

Figure1

MF nr	Specificity	VH Sequence
1337	TT	EVQLVETQAEYKKGASVYSCASGDTPTVDNWRQAPQQLQEMQVGSANTGNTQYAAQKQGRVTHFDTSINTATAYMSLSLTSQDTAVYTCARSLPZTETAPYTHPFDLVWGQGITVTVSS
3579	EGFR	QVQLVQSGAEVKKPKQASVYSCAKSCYTTSTSGISWVRQAPQQLQEMGWISAYNGNTNYAQKLAQGRVMTDTISNTAYMELSLRSQDTAVYYCAKDKRHWHWLDAFTYWGQGITVTVSS
3755	EGFR	QVQLVQSGELKEPKASVYSCAKSGDTPTVYAMNWRQAPQCHGLEWVGWINANTQDPTVAQPGTPQVPSLDTNSNTAYLQSSSLKARSAVYVYVUTREKRELEWLFHFDYWGQGITVTVSS
4297	CMET	EVQLVDSGGGLVKTFGSGELRLSCAASGFTYSKAWNNWVRQAPQCHGLEWVGVRKSKDGGDTTDAAPYKQKRTSRDSESLYLGQNSLKTETAVYVYCTASSMTFGGVSWHFDYWGQGITVTVSS
4356	CMET	QVQLVQSGSELKPKASVYSCAKSCYVFTSYSEMNVVRQAPQQLQEMGWINTYTOOPTVAQPGTPQVPSLDTNSNTAYLQSSSLKADDTAVYCAKETTYVDKGGYTFDFTWQGITVTVSS
2708	HSV-G	EVQLVETSGGVVQFCRLRLSCAASGFTFSNVGMHWVRQAPQCHGLEWVAVISYDGSNTYGSADSLKQFTSRDSESLNTLYLGQNSLRADDTAVYVYCAKEQWGSFDSNGYRSWFDSWGQGITVTVSS

MF nr	Specificity	FR1	CDR1	FR2	CDR2	FR3	CDR3	FR4
1337	TT	EVQLVETQAEYKKGASVYSCASGDTPTVDNWRQAPQQLQEMQVGSANTGNTQYAAQKQGRVTHFDTSINTATAYMSLSLTSQDTAVYTCARSLPZTETAPYTHPFDLVWGQGITVTVSS	NYDIN	WVRQAPQCHGLEWVG	WQDAWNGNIGIAQNFQS	RTWTQDTSINTATAYMSLSLTSQDTAVYTCAR	SSLPZTETAPYTHPFDLV	WGQGITVTVSS
3579	EGFR	QVQLVQSGAEVKKPKQASVYSCAKSCYTTSTSGISWVRQAPQQLQEMGWISAYNGNTNYAQKLAQGRVMTDTISNTAYMELSLRSQDTAVYYCAKDKRHWHWLDAFTYWGQGITVTVSS	SYGDS	WVRQAPQCHGLEWVG	WISALNGNINWIAQNLQS	RTWTQDTSINTATAYMSLSLTSQDTAVYTCAR	CHRRHWLDAFTY	WGQGITVTVSS
3755	EGFR	QVQLVQSGELKEPKASVYSCAKSGDTPTVYAMNWRQAPQCHGLEWVGWINANTQDPTVAQPGTPQVPSLDTNSNTAYLQSSSLKARSAVYVYVUTREKRELEWLFHFDYWGQGITVTVSS	NYAQN	WVRQAPQCHGLEWVG	WIRNNTGQPTVAQGITG	RTVPSLDTISNTAYLQSSSLKARSAVYVYVUTREKRELEWLFHFDY	EHFLDLHFDY	WGQGITVTVSS
4297	CMET	EVQLVDSGGGLVKTFGSGELRLSCAASGFTYSKAWNNWVRQAPQCHGLEWVGVRKSKDGGDTTDAAPYKQKRTSRDSESLYLGQNSLKTETAVYVYCTASSMTFGGVSWHFDYWGQGITVTVSS	KARQN	WVRQAPQCHGLEWVG	RISKEDGGTIDYAAAFVNG	RTISRDSKNTLILQ	ASSMTFGGVSWHFDY	WGQGITVTVSS
4356	CMET	QVQLVQSGSELKPKASVYSCAKSCYVFTSYSEMNVVRQAPQQLQEMGWINTYTOOPTVAQPGTPQVPSLDTNSNTAYLQSSSLKADDTAVYCAKETTYVDKGGYTFDFTWQGITVTVSS	SYGMN	WVRQAPQCHGLEWVG	WINTYTOOPTVAQGITG	RTISRDSKNTLILQ	ETYYVGRGAFHFDY	WGQGITVTVSS
2708	HSV-G	EVQLVETSGGVVQFCRLRLSCAASGFTFSNVGMHWVRQAPQCHGLEWVAVISYDGSNTYGSADSLKQFTSRDSESLNTLYLGQNSLRADDTAVYVYCAKEQWGSFDSNGYRSWFDSWGQGITVTVSS	NYGMH	WVRQAPQCHGLEWVAVISYDGSNTYGSADSLKQFTSRDSESLNTLYLGQNSLRADDTAVYVYCAKEQWGSFDSNGYRSWFDSWGQGITVTVSS	WISALNGNINWIAQNLQS	RTISRDSKNTLILQ	ETYYVGRGAFHFDY	WGQGITVTVSS

