

BD1 CIP FWC III

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicants : Sherie L. Morrison, et al.
 Serial No. : 07/893,610
 Filed : June 3, 1992
 For : RECEPTORS BY DNA SPLICING AND EXPRESSION
 Art Unit : 1806
 Examiner : T. Nisbet

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August 23, 1993

Hon. Commissioner of Patents and Trademarks
Washington, D.C. 20231

RESPONSE UNDER 37 C.F.R. §1.115
TO EXAMINER'S ACTION

Sir:

Applicants respectfully request entry of the following amendments to the pending claims:

39. (Thrice amended) A method for producing a functional antibody having a heavy chain and a light chain [two subunits], which comprises the steps of:

(a) transfecting a non-antibody producing mammalian, [lymphoid] cell with a first DNA sequence coding for a first chain [subunit] of the antibody;

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(b) transfecting the cell with a second DNA sequence, said second DNA sequence coding for a second chain [subunit] of the antibody, said second chain [subunit] being a chain [subunit] other than the first chain [subunit] and said first and second chains being either the heavy chain or the light chain; and

(c) maintaining the cell in a nutrient medium, so that the cell expresses the first and second DNA sequences and the resultant chains [subunits] are intracellularly assembled together to form the antibody which is then

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secreted in a form capable of specifically binding to antigen.

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45. (Twice Amended) A method as recited in claim 39 [43] wherein the cell does not endogenously produce any immunoglobulin chains.

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47. (Amended) A method as recited in claim 39 [43] wherein the cell endogenously produces [only] an immunoglobulin light chain or an immunoglobulin heavy chain but not both.

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54. (Twice amended) A method for producing a functional antibody having a heavy chain and a light chain [two subunits], which comprises the steps of:

(a) transfecting a non-antibody producing mammalian ^{lymphoid} [lymphoid] cell with a plasmid comprising a first DNA sequence coding for a first chain [subunit] of the antibody and a second DNA sequence coding for a second chain [subunit] of the antibody, said second chain [subunit] being a chain [subunit] other than the first chain [subunit] and said first and second chains being either the heavy chain or the light chain; and

(b) maintaining the cell in a nutrient medium so that the cell expresses said first DNA sequence and said second DNA sequence and the resultant chains [subunits] are intracellularly assembled together to form the antibody which is then secreted in a form capable of specifically binding to antigen.

Please add the following claims:

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-56. A method as recited in claim 39 wherein the cell is a lymphoid cell.

4 57. A method as recited in claim 54 wherein the cell is transfected via protoplast fusion. 13

15 58. A method as recited in claim 54 wherein the cell is transfected via calcium phosphate precipitation.

59. A method as recited in claim 54 wherein the cell is a lymphoid cell.

16 60. A method as recited in claim 54 wherein the cell is a myeloma cell. *sub 4*

17 61. A method as recited in claim 60 wherein the cell is a murine myeloma cell. 15

18 62. A method as recited in claim 54 wherein the cell does not endogenously produce any immunoglobulin chains. 12

K3 19 63. A method as recited in claim 62 wherein the cell is a murine P₃ cell. 10

20 64. A method as recited in claim 54 wherein the cell endogenously produces an immunoglobulin light chain or an immunoglobulin heavy chain but not both. 12

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21 65. A method as recited in claim 64 wherein the cell is a murine J558L cell.

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22 66. A method as recited in claim 54 wherein the antibody is a chimeric antibody having a variable region substantially the same as that found in a first mammalian source and having a constant region substantially the same as that found in a second mammalian source, said second mammalian source being from a mammalian species other than that of the first mammalian source.

23 67. A method for producing a functional antibody having a heavy chain and a light chain which comprises the steps of:

(a) maintaining in a nutrient medium a non-antibody producing mammalian ^{lymphoid} cell, said cell having been transfected with a first DNA sequence coding for a first chain of the antibody and a second DNA sequence coding for a second chain of the antibody, said second chain being a chain other than the first chain and said first and second chains being either the heavy chain or the light chain;

(b) expressing from said cell the heavy chain and the light chain functionally assembled together to form said antibody which is then secreted in a form capable of binding antigen; and

(c) recovering said antibody.

24 68. A method as recited in claim 67 wherein the cell is transfected via protoplast fusion.

25 69. A method as recited in claim 67 wherein the cell is transfected via calcium phosphate precipitation.

70. A method as recited in claim 67 wherein the cell is a lymphoid cell.

71. A method as recited in claim 67 wherein the cell is a myeloma cell.

72. A method as recited in claim 71 wherein the cell is a murine myeloma cell.

73. A method as recited in claim 67 wherein the cell does not endogenously produce any immunoglobulin chains.

74. A method as recited in claim 73 wherein the cell is a murine P₃ cell.

75. A method as recited in claim 67 wherein the cell endogenously produces an immunoglobulin light chain or an immunoglobulin heavy chain but not both.

76. A method as recited in claim 75 wherein the cell is a murine J558L cell.

77. A method as recited in claim 67 wherein the antibody is a chimeric antibody having a variable region substantially the same as that found in a first mammalian source and having a constant region substantially the same as that found in a second mammalian source, said second mammalian source being from a mammalian species other than that of the first mammalian source.

Please cancel claims 49-51.

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