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(54) **ANTI-VEGF ANTIBODIES**  
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(\* ) Notice: Subject to any disclaimer, the term of this  
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(58) **Field of Classification Search** ..... **530/387.1,**  
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(57) **ABSTRACT**

Humanized and variant anti-VEGF antibodies and various  
uses therefor are disclosed. The anti-VEGF antibodies have  
strong binding affinities for VEGF; inhibit VEGF-induced  
proliferation of endothelial cells in vitro; and inhibit tumor  
growth in vivo.

**22 Claims, 16 Drawing Sheets**

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1          10          20          30          40
A4.6.1  EIQLVQSGPELKQPGETVRISCASGYTFTNYGMNWVKQA
      * * * * * * * * * *
F(ab)-12 EVQLVESGGGLVQPGGSLRLSCAASGYTFTNYGMNWVRQA
      * * * * *
humIII  EVQLVESGGGLVQPGGSLRLSCAASGYTFTNYGMNWVRQA

          50 a          60          70          80
A4.6.1  PGKGLKWMGWINTYTGPTYAADFKRRFTFSLETSASTAYL
      * * * * * * * *
F(ab)-12 PGKGLEWVGWINTYTGPTYAADFKRRFTFSLDTSKSTAYL
      * * * * * * * *
humIII  PGKGLEWVSVISGDGGSTYADSVKGRFTISRDNSKNTLYL

          abc          90          110
A4.6.1  QISNLKNDTATYFCAKYPHYYGSSHWYFDVWGAGTTVTVSS (SEQ.ID NO:9)
      * * * * * * * *
F(ab)-12 QMNSLRAEDTAVYYCAKYPHYYGSSHWYFDVWGQGTLVTVSS (SEQ.ID NO:7)
      * * * * *
humIII  QMNSLRAEDTAVYYCARG-----FDYWGQGTLVTVSS (SEQ.ID NO:11)

```

FIG. 1A

```

1          10          20          30          40
A4.6.1  DIQMTQTTSSLSASLGDRVIISCSASQDISNYLNWYQQKP
      * * * * *
F(ab)-12 DIQMTQSPSSLSASVGDRVTITCSASQDISNYLNWYQQKP
      * * * * *
humKI  DIQMTQSPSSLSASVGDRVTITCRASQDISNYLAWYQQKP

          50          60          70          80
A4.6.1  DGTVKVLIYFTSSLHSGVPSRFSGSGSGTDYSLTISNLEP
      * * * * * * * *
F(ab)-12 GKAPKVLIYFTSSLHSGVPSRFSGSGSGTDFLTISLQF
      * * * * *
humKI  GKAPKLLIYAASSLESGVPSRFSGSGSGTDFLTISLQF

          90          100
A4.6.1  EDIATYYCQOYSTVPWTFGGGKLEIKR (SEQ.ID NO:10)
      * * * * *
F(ab)-12 EDFATYYCQOYSTVPWTFGGGKVEIKR (SEQ.ID NO:8)
      * * * * *
humKI  EDFATYYCQOYNSLPWTFGGGKVEIKR (SEQ.ID NO:12)

```

FIG. 1B

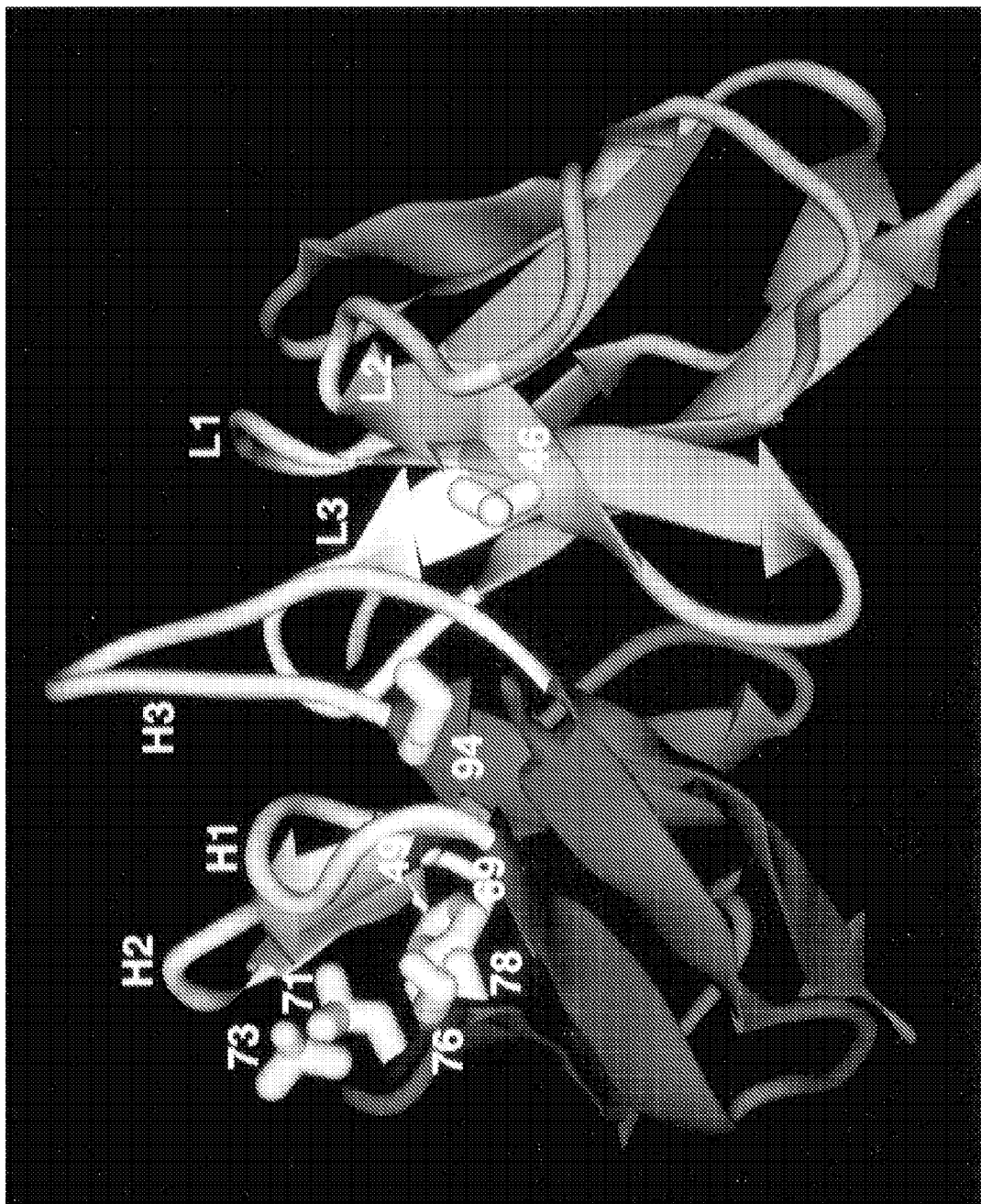


FIG. 2

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