Figure 2

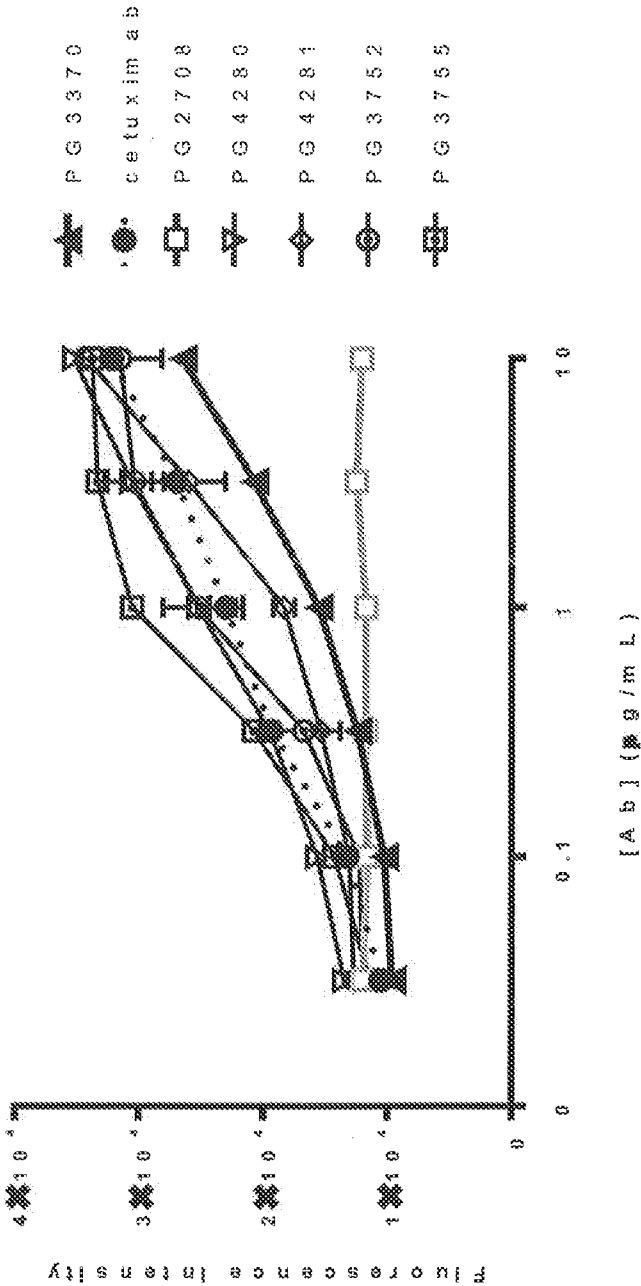


Figure 3

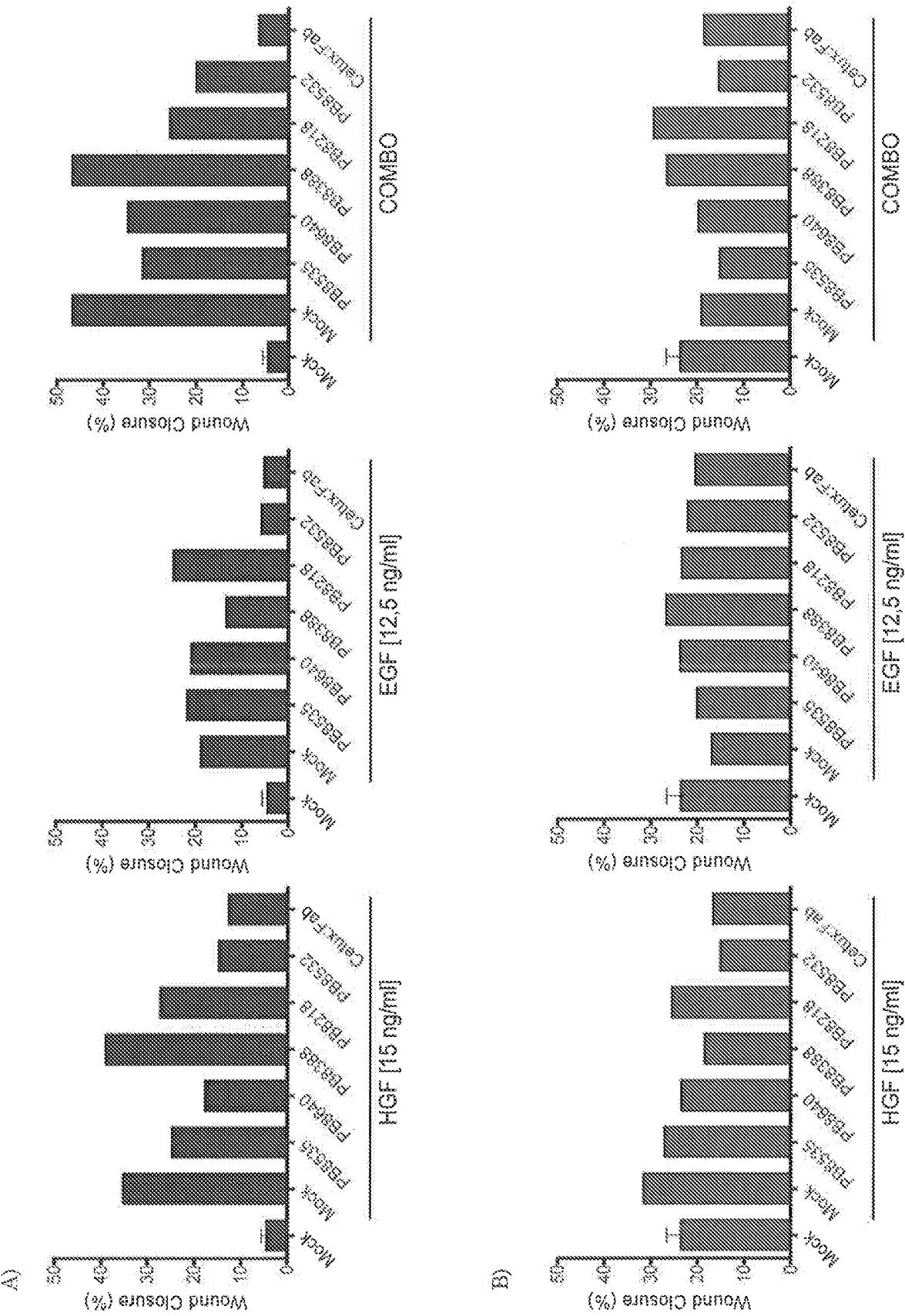
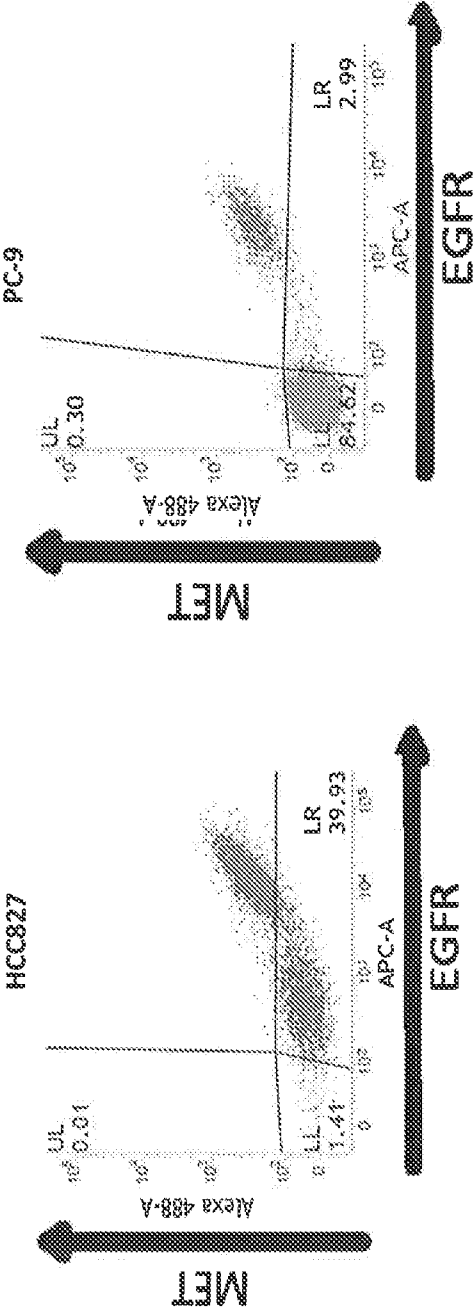


Figure 4.

A)



B)

