glu Leu Cys Trp Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6598 ) Cys Glu Leu Cys Trp Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6599 ) Cys Glu Leu Cys Trp Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6600 ) Cys Glu Leu Cys Trp Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6601 ) Cys Glu Leu Cys Trp Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6602 ) Cys Glu Leu Cys Trp Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6603 ) Cys Glu Leu Cys Trp Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6604 ) Cys Glu Leu Cys Trp Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6605 ) Cys Glu Leu Cys Trp Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6606 ) Cys Glu Leu Cys Trp Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6607 ) Cys Glu Leu Cys Trp Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6608 ) Cys Glu Leu Cys Trp Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6609 ) Cys Glu Leu Cys Trp Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6610 ) Cys Glu Leu Cys Trp Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6611 ) Cys Glu Leu Cys Trp Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6612 ) Cys Glu Leu Cys Tyr Asn Pro Ala Cys Thr Gly Cys Tyr

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(SEQ ID NO: 6613 ) Cys Glu Leu Cys Tyr Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6614 ) Cys Glu Leu Cys Tyr Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6615 ) Cys Glu Leu Cys Tyr Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6616 ) Cys Glu Leu Cys Tyr Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6617 ) Cys Glu Leu Cys Tyr Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6618 ) Cys Glu Leu Cys Tyr Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6619 ) Cys Glu Leu Cys Tyr Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6620 ) Cys Glu Leu Cys Tyr Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6621 ) Cys Glu Leu Cys Tyr Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6622 ) Cys Glu Leu Cys Tyr Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6623 ) Cys Glu Leu Cys Tyr Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6624 ) Cys Glu Leu Cys Tyr Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6625 ) Cys Glu Leu Cys Tyr Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6626 ) Cys Glu Leu Cys Tyr Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6627 ) Cys Glu Leu Cys Tyr Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6628 ) Cys Glu Leu Cys Tyr Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6629 ) Cys Glu Leu Cys Tyr Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6630 ) Cys Glu Leu Cys Tyr Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6631 ) Cys Glu Leu Cys Tyr Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6632 ) Cys Glu Leu Cys Tyr Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6633 ) Cys Glu Leu Cys Tyr Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6634 ) Cys Glu Leu Cys Tyr Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6635 ) Cys Glu Leu Cys Tyr Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6636 ) Cys Glu Leu Cys Val Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6637 ) Cys Glu Leu Cys Val Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6638 ) Cys Glu Leu Cys Val Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6639 ) Cys Glu Leu Cys Val Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6640 ) Cys Glu Leu Cys Val Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6641 ) Cys Glu Leu Cys Val Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6642 ) Cys Glu Leu Cys Val Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6643 ) Cys Glu Leu Cys Val Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6644 ) Cys Glu Leu Cys Val Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6645 ) Cys Glu Leu Cys Val Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6646 ) Cys Glu Leu Cys Val Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6647 ) Cys Glu Leu Cys Val Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6648 ) Cys Glu Leu Cys Val Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6649 ) Cys Glu Leu Cys Val Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6650 ) Cys Glu Leu Cys Val Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6651 ) Cys Glu Leu Cys Val Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6652 ) Cys Glu Leu Cys Val Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6653 ) Cys Glu Leu Cys Val Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6654 ) Cys Glu Leu Cys Val Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6655 ) Cys Glu Leu Cys Val Asn Gly Thr Cys Thr Ala Cys Tyr

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(SEQ ID NO: 6656 ) Cys Glu Leu Cys Val Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6657 ) Cys Glu Leu Cys Val Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6658 ) Cys Glu Leu Cys Val Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6659 ) Cys Glu Leu Cys Val Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6660 ) Cys Glu Leu Cys --- Asn