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(54) **ANTI-VEGF ANTIBODIES**

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530/387.3; 530/388.85

(58) **Field of Search** ..... 435/327, 252,  
435/1, 320.1, 252.3, 69.1; 536/23.1, 23.53;  
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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.

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Variable Heavy

A4.6.1 EIQLVCSGPELKQPGETVRI~~SC~~KASGYTETNYGMN~~VVKQAPGKGLKWMG~~  
 \* \* \* \* \* \*\* \* \* \* \* \* \* \* \* \* \*  
 F(ab)-12 EVQLVESGGGLVQPGGSLRLS~~CAASGYTETNYGMN~~WVRQAPGKGLEWVG  
 \*  
 humIII EVQLVESGGGLVQPGGSLRLS~~CAASGFTFSSYAMS~~WVRQAPGKGLEWVS  
 1 10 20 30 40

A4.6.1 WINTYTGEP~~TYAADEKRR~~FTFSLETSASTAYLQISNLKND~~DTATYFCAK~~  
 \* \* \* \* \* \*\* \* \* \* \* \* \* \* \* \* \*  
 F(ab)-12 WINTYTGEP~~TYAADEKRR~~FTSLDTSKSTAYLQMN~~SLRAEDTAVYYCAK~~  
 \* \* \* \* \* \*\*  
 humIII VISGDGGSTYYADSVKGRFTISRDNSKNTLYLQMN~~SLRAEDTAVYYCAR~~  
 50 a 60 70 80 abc 90

Fig. 1A

A4.6.1 YPHYGSSHWYFDVWGAGTTVTVSS (SEQ ID NO: 9)  
 \* \* \* \* \*  
 F(ab)-12 YPHYGSSHWYFDVWGQGLVTVSS (SEQ ID NO: 7)  
 \* \* \* \* \*  
 humIII G-----FDYWGQGLVTVSS (SEQ ID NO: 11)  
 110

Variable Light

A4.6.1 DIQMTQTSSLSASLGDRV~~IISCSASODISNYLN~~WYQOKPDGTVK~~VLIY~~  
 \*\*  
 F(ab)-12 DIQMTQSPSSLSASVGD~~RVTITCSASODISNYLN~~WYQOKPK~~KAPKVLII~~  
 \*  
 humKI DIQMTQSPSSLSASVGD~~RVTITCRASQISNYLAWY~~QOKPK~~KAPKLLIY~~  
 1 10 20 30 40

Fig. 1B

A4.6.1 FTSSLHSGVPSRFSGSGGTDYSLTISNLEPEDIATYYCOOYSTV~~RWTF~~  
 \*\*  
 F(ab)-12 FTSSLHSGVPSRFSGSGGTDFTLTISLQPEDFATYYCOOYSTV~~EWTF~~  
 \*\*  
 humKI AASSLES~~SGVPSRFSGSGGTDFTLTISLQPEDFATYYCQOYNSLPWTF~~  
 50 60 70 80 90

A4.6.1 GGGTKI~~EIKR~~ (SEQ ID NO: 10)  
 \* \* \* \* \*  
 F(ab)-12 GQGTKV~~EIKR~~ (SEQ ID NO: 8)  
 humKI GQGTKV~~EIKR~~ (SEQ ID NO: 12)  
 100



Fig. 2

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