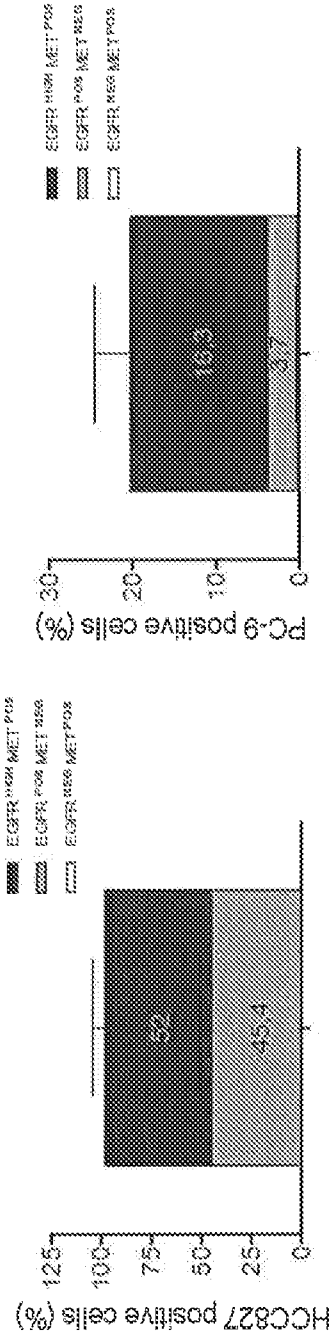


Figure 5

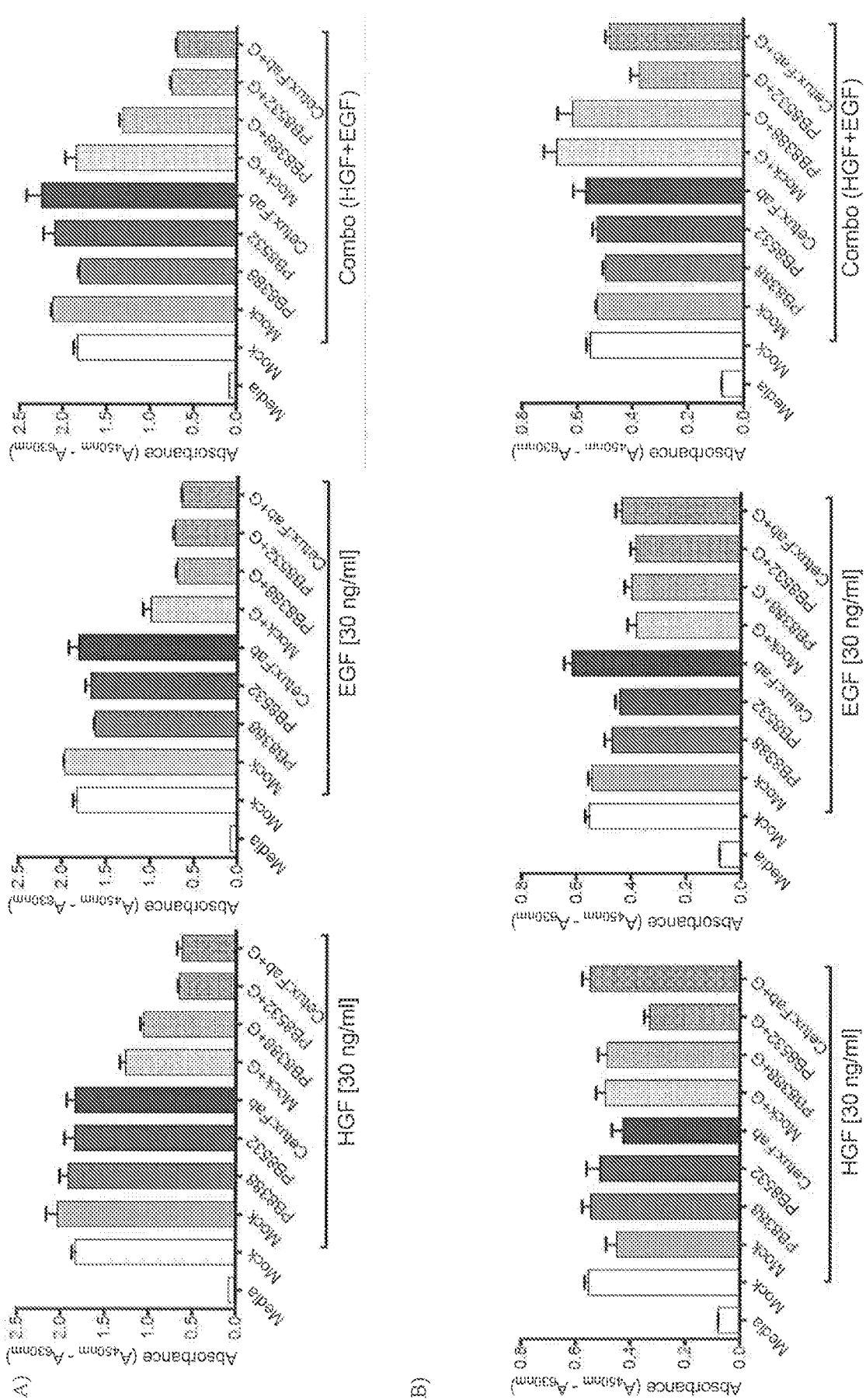


Figure 6

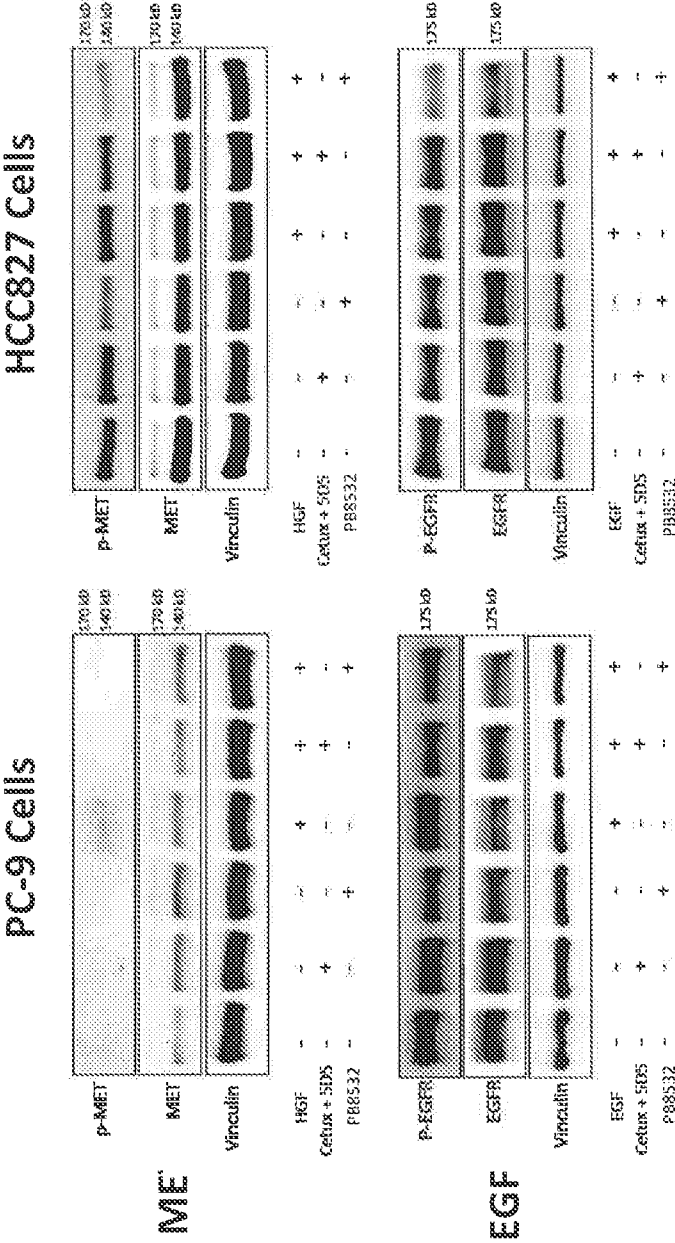


Figure 7

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MF3353 QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLEWMGW
MF8229 QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLEWMGW
MF8228 QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLEWMGW
MF3370 QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLEWMGW
MF8233 QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLEWMGW
MF8232 QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLEWMGW
MF3393 QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLEWMGW
MF8227 QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLEWMGW
MF8226 QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLEWMGW
*****

MF3353 ISAYNGNTNYAQKLQGRVTMTTDTSTSTAYMELRSLRSDDTAVYYCARDS
MF8229 ISAYNANTNYAQKLQGRVTMTTDTSTSTAYMELRSLRSDDTAVYYCARDS
MF8228 ISAYSGNTNYAQKLQGRVTMTTDTSTSTAYMELRSLRSDDTAVYYCARDS
MF3370 ISAYNGNTNYAQKLQGRVTMTTDTSTSTAYMELRSLRSDDTAVYYCAKDR
MF8233 ISAYNANTNYAQKLQGRVTMTTDTSTSTAYMELRSLRSDDTAVYYCAKDR
MF8232 ISAYSGNTNYAQKLQGRVTMTTDTSTSTAYMELRSLRSDDTAVYYCAKDR
MF3393 ISAYNGNTNYAQKLQGRVTMTTDTSTSTAYMELRSLRSDDTAVYYCARGY
MF8227 ISAYNANTNYAQKLQGRVTMTTDTSTSTAYMELRSLRSDDTAVYYCARGY
MF8226 ISAYSGNTNYAQKLQGRVTMTTDTSTSTAYMELRSLRSDDTAVYYCARGY
****_*****

MF3353 YWHWWLGAFDYWGQGTFLVTVSS
MF8229 YWHWWLGAFDYWGQGTFLVTVSS
MF8228 YWHWWLGAFDYWGQGTFLVTVSS
MF3370 HWHWWLDAFDYWGQGTFLVTVSS
MF8233 HWHWWLDAFDYWGQGTFLVTVSS
MF8232 HWHWWLDAFDYWGQGTFLVTVSS
MF3393 LDHWWLGAFDYWGQGTFLVTVSS
MF8227 LDHWWLGAFDYWGQGTFLVTVSS
MF8226 LDHWWLGAFDYWGQGTFLVTVSS
****_*****
```

MF8225	INTYTGNNPTTYAQGFTGRFVFPLDTSVSTAYLQISSLKAEDTAVYYCARET
MF8243	INTNTGNPTTYAQGFTGRFVFSLDTSVSTAYLQISSLKAEDTAVYYCARET
MF8224	INTNTGNPTTYAQDFTGRFVFSLDTSVSTAYLQISSLKAEDTAVYYCARET
MF8239	INTYTGNNPTTYVQGFTGRFVFSLDTSVSTAYLQISSLKAEDTAVYYCARET
MF8242	INTNTGNPTTYAQGFTGRFVFPLDTSVSTTYLQISSLKAEDTAVYYCARET
MF8237	INTNTGNPTTYAQGFTGRFVFSLDTSVSTAYLQINSLKAEDTAVYYCARES
MF8240	INTNTGNPTTYAQGFTGRFVFSLDTSVSTAYLQISSLNTEdTAVYYCARET
MF8234	INTYTGNNPTTYAQGFTGRFVFSLDTSVSTAYLQISSLKAEDTAVYYCARET
MF8245	INTYTGNNPTTYAQGFTGRFVFSSDTSVNTAYLQISSLKAEDTAVYYCARET
MF8231	INTYTGDPPTYVQGFTGRFVFSLDTSVSTAYLQISSLKAEDTAVYYCARET
MF8247	INTYTGNNPTTYVQGFTGRFVFSLDTSVSTAYLQISSLKAEDTAVYYCARET
MF8238	INTYTGSPPTYAQGFTGRFVFSLDTSVSTAYLQISSLKAEDTAIYYCARET
MF8230	INTYTGDPPTYAQGFTGRFVFSLDTSVSTAYLQISSLKAEDTAVYYCARET
MF8248	INTNTGNPTTYAQGFTGRFVFSLDTSVSTAHLQISSLKAEDTAVYYCARET
MF8246	INTYTGDPPTYAQGFTGRFVFSLDTSVNTAYLQISSLKAEDTAVYYCARET
MF8223	INTNTGNPTTYAQGFTGRFVFSLDTS DSTAFLQISSLKAEDTAVYYCARET
MF8222	INTNTGTPTYAQGFTGRFVFSLDTSVSTAYLQISSLKAEDTAVYYCARET
MF8235	INTNTGTPTYAQGFTGRFVFSLDTSVSTAYLQISSLKAEDTAVYYCARET
MF8236	INTYTGNNPTTYAQGFTGRFVFSLDTSVSTAYLQISSLTTEdTAVYYCARET
MF8241	INTYTGSPPTYAQGFTGRFVFSLDTSVSTAYLQISSLKAEDTAVYYCARET
MF8244	INTYTGSPPTYAQGFTGRFVFSLDTSVSTAYLQISSLKAEDTAVYYCARET

```
MF8221          INTYTGNTTYVQGGFTGRFVFSLDTSVSTAYLQISSLKAEHTAVYYCARET  
MF4356          INTYTGDPITYAQGGFTGRFVFSLDTSVNTAYLQISSLKAEHTAVYYCARET  
                *** * ** *.*****;**   ** .*; **.***.*.*****;*****;  
  