Pro Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6661 ) Cys Glu Leu Cys --- Asn Pro Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6662 ) Cys Glu Leu Cys --- Asn Pro Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6663 ) Cys Glu Leu Cys --- Asn Pro Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6664 ) Cys Glu Leu Cys --- Asn Pro Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6665 ) Cys Glu Leu Cys --- Asn Pro Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6666 ) Cys Glu Leu Cys --- Asn Pro Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6667 ) Cys Glu Leu Cys --- Asn Pro Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6668 ) Cys Glu Leu Cys --- Asn Pro Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6669 ) Cys Glu Leu Cys --- Asn Pro Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6670 ) Cys Glu Leu Cys --- Asn Pro Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6671 ) Cys Glu Leu Cys --- Asn Pro Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6672 ) Cys Glu Leu Cys --- Asn Gly Ala Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6673 ) Cys Glu Leu Cys --- Asn Gly Ala Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6674 ) Cys Glu Leu Cys --- Asn Gly Ala Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6675 ) Cys Glu Leu Cys --- Asn Gly Ala Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6676 ) Cys Glu Leu Cys --- Asn Gly Ala Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6677 ) Cys Glu Leu Cys --- Asn Gly Ala Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6678 ) Cys Glu Leu Cys --- Asn Gly Thr Cys Thr Gly Cys Tyr  
 (SEQ ID NO: 6679 ) Cys Glu Leu Cys --- Asn Gly Thr Cys Thr Ala Cys Tyr  
 (SEQ ID NO: 6680 ) Cys Glu Leu Cys --- Asn Gly Thr Cys Val Gly Cys Tyr  
 (SEQ ID NO: 6681 ) Cys Glu Leu Cys --- Asn Gly Thr Cys Val Ala Cys Tyr  
 (SEQ ID NO: 6682 ) Cys Glu Leu Cys --- Asn Gly Thr Cys Gly Gly Cys Tyr  
 (SEQ ID NO: 6683 ) Cys Glu Leu Cys --- Asn Gly Thr Cys Gly Ala Cys Tyr  
 (SEQ ID NO: 6684 ) Cys Glu Tyr Cys Ala Asn Pro Ala Cys Thr Gly Cys  
 (SEQ ID NO: 6685 ) Cys Glu Tyr Cys Ala Asn Pro Ala Cys Thr Ala Cys  
 (SEQ ID NO: 6686 ) Cys Glu Tyr Cys Ala Asn Pro Ala Cys Val Gly Cys  
 (SEQ ID NO: 6687 ) Cys Glu Tyr Cys Ala Asn Pro Ala Cys Val Ala Cys  
 (SEQ ID NO: 6688 ) Cys Glu Tyr Cys Ala Asn Pro Ala Cys Gly Gly Cys  
 (SEQ ID NO: 6689 ) Cys Glu Tyr Cys Ala Asn Pro Ala Cys Gly Ala Cys  
 (SEQ ID NO: 6690 ) Cys Glu Tyr Cys Ala Asn Pro Thr Cys Thr Gly Cys  
 (SEQ ID NO: 6691 ) Cys Glu Tyr Cys Ala Asn Pro Thr Cys Thr Ala Cys  
