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(54) ANTI-VEGF ANTIBODIES

(75) Inventors: **Manuel Baca**, Foster City, CA (US); **James A. Wells**, Burlingame, CA (US)

(73) Assignee: Genentech, Inc., South San Francisco,

CA (US)

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(58) **Field of Search** 435/327, 252,

435/1, 320.1, 252.3, 69.1; 536/23.1, 23.53; 530/382.1, 387.3, 388, 388.85

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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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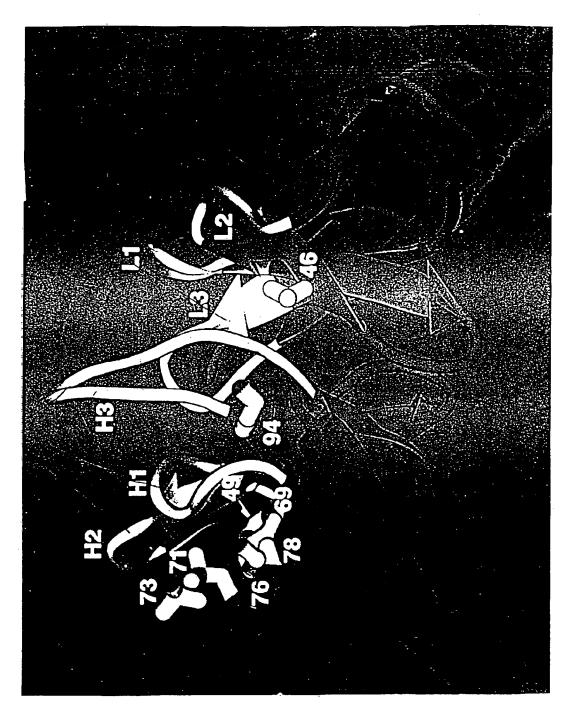
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Variable Heavy

| A4.6.1 | EIQLV | SGPELKO | PGETVRISCKA | SGYTFTNYG | <u>MN</u> WVKQA | PGKGLKWMG | |
|----------------|---|----------------|------------------------|------------------------|----------------------|------------------|---------|
| F(ab)-12 | FAOTA | ESGGGLVQ | PGGSLRLSCAA | GYTFTNYG | * <u>MN</u> WVRQA | * * PGKGLEWVG | |
| illumun | | | PGGSLRLSCAAS 20 | * ** * | | | |
| A4.6.1 | WINTYT | GEPTYAAI | O <u>FKR</u> RFTFSLE1 | SASTAYLQ | ISNLKNDI | TATYFCAK | |
| F(ab)-12 | WINTYT | GEPTYAAI | OFKRRFTFSLDI | SKSTAYLQI | *** *** Mnslraei | * * TAVYYCAK | Fig. 14 |
| humIII | VISGDG 50 a | GSTYYADS 60 | VKGRFTISRDN 70 | SKNTLYLQI 80 | MNSLRAEI abc | TAVYYCAR 90 | |
| <i>k</i> 4.6.1 | YPHYYG | SSHWYFDV | WGAGTTVTVSS | (SEØ 10 1 | (P:04 | | |
| F(ab)-12 | YPHYYG: | SSHWYFDV | WGQGTLVTVSS | (SEO ID | (F:0N | | |
| humIII | G | FDY | WGQGTLVTVSS 110 | (SEØ IC | > NO: 11) | | |
| | | 7 | [/] ariable L | ight | | | |
| A4.6.1 | DIQMTQT | TSSLSAS | LGDRVIISC <u>SAS</u> | ODISNYLN | WYQQKPD | GTVKVLIY | |
| F(ab)-12 | DIQMTQS | PSSLSAS | VGDRVTITC <u>SAS</u> | ODISNYLN | * WYQQKPGI | *** KAPKVLIY | |
| humKI | DIQMTQS | PSSLSAS | VGDRVTITCRAS 20 | * * GOSISNYLA 30 | WYQQKFG 40 | * KAPKLLIY | |
| A4.6.1 | UMA OT 110 | | | | | | Fig. 1B |
| | | | SGSGTDYSLTI ** | * * * | | | |
| F(ab)-12 | FTESL SGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCOOYSTVFWTF | | | | | | |
| humKI | Aassles () | TVPSRTSG | SGSGTDFTLTI 70 | SSLQPEDF/ 80 | ATYYCQQY 90 | NSLPWTF | |
| A4.6.1 | GGGTKIE | ikr (Sec | (01:0N al | | | | |
| F(ab)-12 | GQGTKVE | KR (S EG | (8:0N ai s | | | | |
| humKI | GQGTKVE | KR (SEG | (E1:04 O1 & | | | | |





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