MF8225          YYYDSSSGYPFDPPWGQGTLVTVSS (SEQ ID NO: 1)  
MF8243          YYYDRGGYPFDPPWGQGTLVTVSS (SEQ ID NO: 2)  
MF8224          YYYDSSSGYPFDPPWGQGTLVTVSS (SEQ ID NO: 3)  
MF8239          YYYDSSSGFPFDPPWGQGTLVTVSS (SEQ ID NO: 4)  
MF8242          YYYQSSGGLFDPPWGQGTLVTVSS (SEQ ID NO: 5)  
MF8237          YYYDRNDYPFDPPWGQGTLVTVSS (SEQ ID NO: 6)  
MF8240          YYYDVGGYPFDPPWGQGTLVTVSS (SEQ ID NO: 7)  
MF8234          YYYDSSGYPFDPPWGQGTLVTVSS (SEQ ID NO: 8)  
MF8245          FYFDSSSGYPFDPPWGQGTLVTVSS (SEQ ID NO: 9)  
MF8231          FYFDRGGYPFDPPWGQGTLVTVSS (SEQ ID NO: 10)  
MF8247          YYYDSSAYPFDPPWGQGTLVTVSS (SEQ ID NO: 11)  
MF8238          FYFDSSGYPFDPPWGQGTLVTVSS (SEQ ID NO: 12)  
MF8230          FYFDRGGYPFDPPWGQGTLVTVSS (SEQ ID NO: 13)  
MF8248          YYYATSGYPFDPPWGQGALVTVSS (SEQ ID NO: 14)  
MF8246          SYIDRTGYFPDPPWGQGTLVTVSS (SEQ ID NO: 15)  
MF8223          YYYDSSSGYPFDPPWGQGTLVTVSS (SEQ ID NO: 16)  
MF8222          YYYDSSSGYPFDPPWGQGTLVTVSS (SEQ ID NO: 17)  
MF8235          YYYGSSSGYPFAPWGQGTLVTVSS (SEQ ID NO: 18)  
MF8236          YYYESSGYPFDPPWGQGTLVTVSS (SEQ ID NO: 19)  
MF8241          YYFDSDGYFPDPPWGQGTLVTVSS (SEQ ID NO: 20)  
MF8244          YYFDSSGYPFDPPWGQGTLVTVSS (SEQ ID NO: 21)  
MF8221          YYYDSSSGYPFDPPWGQGTLVTVSS (SEQ ID NO: 22)  
MF4356          YYYDRGGYPFDPPWGQGTLVTVSS (SEQ ID NO: 23)  
                ;. : * *****;*****
```

Figure 9A:

DIQMTQSFSSLSASVGDRTTITCRASQSISSYLNNWYQQKPGKAPKLLIYAASSLQSGVPSRFSGSGSGTDFTLT
 SSLQPEDFATYYCQQSYSTPPTFGQGTKVEIK
 RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSSTYSLSSTLTLS
 KADYERHKKVYACEVTHQGLSSPVTKSFNRGEC

Figure 9B:

gacatccagatgacccagtcctccatccctccctgtctgcacatctgtaggagacagagtcacc
 D I Q M T Q S P S S L S A S V G D R V T
 atcacttgcocgggcaagtcagagcattagcagctacttaaaattggtatcagcagaaacca
 I T C R A S Q S I S S Y L N W Y Q Q K P
 gggaaagcccccctaagctcctgatctatgctgcacccagtttgcaaagtggggtcccatca
 G K A P K L L I Y A A S S L Q S G V P S
 aggttcagtgggcagtggtatctgggacagatttcactctcaccatcagcagtcctgcaacct
 R F S G S G S G T D F T L T I S S L Q P
 gaagattttgcaacttactactgtcaacagagttacagtagccctccaaacgttcggccaa
 E D F A T Y Y C Q Q S Y S T P P T F G Q
 gggaccaaggtggagatcaaa
 G T K V E I K

Figure 9C:

cgaactgtggctgcaccatctgtcttcatcttcccgccatctgatgagcagttgaaatct
 R T V A A P S V F I F P P S D E Q L K S
 ggaactgcctctgttggtgctgctgaataacttctatcccagagaggccaaagtagag
 G T A S V V C L L N N F Y P R E A K V Q
 tggaaaggtggataacgcctccaatcgggtaactccaggagagtggtcacagagcaggac
 W K V D N A L Q S G N S Q E S V T E Q D
 agcaaggacagcacctacagcctcagcagcaccctgacgctgagcaaagcagactacgag
 S K D S T Y S L S S T L T L S K A D Y E
 aaacacaaaagttatcgccctgcgaagtcacccatcagggcctgagctcgcccgtcacaaag
 K H K V Y A C E V T H Q G L S S P V T K
 agcttcaacaggggagagtggttag
 S F N R G E C -

Figure 9D

DIQMTQSPSSLSASVGDRVTITCRASQSISSYLNWYQQKPKGKAPKLLIYAASSLQSGVPSRFSGSGSG
TDETLTISLQPEDFATYYCQQSYSTPPITFGQGTREIK

Figure 9E

DIQMTQSPSSLSASVGDRVTITCRASQSISSYLNWYQQKPKGKAPKLLIYAASSLQSGVPSRFSGSGSG
TDETLTISLQPEDFATYYCQQSYSTP

Figure 10A

CH1:

gctagcaccacagggcccatcggtcttccccctggcaccctcctccaagagcacctctggg
A S T K G P S V F P L A P S S K S T S G
ggcacagcggccctgggctgcctgggtcaaggactacttccccgaaccgggtgacgggtgtcg
G T A A L G C L V K D Y F P E P V T V S
tggaactcaggcgccctgaccagcggcggtgcacaccttccccgggtgtcctacagtcctca
W N S G A L T S G V H T F P A V L Q S S
ggactctactccctcagcagcgtcgtgaccgtgcccctccagcagcttgggcacccagacc
G L Y S L S S V V T V P S S S L G T Q T
tacatctgcaacgtgaatcacacagcccagcaacaccaaggtggacaagagagtt
Y I C N V N H K P S N T K V D K R V

Figure 10B

Hinge:

gagcccaaatcttgtgacaaaaactcacacatgccaccgtgcccc
E P K S C D K T H T C P P C P

Figure 10C

CH2:

gcacctgaactcctggggggaccgtcagttcttcttcccccccaaaacccaaggacacc
A P E L L G G P S V F L F P P K P K D T
ctcatgatctccgggacccctgaggtcacatgcgtgggtgggtggacgtgagccacgaagac
L M I S R T P E V T C V V V D V S H E D
cctgaggtcaagttcaactgggtacgtggacggcggtggaggtgcataatgccaaagacaaag
P E V K F N W Y V D G V E V H N A K T K
ccgcgggaggagcagtagacaacagcacgtaccgtgtgggtcagcgtcctcacccgtcctgcac
P P E E Q Y N S T Y R V V S V L T V L H
caggactgggtgaatggcaaggagtacaagtgcagggtctccaacaaagccctcccagcc
Q D W L N G K E Y K C K V S N K A L P A
cccatcgagaaaaaccatctccaaagccaaa
P I E K T I S K A K

Figure 10D

CH2 containing L235G and G236R silencing substitutions:

```

gcacctgaactcggcaggggacgcgtcagttcttctcttcccccccaaaacccaaggacacc
A P E L G R G P S V F L F P P K P K D T
ctcatgatctccccgacccctgaggtcacatgcgtgggtgggacgtgagccaagagac
L M I S R T P E V T C V V V D V S H E D
cctgaggtcaagttcaactgggtacgtggacggcgtggaggtgcataatgccaaagacaaag
P E V K F N W Y V D G V E V H N A K T K
ccgcgggaggagcagtagacaacagcacgtaccgtgtgggtcagcgtctctcacogtccctgcac
P R E E Q Y N S T Y R V V S V L T V L H
caggactgggtgaatggcaaggagtagaagtgcaagggtctccaacaaagccctcccagcc
Q D W L N G K E Y K C K V S N K A L P A
cccatcgagaaaaccatctccaagccaaa
P I E K T I S K A K

```

Figure 10E

CH3: KK of DEKK

```

gggcagccccgagaaccacaggtgtacaccaagccccccatccccgggaggagatgaccaag
G Q P R E P Q V Y T K P P S R E E M T K
aaccaggtcagcctgaagtgcctgggtcaaaaggcttctatcccagcgacatcgccgtggag
N Q V S L K C L V K G F Y P S D I A V E
tgggagagcaatgggcagccgggagaaactacaagaccacgcctccccgtgtgtggactcc
W E S N G Q P E N N Y K T T P P V L D S
gacggctccttcttctctatagcaagctcacccgtggacaagagcaggtggcagcagggg
D G S F F L Y S K L T V D K S R W Q Q G
aacgttcttctcatgtccgtgatgcagtgaggctctgcacaaccactacacgcagaagagc
N V F S C S V M H E A L H N H Y T Q K S
ctctccctgtctccgggttga
L S L S P G -

```

Figure 10F

CH3: DE of DEKK