 (SEQ ID NO: 6692 ) Cys Glu Tyr Cys Ala Asn Pro Thr Cys Val Gly Cys  
 (SEQ ID NO: 6693 ) Cys Glu Tyr Cys Ala Asn Pro Thr Cys Val Ala Cys  
 (SEQ ID NO: 6694 ) Cys Glu Tyr Cys Ala Asn Pro Thr Cys Gly Gly Cys  
 (SEQ ID NO: 6695 ) Cys Glu Tyr Cys Ala Asn Pro Thr Cys Gly Ala Cys  
 (SEQ ID NO: 6696 ) Cys Glu Tyr Cys Ala Asn Gly Ala Cys Thr Gly Cys  
 (SEQ ID NO: 6697 ) Cys Glu Tyr Cys Ala Asn Gly Ala Cys Thr Ala Cys  
 (SEQ ID NO: 6698 ) Cys Glu Tyr Cys Ala Asn Gly Ala Cys Val Gly Cys

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(SEQ ID NO: 6699 ) Cys Glu Tyr Cys Ala Asn Gly Ala Cys Val Ala Cys  
 (SEQ ID NO: 6700 ) Cys Glu Tyr Cys Ala Asn Gly Ala Cys Gly Gly Cys  
 (SEQ ID NO: 6701 ) Cys Glu Tyr Cys Ala Asn Gly Ala Cys Gly Ala Cys  
 (SEQ ID NO: 6702 ) Cys Glu Tyr Cys Ala Asn Gly Thr Cys Thr Gly Cys  
 (SEQ ID NO: 6703 ) Cys Glu Tyr Cys Ala Asn Gly Thr Cys Thr Ala Cys  
 (SEQ ID NO: 6704 ) Cys Glu Tyr Cys Ala Asn Gly Thr Cys Val Gly Cys  
 (SEQ ID NO: 6705 ) Cys Glu Tyr Cys Ala Asn Gly Thr Cys Val Ala Cys  
 (SEQ ID NO: 6706 ) Cys Glu Tyr Cys Ala Asn Gly Thr Cys Gly Gly Cys  
 (SEQ ID NO: 6707 ) Cys Glu Tyr Cys Ala Asn Gly Thr Cys Gly Ala Cys  
 (SEQ ID NO: 6708 ) Cys Glu Tyr Cys Arg Asn Pro Ala Cys Thr Gly Cys  
 (SEQ ID NO: 6709 ) Cys Glu Tyr Cys Arg Asn Pro Ala Cys Thr Ala Cys  
 (SEQ ID NO: 6710 ) Cys Glu Tyr Cys Arg Asn Pro Ala Cys Val Gly Cys  
 (SEQ ID NO: 6711 ) Cys Glu Tyr Cys Arg Asn Pro Ala Cys Val Ala Cys  
 (SEQ ID NO: 6712 ) Cys Glu Tyr Cys Arg Asn Pro Ala Cys Gly Gly Cys  
 (SEQ ID NO: 6713 ) Cys Glu Tyr Cys Arg Asn Pro Ala Cys Gly Ala Cys  
 (SEQ ID NO: 6714 ) Cys Glu Tyr Cys Arg Asn Pro Thr Cys Thr Gly Cys  
 (SEQ ID NO: 6715 ) Cys Glu Tyr Cys Arg Asn Pro Thr Cys Thr Ala Cys  
 (SEQ ID NO: 6716 ) Cys Glu Tyr Cys Arg Asn Pro Thr Cys Val Gly Cys  
 (SEQ ID NO: 6717 ) Cys Glu Tyr Cys Arg Asn Pro Thr Cys Val Ala Cys  
 (SEQ ID NO: 6718 ) Cys Glu Tyr Cys Arg Asn Pro Thr Cys Gly Gly Cys  
 (SEQ ID NO: 6719 ) Cys Glu Tyr Cys Arg Asn Pro Thr Cys Gly Ala Cys  
 (SEQ ID NO: 6720 ) Cys Glu Tyr Cys Arg Asn Gly Ala Cys Thr Gly Cys  
 (SEQ ID NO: 6721 ) Cys Glu Tyr Cys Arg Asn Gly Ala Cys Thr Ala Cys  
 (SEQ ID NO: 6722 ) Cys Glu Tyr Cys Arg Asn Gly Ala Cys Val Gly Cys  
 (SEQ ID NO: 6723 ) Cys Glu Tyr Cys Arg Asn Gly Ala Cys Val Ala Cys  
 (SEQ ID NO: 6724 ) Cys Glu Tyr Cys Arg Asn Gly Ala Cys Gly Gly Cys  
 (SEQ ID NO: 6725 ) Cys Glu Tyr Cys Arg Asn Gly Ala Cys Gly Ala Cys  
 (SEQ ID NO: 6726 ) Cys Glu Tyr Cys Arg Asn Gly Thr Cys Thr Gly Cys  