```

gggcagccccgagaaccacaggtgtacaccgacccccccatccccgggaggagatgaccaag
G Q P R E P Q V Y T D P P S R E E M T K
aaccaggtcagcctgacctgaggtgcaaaaggcttctatcccagcgacatcgccgtggag
N Q V S L T C E V K G F Y P S D I A V E
tgggagagcaatgggcagccgggagaaactacaagaccacgcctccccgtgtgtggactcc
W E S N G Q P E N N Y K T T P P V L D S
gacggctccttcttctctatagcaagctcacccgtggacaagagcaggtggcagcagggg
D G S F F L Y S K L T V D K S R W Q Q G
aacgttcttctcatgtccgtgatgcagtgaggctctgcacaaccactacacgcagaagagc
N V F S C S V M H E A L H N H Y T Q K S
ctctccctgtctccgggttga
L S L S P G -

```

Figure 11

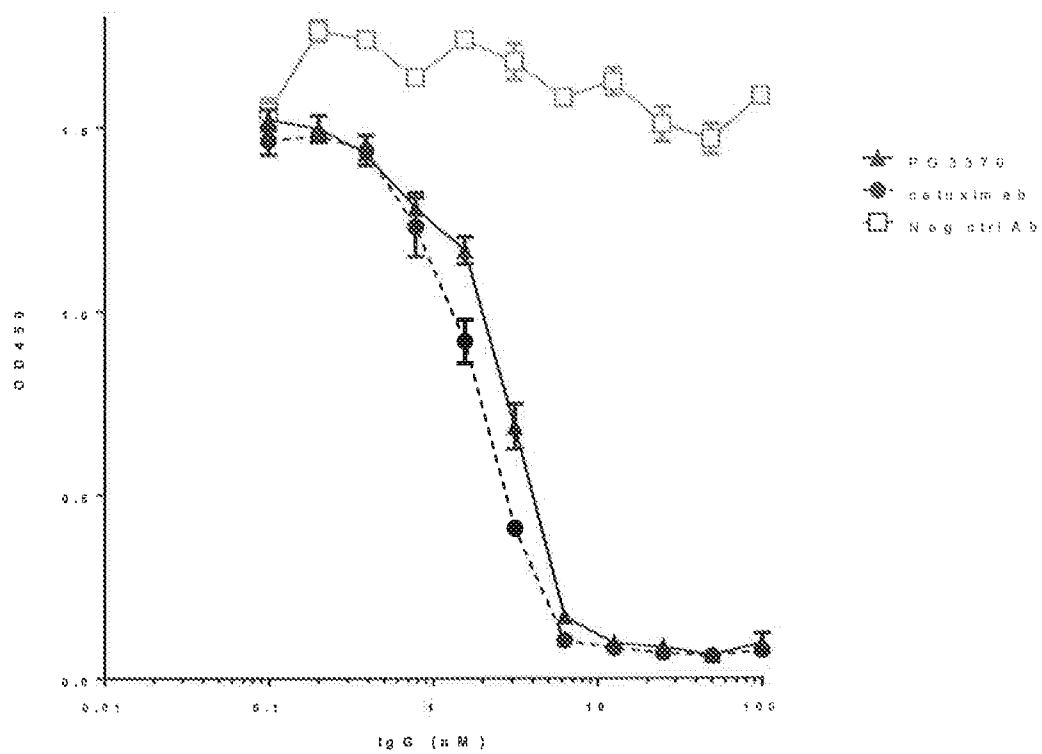


Figure 12

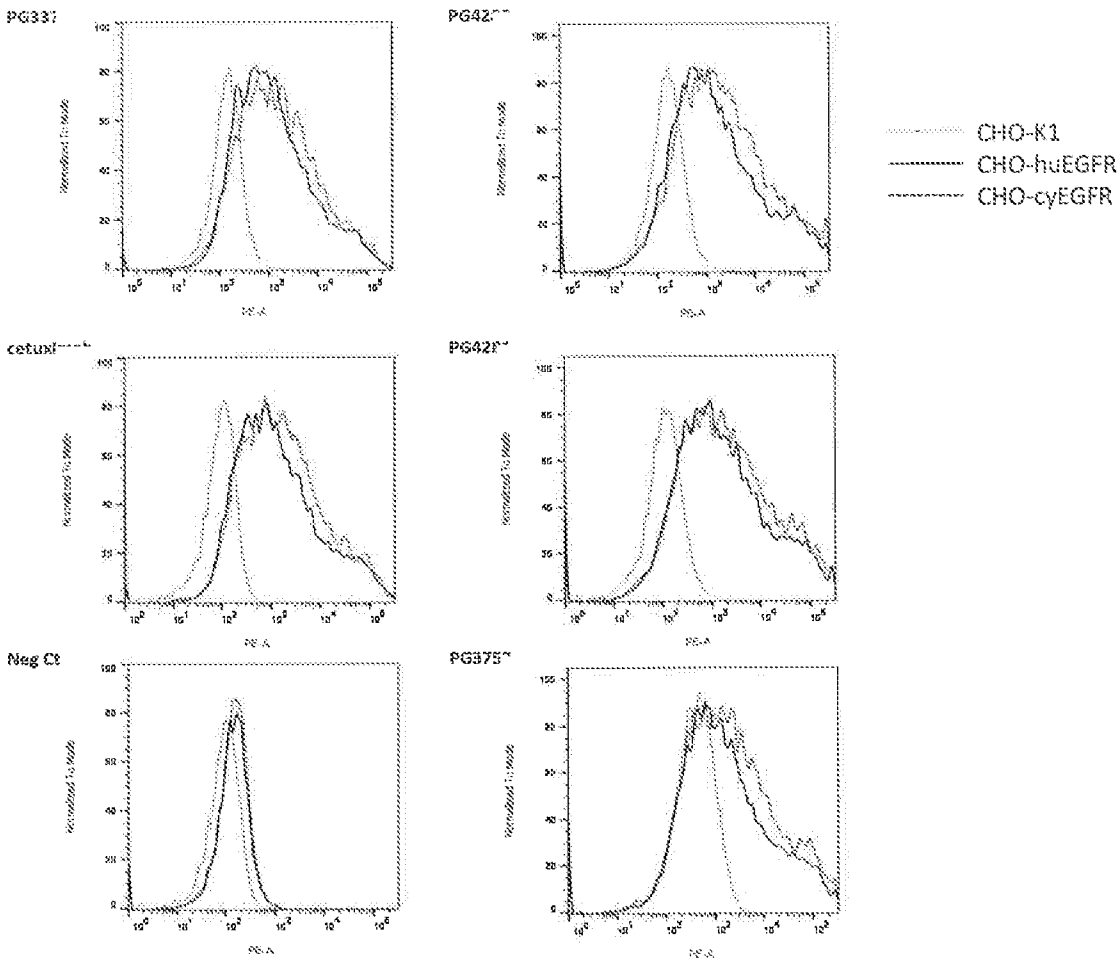


Figure 13

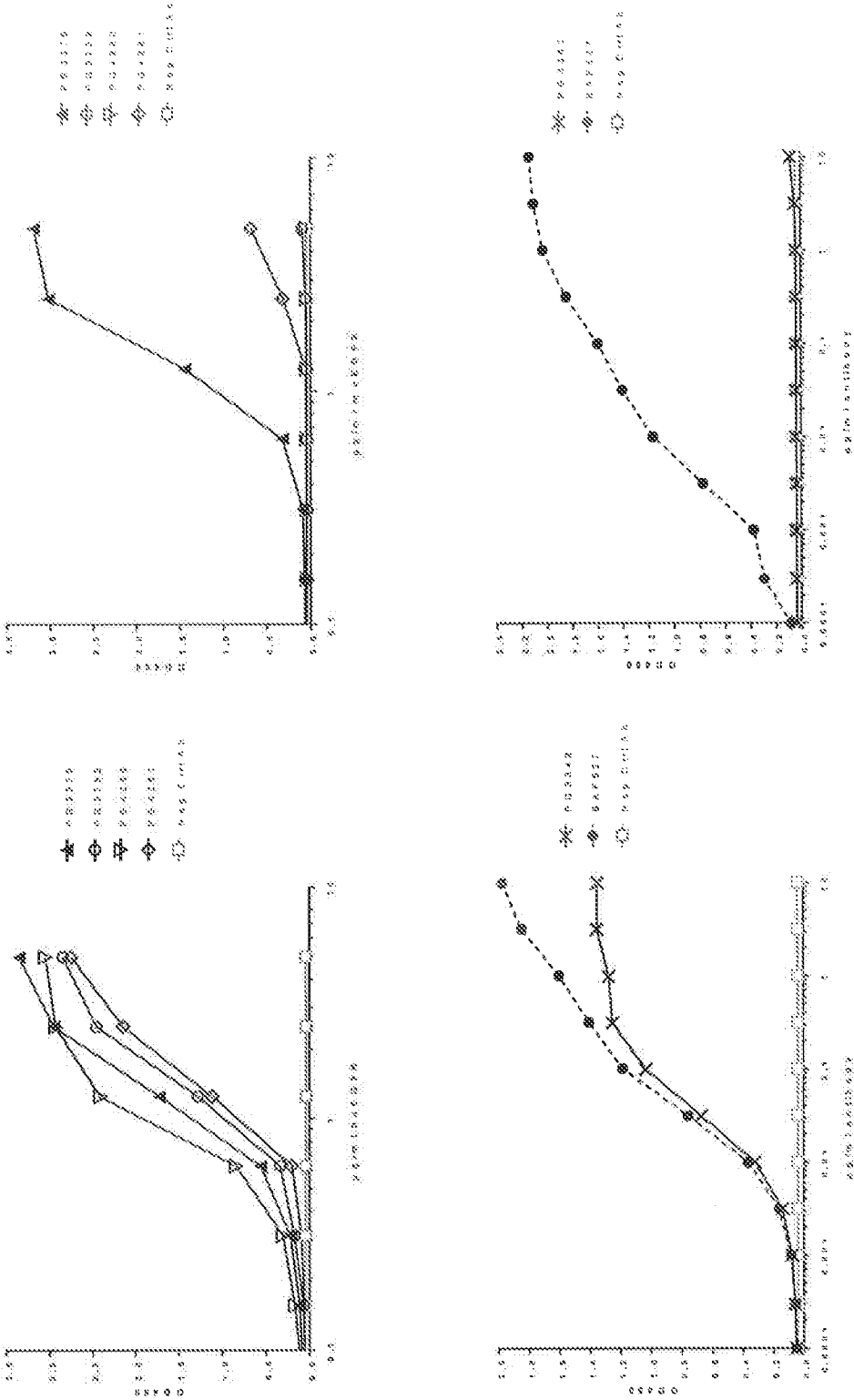