 (SEQ ID NO: 6727 ) Cys Glu Tyr Cys Arg Asn Gly Thr Cys Thr Ala Cys  
 (SEQ ID NO: 6728 ) Cys Glu Tyr Cys Arg Asn Gly Thr Cys Val Gly Cys  
 (SEQ ID NO: 6729 ) Cys Glu Tyr Cys Arg Asn Gly Thr Cys Val Ala Cys  
 (SEQ ID NO: 6730 ) Cys Glu Tyr Cys Arg Asn Gly Thr Cys Gly Gly Cys  
 (SEQ ID NO: 6731 ) Cys Glu Tyr Cys Arg Asn Gly Thr Cys Gly Ala Cys  
 (SEQ ID NO: 6732 ) Cys Glu Tyr Cys Asn Asn Pro Ala Cys Thr Gly Cys  
 (SEQ ID NO: 6733 ) Cys Glu Tyr Cys Asn Asn Pro Ala Cys Thr Ala Cys  
 (SEQ ID NO: 6734 ) Cys Glu Tyr Cys Asn Asn Pro Ala Cys Val Gly Cys  
 (SEQ ID NO: 6735 ) Cys Glu Tyr Cys Asn Asn Pro Ala Cys Val Ala Cys  
 (SEQ ID NO: 6736 ) Cys Glu Tyr Cys Asn Asn Pro Ala Cys Gly Gly Cys  
 (SEQ ID NO: 6737 ) Cys Glu Tyr Cys Asn Asn Pro Ala Cys Gly Ala Cys  
 (SEQ ID NO: 6738 ) Cys Glu Tyr Cys Asn Asn Pro Thr Cys Thr Gly Cys  
 (SEQ ID NO: 6739 ) Cys Glu Tyr Cys Asn Asn Pro Thr Cys Thr Ala Cys  
 (SEQ ID NO: 6740 ) Cys Glu Tyr Cys Asn Asn Pro Thr Cys Val Gly Cys  
 (SEQ ID NO: 6741 ) Cys Glu Tyr Cys Asn Asn Pro Thr Cys Val Ala Cys

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(SEQ ID NO: 6742 ) Cys Glu Tyr Cys Asn Asn Pro Thr Cys Gly Gly Cys  
(SEQ ID NO: 6743 ) Cys Glu Tyr Cys Asn Asn Pro Thr Cys Gly Ala Cys  
(SEQ ID NO: 6744 ) Cys Glu Tyr Cys Asn Asn Gly Ala Cys Thr Gly Cys  
(SEQ ID NO: 6745 ) Cys Glu Tyr Cys Asn Asn Gly Ala Cys Thr Ala Cys  
(SEQ ID NO: 6746 ) Cys Glu Tyr Cys Asn Asn Gly Ala Cys Val Gly Cys  
(SEQ ID NO: 6747 ) Cys Glu Tyr Cys Asn Asn Gly Ala Cys Val Ala Cys  
(SEQ ID NO: 6748 ) Cys Glu Tyr Cys Asn Asn Gly Ala Cys Gly Gly Cys  
(SEQ ID NO: 6749 ) Cys Glu Tyr Cys Asn Asn Gly Ala Cys Gly Ala Cys  
(SEQ ID NO: 6750 ) Cys Glu Tyr Cys Asn Asn Gly Thr Cys Thr Gly Cys  
(SEQ ID NO: 6751 ) Cys Glu Tyr Cys Asn Asn Gly Thr Cys Thr Ala Cys  
(SEQ ID NO: 6752 ) Cys Glu Tyr Cys Asn Asn Gly Thr Cys Val Gly Cys  
(SEQ ID NO: 6753 ) Cys Glu Tyr Cys Asn Asn Gly Thr Cys Val Ala Cys  
(SEQ ID NO: 6754 ) Cys Glu Tyr Cys Asn Asn Gly Thr Cys Gly Gly Cys  
(SEQ ID NO: 6755 ) Cys Glu Tyr Cys Asn Asn Gly Thr Cys Gly Ala Cys  
(SEQ ID NO: 6756 ) Cys Glu Tyr Cys Asp Asn Pro Ala Cys Thr Gly Cys  
(SEQ ID NO: 6757 ) Cys Glu Tyr Cys Asp Asn Pro Ala Cys Thr Ala Cys  
(SEQ ID NO: 6758 ) Cys Glu Tyr Cys Asp Asn Pro Ala Cys Val Gly Cys  
(SEQ ID NO: 6759 ) Cys Glu Tyr Cys Asp Asn Pro Ala Cys Val Ala Cys  
(SEQ ID NO: 6760 ) Cys Glu Tyr Cys Asp Asn Pro Ala Cys Gly Gly Cys  
(SEQ ID NO: 6761 ) Cys Glu Tyr Cys Asp Asn Pro Ala Cys Gly Ala Cys  
(SEQ ID NO: 6762 ) Cys Glu Tyr Cys Asp Asn Pro Thr Cys Thr Gly Cys  
(SEQ ID NO: 6763 ) Cys Glu Tyr Cys Asp Asn Pro Thr Cys Thr Ala Cys  
(SEQ ID NO: 6764 ) Cys Glu Tyr Cys Asp Asn Pro Thr Cys Val Gly Cys  
(SEQ ID NO: 6765 ) Cys Glu Tyr Cys Asp Asn Pro Thr Cys Val Ala Cys  
(SEQ ID NO: 6766 ) Cys Glu Tyr Cys Asp Asn Pro Thr Cys Gly Gly Cys  
(SEQ ID NO: 6767 ) Cys Glu Tyr Cys Asp Asn Pro Thr Cys Gly Ala Cys  
(SEQ ID NO: 6768 ) Cys Glu Tyr Cys Asp Asn Gly Ala Cys Thr Gly Cys  
(SEQ ID NO: 6769 ) Cys Glu Tyr Cys Asp Asn Gly Ala Cys Thr Ala Cys  
(SEQ ID NO: 6770 ) Cys Glu Tyr Cys Asp Asn Gly Ala Cys Val Gly Cys  
(SEQ ID NO: 6771 ) Cys Glu Tyr Cys Asp Asn Gly Ala Cys Val Ala Cys  
(SEQ ID NO: 6772 ) Cys Glu Tyr Cys Asp Asn Gly Ala Cys Gly Gly Cys  
(SEQ ID NO: 6773 ) Cys Glu Tyr Cys Asp Asn Gly Ala Cys Gly Ala Cys  
(SEQ ID NO: 6774 ) Cys Glu Tyr Cys Asp Asn Gly Thr Cys Thr Gly Cys  
(SEQ ID NO: 6775 ) Cys Glu Tyr Cys Asp Asn Gly Thr Cys Thr Ala Cys  
(SEQ ID NO: 6776 ) Cys Glu Tyr Cys Asp Asn Gly Thr Cys Val Gly Cys  
(SEQ ID NO: 6777 ) Cys Glu Tyr Cys Asp Asn Gly Thr Cys Val Ala Cys  
(SEQ ID NO: 6778 ) Cys Glu Tyr Cys Asp Asn Gly Thr Cys Gly Gly Cys  
(SEQ ID NO: 6779 ) Cys Glu Tyr Cys Asp Asn Gly Thr Cys Gly Ala Cys  
(SEQ ID NO: 6780 ) Cys Glu Tyr Cys Gln Asn Pro Ala Cys Thr Gly Cys  
(SEQ ID NO: 6781 ) Cys Glu Tyr Cys Gln Asn Pro Ala Cys Thr Ala Cys  
(SEQ ID NO: 6782 ) Cys Glu Tyr Cys Gln Asn Pro Ala Cys Val Gly Cys  
(SEQ ID NO: 6783 ) Cys Glu Tyr Cys Gln Asn Pro Ala Cys Val Ala Cys  
(SEQ ID NO: 6784 ) Cys Glu Tyr Cys Gln Asn Pro Ala Cys Gly Gly Cys

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(SEQ ID NO: 6785 ) Cys Glu Tyr Cys Gln Asn Pro Ala Cys Gly Ala Cys  
(SEQ ID NO: 6786 ) Cys Glu Tyr Cys Gln Asn Pro Thr Cys Thr Gly Cys  
(SEQ ID NO: 6787 ) Cys Glu Tyr Cys Gln Asn Pro Thr Cys Thr Ala Cys  
(SEQ ID NO: 6788 ) Cys Glu Tyr Cys Gln Asn Pro Thr Cys Val Gly Cys  
(SEQ ID NO: 6789 ) Cys Glu Tyr Cys Gln Asn Pro Thr Cys Val Ala Cys  
(SEQ ID NO: 6790 ) Cys Glu Tyr Cys Gln Asn Pro Thr Cys Gly Gly Cys  
(SEQ ID NO: 6791 ) Cys Glu Tyr Cys Gln Asn Pro Thr Cys Gly Ala Cys  
(SEQ ID NO: 6792 ) Cys Glu Tyr Cys Gln Asn Gly Ala Cys Thr Gly Cys  
(SEQ ID NO: 6793 ) Cys Glu Tyr Cys Gln Asn Gly Ala Cys Thr Ala Cys  
(SEQ ID NO: 6794 ) Cys Glu Tyr Cys Gln Asn Gly Ala Cys Val Gly Cys  
(SEQ ID NO: 6795 ) Cys Glu Tyr Cys Gln Asn Gly Ala Cys Val Ala Cys  
(SEQ ID NO: 6796 ) Cys Glu Tyr Cys Gln Asn Gly Ala Cys Gly Gly Cys  
(SEQ ID NO: 6797 ) Cys Glu Tyr Cys Gln Asn Gly Ala Cys Gly Ala Cys  
(SEQ ID NO: 6798 ) Cys Glu Tyr Cys Gln Asn Gly Thr Cys Thr Gly Cys  