Figure 14A

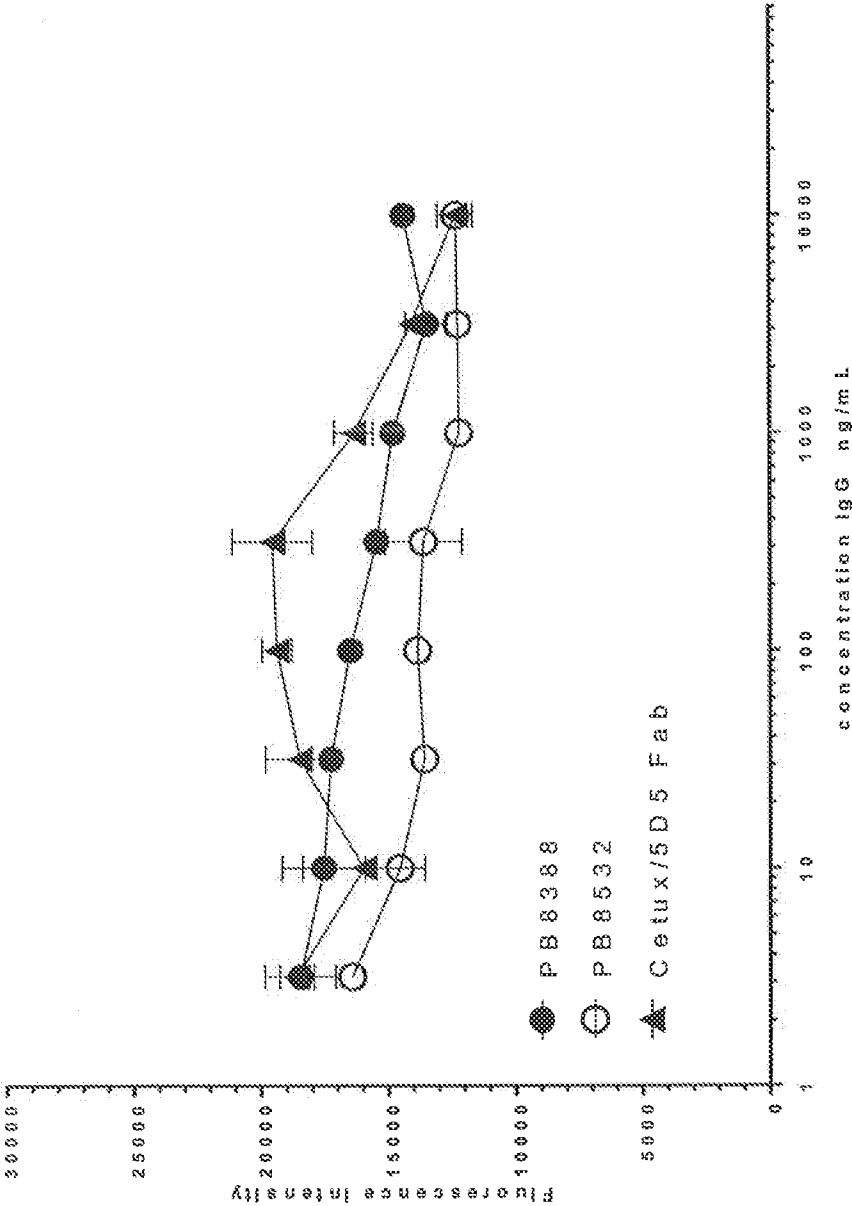


Figure 14B

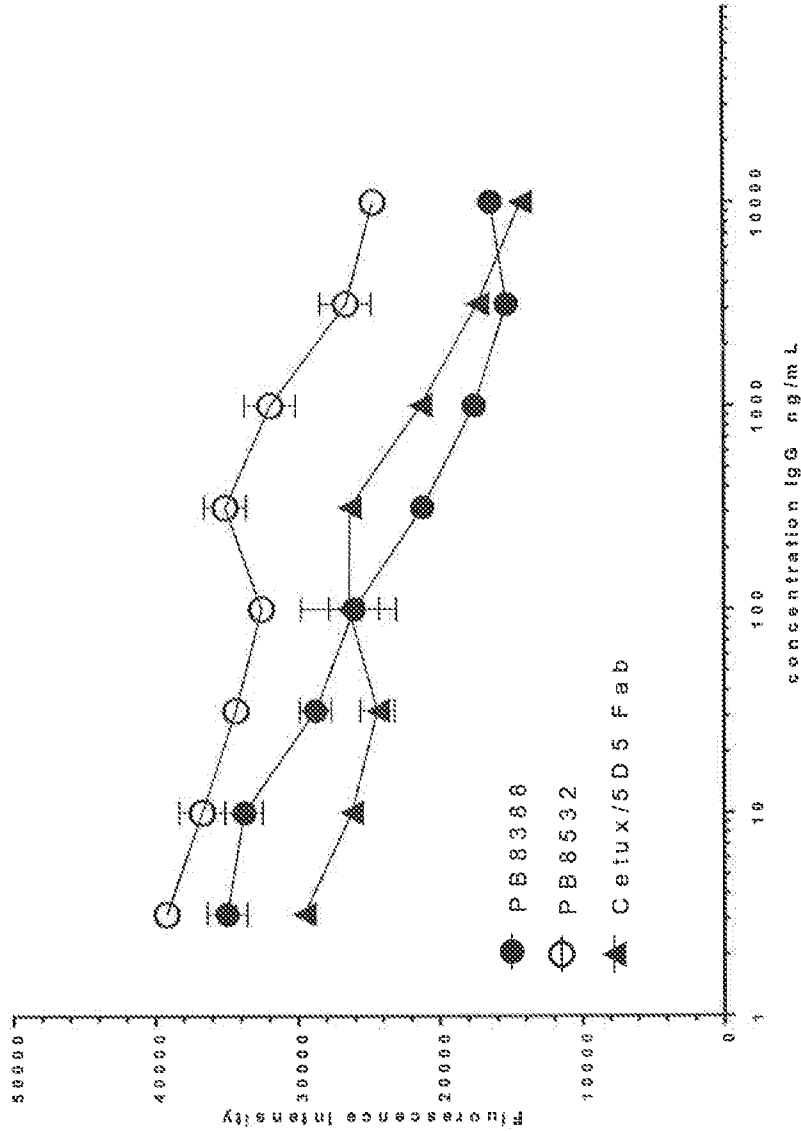


Figure 14C

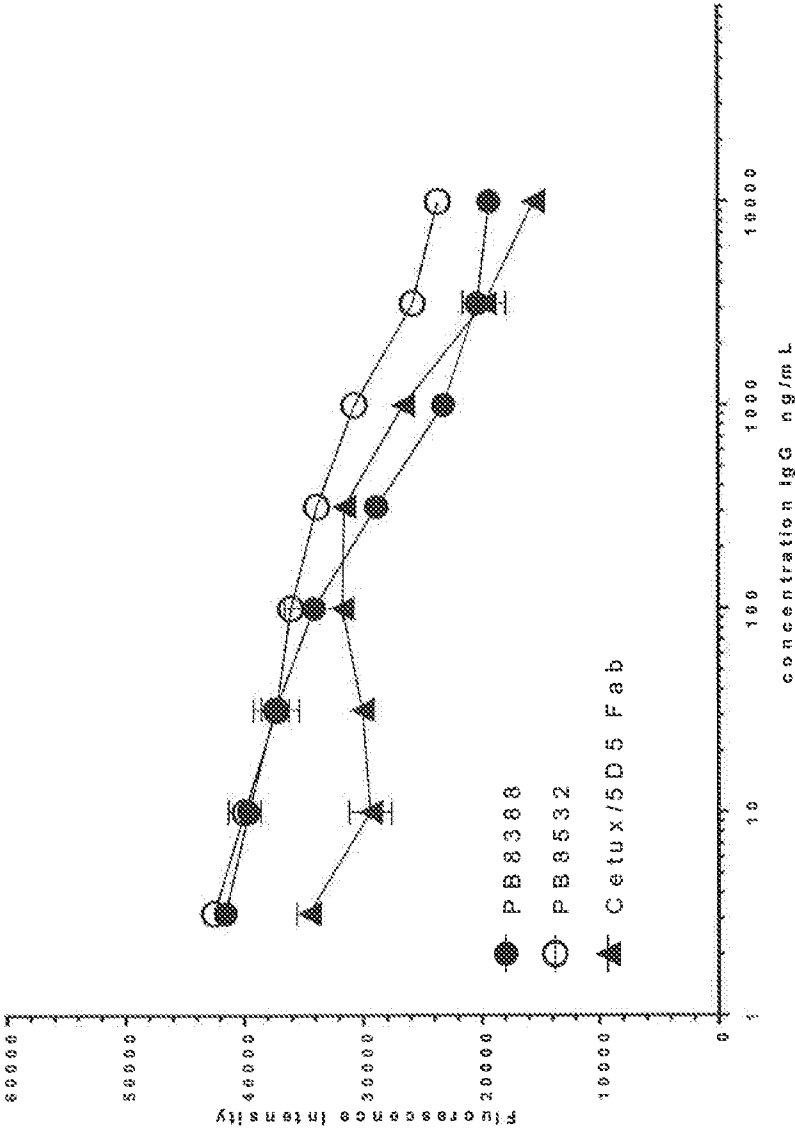


Figure 15B

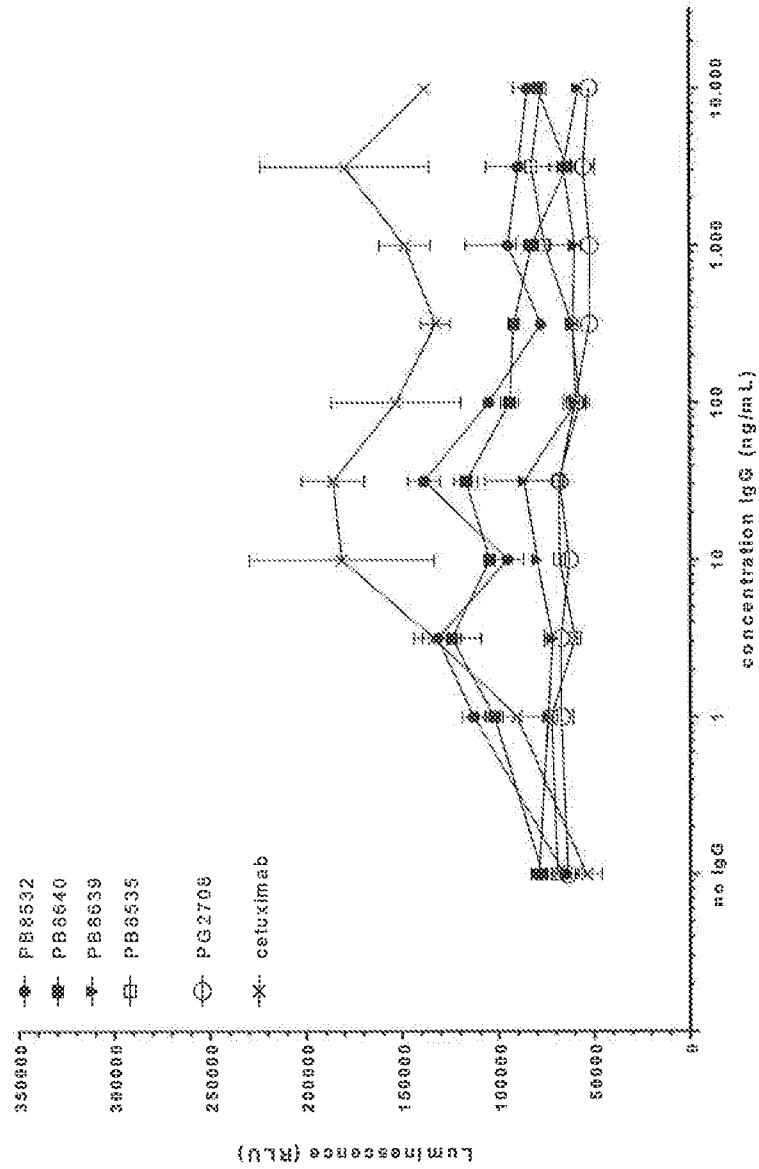


Figure 16A

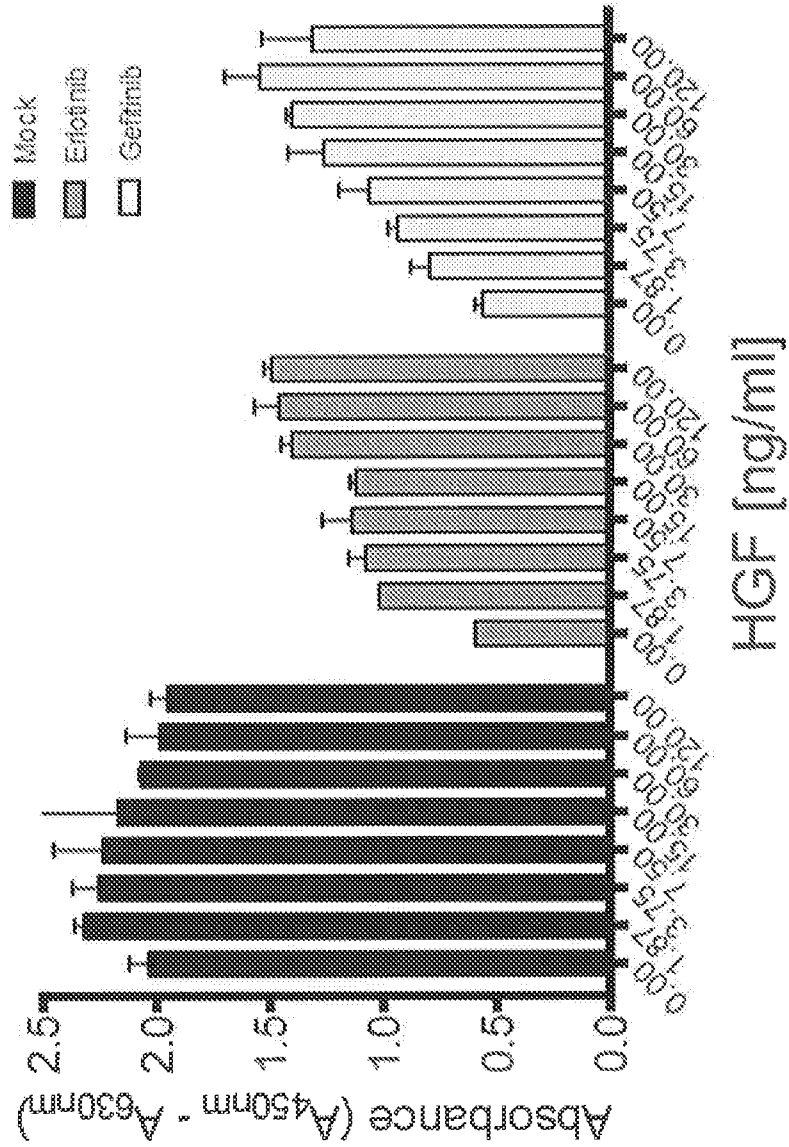


Figure 16B

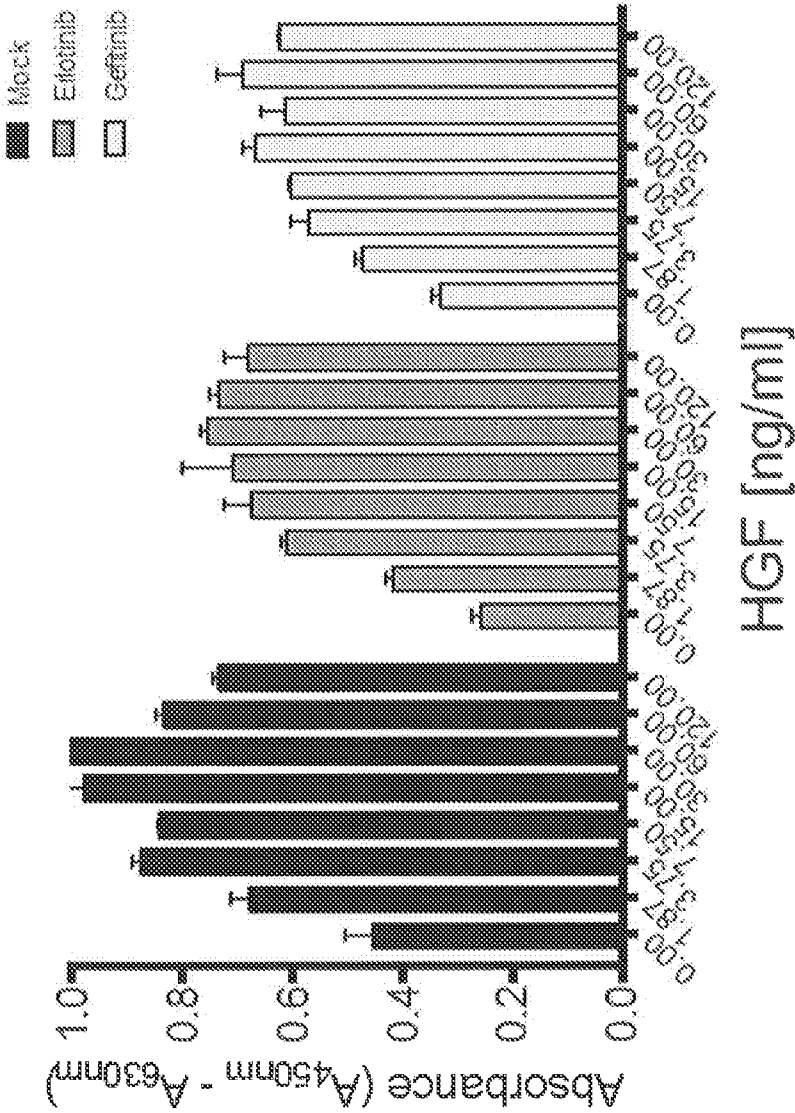


Figure 17A