(SEQ ID NO: 6799 ) Cys Glu Tyr Cys Gln Asn Gly Thr Cys Thr Ala Cys  
(SEQ ID NO: 6800 ) Cys Glu Tyr Cys Gln Asn Gly Thr Cys Val Gly Cys  
(SEQ ID NO: 6801 ) Cys Glu Tyr Cys Gln Asn Gly Thr Cys Val Ala Cys  
(SEQ ID NO: 6802 ) Cys Glu Tyr Cys Gln Asn Gly Thr Cys Gly Gly Cys  
(SEQ ID NO: 6803 ) Cys Glu Tyr Cys Gln Asn Gly Thr Cys Gly Ala Cys  
(SEQ ID NO: 6804 ) Cys Glu Tyr Cys Glu Asn Pro Ala Cys Thr Gly Cys  
(SEQ ID NO: 6805 ) Cys Glu Tyr Cys Glu Asn Pro Ala Cys Thr Ala Cys  
(SEQ ID NO: 6806 ) Cys Glu Tyr Cys Glu Asn Pro Ala Cys Val Gly Cys  
(SEQ ID NO: 6807 ) Cys Glu Tyr Cys Glu Asn Pro Ala Cys Val Ala Cys  
(SEQ ID NO: 6808 ) Cys Glu Tyr Cys Glu Asn Pro Ala Cys Gly Gly Cys  
(SEQ ID NO: 6809 ) Cys Glu Tyr Cys Glu Asn Pro Ala Cys Gly Ala Cys  
(SEQ ID NO: 6810 ) Cys Glu Tyr Cys Glu Asn Pro Thr Cys Thr Gly Cys  
(SEQ ID NO: 6811 ) Cys Glu Tyr Cys Glu Asn Pro Thr Cys Thr Ala Cys  
(SEQ ID NO: 6812 ) Cys Glu Tyr Cys Glu Asn Pro Thr Cys Val Gly Cys  
(SEQ ID NO: 6813 ) Cys Glu Tyr Cys Glu Asn Pro Thr Cys Val Ala Cys  
(SEQ ID NO: 6814 ) Cys Glu Tyr Cys Glu Asn Pro Thr Cys Gly Gly Cys  
(SEQ ID NO: 6815 ) Cys Glu Tyr Cys Glu Asn Pro Thr Cys Gly Ala Cys  
(SEQ ID NO: 6816 ) Cys Glu Tyr Cys Glu Asn Gly Ala Cys Thr Gly Cys  
(SEQ ID NO: 6817 ) Cys Glu Tyr Cys Glu Asn Gly Ala Cys Thr Ala Cys  
(SEQ ID NO: 6818 ) Cys Glu Tyr Cys Glu Asn Gly Ala Cys Val Gly Cys  
(SEQ ID NO: 6819 ) Cys Glu Tyr Cys Glu Asn Gly Ala Cys Val Ala Cys  
(SEQ ID NO: 6820 ) Cys Glu Tyr Cys Glu Asn Gly Ala Cys Gly Gly Cys  
(SEQ ID NO: 6821 ) Cys Glu Tyr Cys Glu Asn Gly Ala Cys Gly Ala Cys  
(SEQ ID NO: 6822 ) Cys Glu Tyr Cys Glu Asn Gly Thr Cys Thr Gly Cys  
(SEQ ID NO: 6823 ) Cys Glu Tyr Cys Glu Asn Gly Thr Cys Thr Ala Cys  
(SEQ ID NO: 6824 ) Cys Glu Tyr Cys Glu Asn Gly Thr Cys Val Gly Cys  
(SEQ ID NO: 6825 ) Cys Glu Tyr Cys Glu Asn Gly Thr Cys Val Ala Cys  
(SEQ ID NO: 6826 ) Cys Glu Tyr Cys Glu Asn Gly Thr Cys Gly Gly Cys  
(SEQ ID NO: 6827 ) Cys Glu Tyr Cys Glu Asn Gly Thr Cys Gly Ala Cys

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(SEQ ID NO: 6828 ) Cys Glu Tyr Cys Gly Asn Pro Ala Cys Thr Gly Cys  
 (SEQ ID NO: 6829 ) Cys Glu Tyr Cys Gly Asn Pro Ala Cys Thr Ala Cys  
 (SEQ ID NO: 6830 ) Cys Glu Tyr Cys Gly Asn Pro Ala Cys Val Gly Cys  
 (SEQ ID NO: 6831 ) Cys Glu Tyr Cys Gly Asn Pro Ala Cys Val Ala Cys  
 (SEQ ID NO: 6832 ) Cys Glu Tyr Cys Gly Asn Pro Ala Cys Gly Gly Cys  
 (SEQ ID NO: 6833 ) Cys Glu Tyr Cys Gly Asn Pro Ala Cys Gly Ala Cys  
 (SEQ ID NO: 6834 ) Cys Glu Tyr Cys Gly Asn Pro Thr Cys Thr Gly Cys  
 (SEQ ID NO: 6835 ) Cys Glu Tyr Cys Gly Asn Pro Thr Cys Thr Ala Cys  
 (SEQ ID NO: 6836 ) Cys Glu Tyr Cys Gly Asn Pro Thr Cys Val Gly Cys  
 (SEQ ID NO: 6837 ) Cys Glu Tyr Cys Gly Asn Pro Thr Cys Val Ala Cys  
 (SEQ ID NO: 6838 ) Cys Glu Tyr Cys Gly Asn Pro Thr Cys Gly Gly Cys  
 (SEQ ID NO: 6839 ) Cys Glu Tyr Cys Gly Asn Pro Thr Cys Gly Ala Cys  
 (SEQ ID NO: 6840 ) Cys Glu Tyr Cys Gly Asn Gly Ala Cys Thr Gly Cys  
 (SEQ ID NO: 6841 ) Cys Glu Tyr Cys Gly Asn Gly Ala Cys Thr Ala Cys  
 (SEQ ID NO: 6842 ) Cys Glu Tyr Cys Gly Asn Gly Ala Cys Val Gly Cys  
 (SEQ ID NO: 6843 ) Cys Glu Tyr Cys Gly Asn Gly Ala Cys Val Ala Cys  
 (SEQ ID NO: 6844 ) Cys Glu Tyr Cys Gly Asn Gly Ala Cys Gly Gly Cys  
 (SEQ ID NO: 6845 ) Cys Glu Tyr Cys Gly Asn Gly Ala Cys Gly Ala Cys  
 (SEQ ID NO: 6846 ) Cys Glu Tyr Cys Gly Asn Gly Thr Cys Thr Gly Cys  
 (SEQ ID NO: 6847 ) Cys Glu Tyr Cys Gly Asn Gly Thr Cys Thr Ala Cys  
 (SEQ ID NO: 6848 ) Cys Glu Tyr Cys Gly Asn Gly Thr Cys Val Gly Cys  
 (SEQ ID NO: 6849 ) Cys Glu Tyr Cys Gly Asn Gly Thr Cys Val Ala Cys  
 (SEQ ID NO: 6850 ) Cys Glu Tyr Cys Gly Asn Gly Thr Cys Gly Gly Cys  
 (SEQ ID NO: 6851 ) Cys Glu Tyr Cys Gly Asn Gly Thr Cys Gly Ala Cys  
 (SEQ ID NO: 6852 ) Cys Glu Tyr Cys His Asn Pro Ala Cys Thr Gly Cys  
 (SEQ ID NO: 6853 ) Cys Glu Tyr Cys His Asn Pro Ala Cys Thr Ala Cys  
 (SEQ ID NO: 6854 ) Cys Glu Tyr Cys His Asn Pro Ala Cys Val Gly Cys  
 (SEQ ID NO: 6855 ) Cys Glu Tyr Cys His Asn Pro Ala Cys Val Ala Cys  
 (SEQ ID NO: 6856 ) Cys Glu Tyr Cys His Asn Pro Ala Cys Gly Gly Cys  
 (SEQ ID NO: 6857 ) Cys Glu Tyr Cys His Asn Pro Ala Cys Gly Ala Cys  
 (SEQ ID NO: 6858 ) Cys Glu Tyr Cys His Asn Pro Thr Cys Thr Gly Cys  
 (SEQ ID NO: 6859 ) Cys Glu Tyr Cys His Asn Pro Thr Cys Thr Ala Cys  
 (SEQ ID NO: 6860 ) Cys Glu Tyr Cys His Asn Pro Thr Cys Val Gly Cys  
 (SEQ ID NO: 6861 ) Cys Glu Tyr Cys His Asn Pro Thr Cys Val Ala Cys  
 (SEQ ID NO: 6862 ) Cys Glu Tyr Cys His Asn Pro Thr Cys Gly Gly Cys  
 (SEQ ID NO: 6863 ) Cys Glu Tyr Cys His Asn Pro Thr Cys Gly Ala Cys  
 (SEQ ID NO: 6864 ) Cys Glu Tyr Cys His Asn Gly Ala Cys Thr Gly Cys  
 (SEQ ID NO: 6865 ) Cys Glu Tyr Cys His Asn Gly Ala Cys Thr Ala Cys  
 (SEQ ID NO: 6866 ) Cys Glu Tyr Cys His Asn Gly Ala Cys Val Gly Cys  
 (SEQ ID NO: 6867 ) Cys Glu Tyr Cys His Asn Gly Ala Cys Val Ala Cys  
 (SEQ ID NO: 6868 ) Cys Glu Tyr Cys His Asn Gly Ala Cys Gly Gly Cys  
 (SEQ ID NO: 6869 ) Cys Glu Tyr Cys His Asn Gly Ala Cys Gly Ala Cys  
 (SEQ ID NO: 6870 ) Cys Glu Tyr Cys His Asn Gly Thr Cys Thr Gly Cys

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