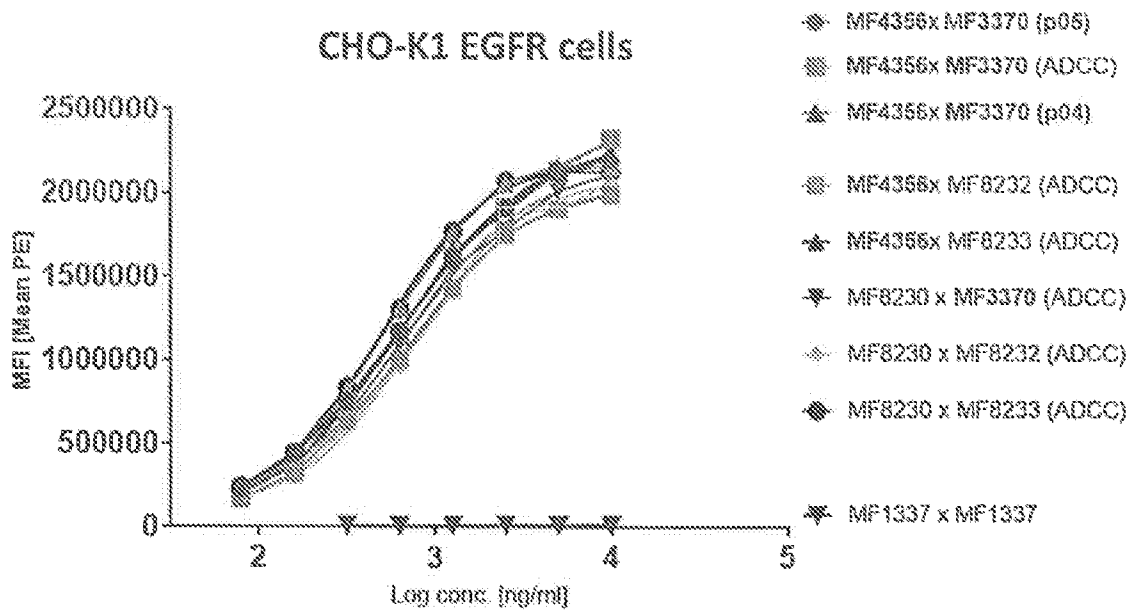


Figure 17B

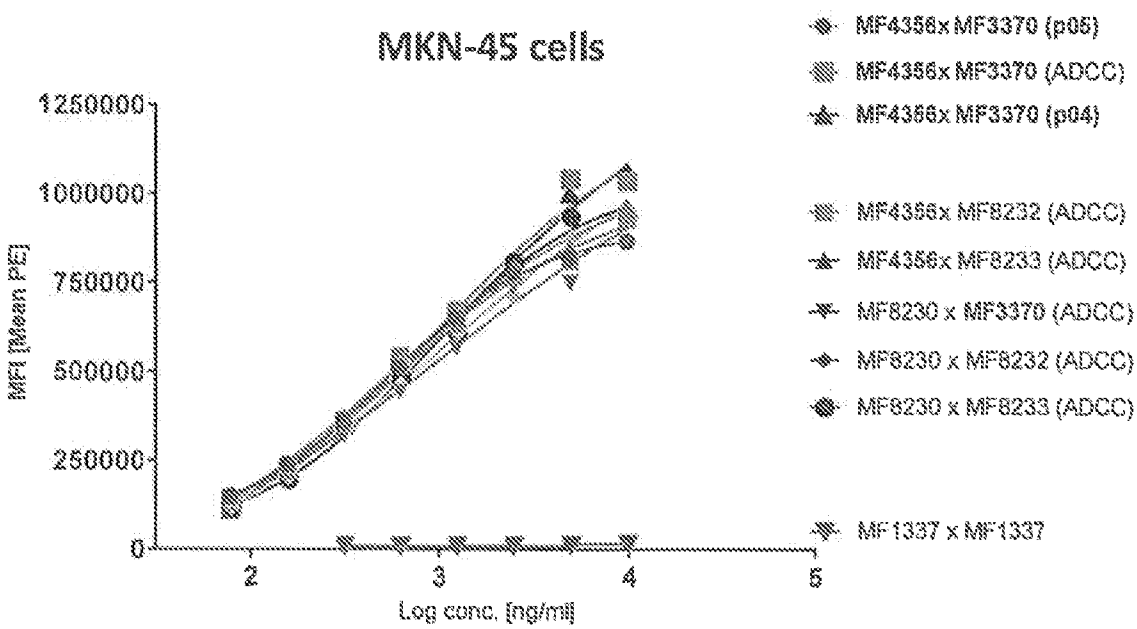


Figure 18

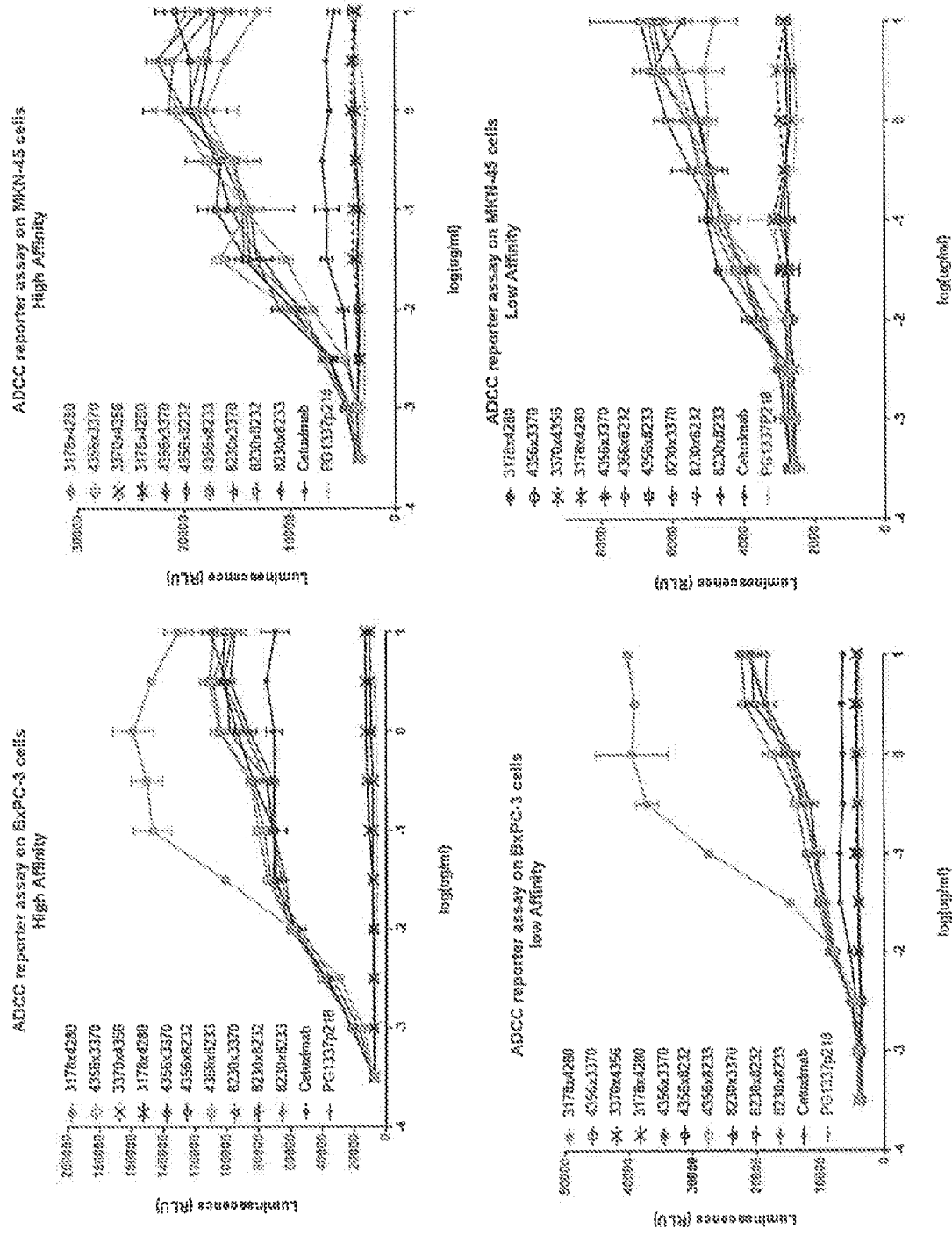


Figure 19

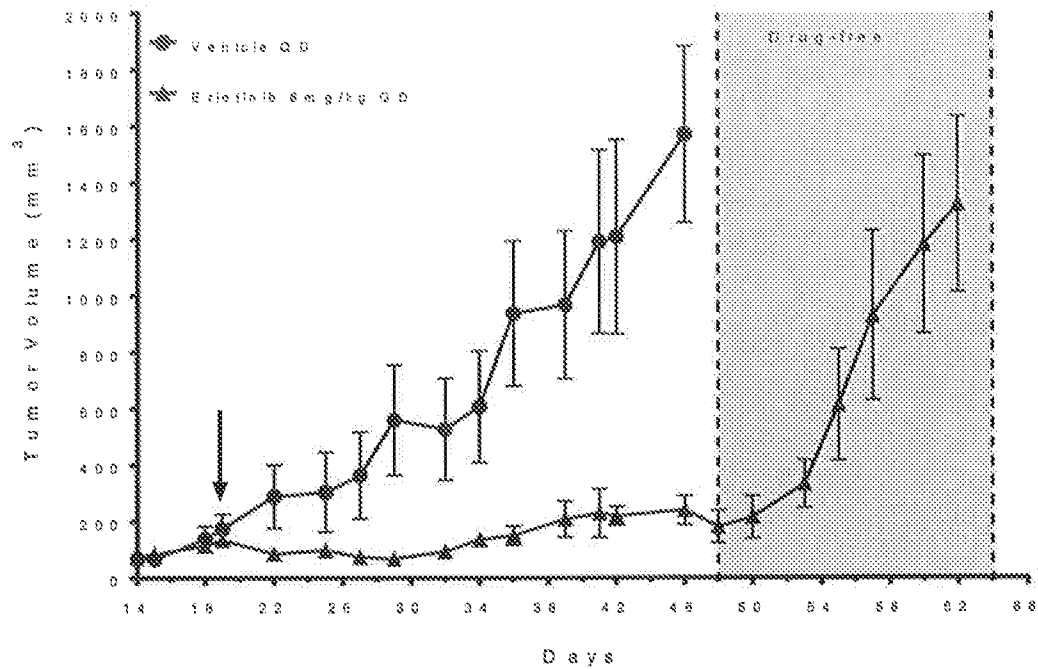


Figure 20

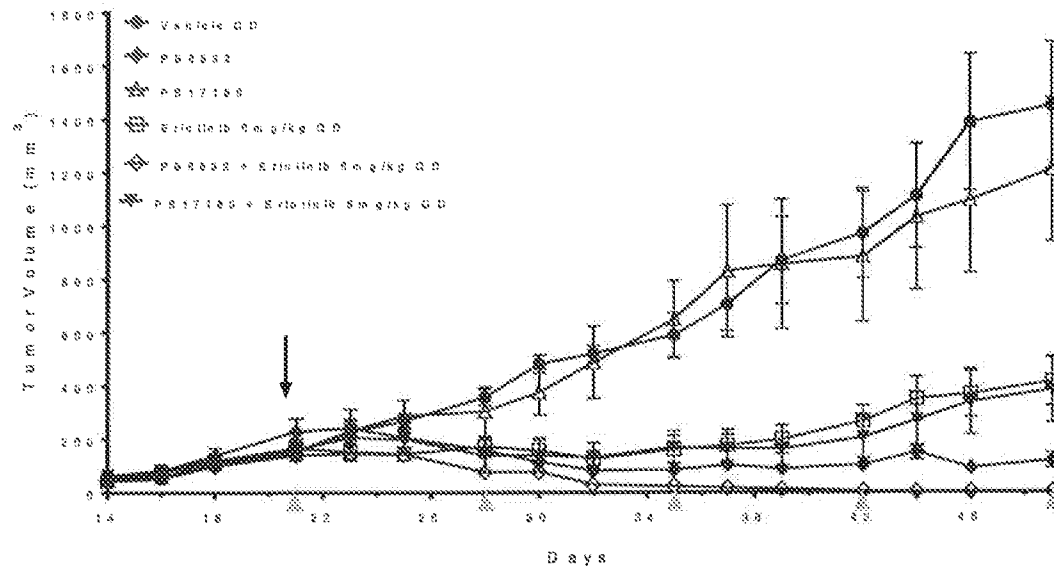


Figure 21

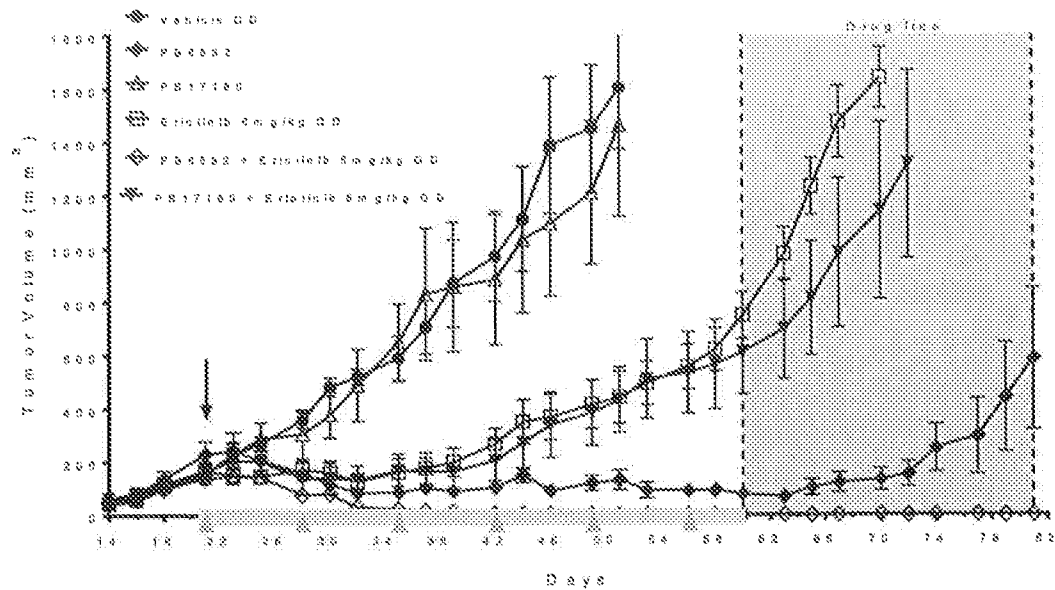


Figure 22

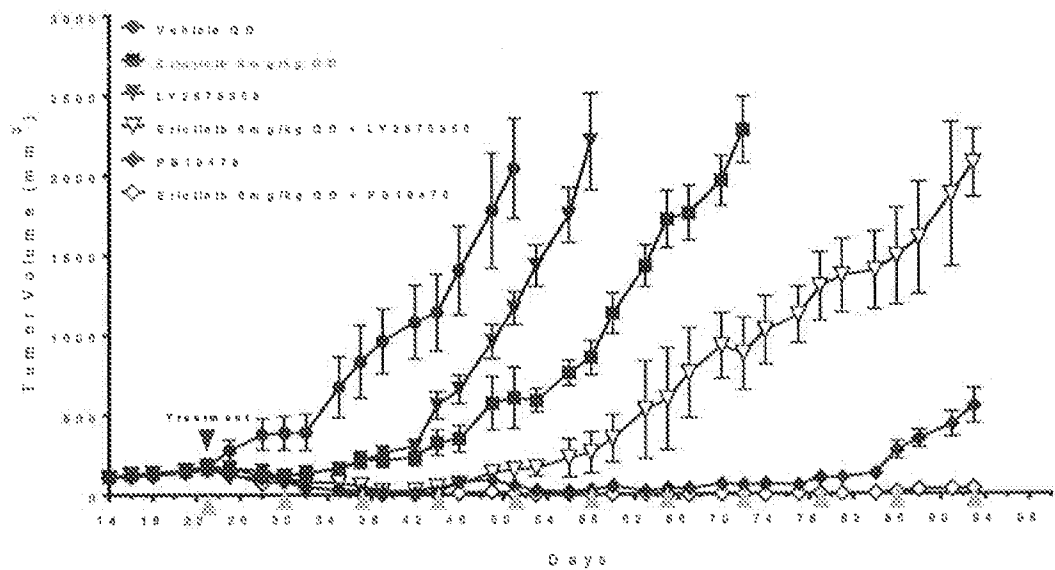


Figure 23

