

Figure 1

```

                                40          50          60
MDTSR LGVLL SLPVL LQLAT GGSSP RSGVL LRGCP THCHC EPDGR MLLRV DCSDL GLSEL
                                90          100         110         120
PSNLS VFTSY LDLSM NNISQ LLPNP LPSLR FLEEL RLAGN ALTYI PKGAF TGLYS LKVLM
                                180
LQNNQ LRHVP TEALQ NLRSL QSLRL DANHI SYVPP SCFSG LHSLR HLWLD DNALT EIPVQ
                                240
AFRSL SALQA MTLAL NKIHH IPDYA FGNLS SLVVL HLHNN RIHSL GKKCF DGLHS LETLD
                                300
LNNYN LDEFP TAIRT LSNLK ELGFH SNNIR SIPEK AFVGN PSLIT IHFYD NPIQF VGRSA
                                360
FQHLP ELRTL TLNGA SQITE FPDLT GTANL ESLTL TGAQI SSLPQ TVCNQ LPNLQ VLDLS
                                420
YNLLE DLPSE SVCQK LQKID LRHNE IYEIK VDTFQ QLSSL RSLNL AWNKI AIIHP NAFST
                                480
LPSLI KDLDS SNLLS SFPIT GLHGL THLKL TGNHA LQSLI SSENF PELKV IEMPY AYQCC
                                540
AFGVC ENAYK ISNQW NKGDN SSMDD LHKKD AGMFQ AQDER DLEDF LLDPE EDLKA LHSVQ
                                600
CSPSP GPFPK CEHLL DGWLI RIGVW TIAVL ALTCN ALVTS TVFRS PLYIS PIKLL IGZIA
                                660
AVNML TGVSS AVLAG VDAFT FGSFA RHGAW WENGV GCHVI GFLSI FASES SVFLL TLAAL
                                720
ERGFs VKYSA KFETK APFSS LKVII LLCAL LALTM AAVPL LGGSK YGASP LCLPL PFGEF
                                780
STMGY MVALI LLNSL CFLMM TIAYT KLYCN LDKGD LENIW DCSMV KHIAL LLFTN CILNC
                                840
PVAFL SFSSL INLTF ISPEV IKFIL LVVVP LPACL NPLLY ILFNP HFKEF LVSLR KQTYV
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VAFVP CL

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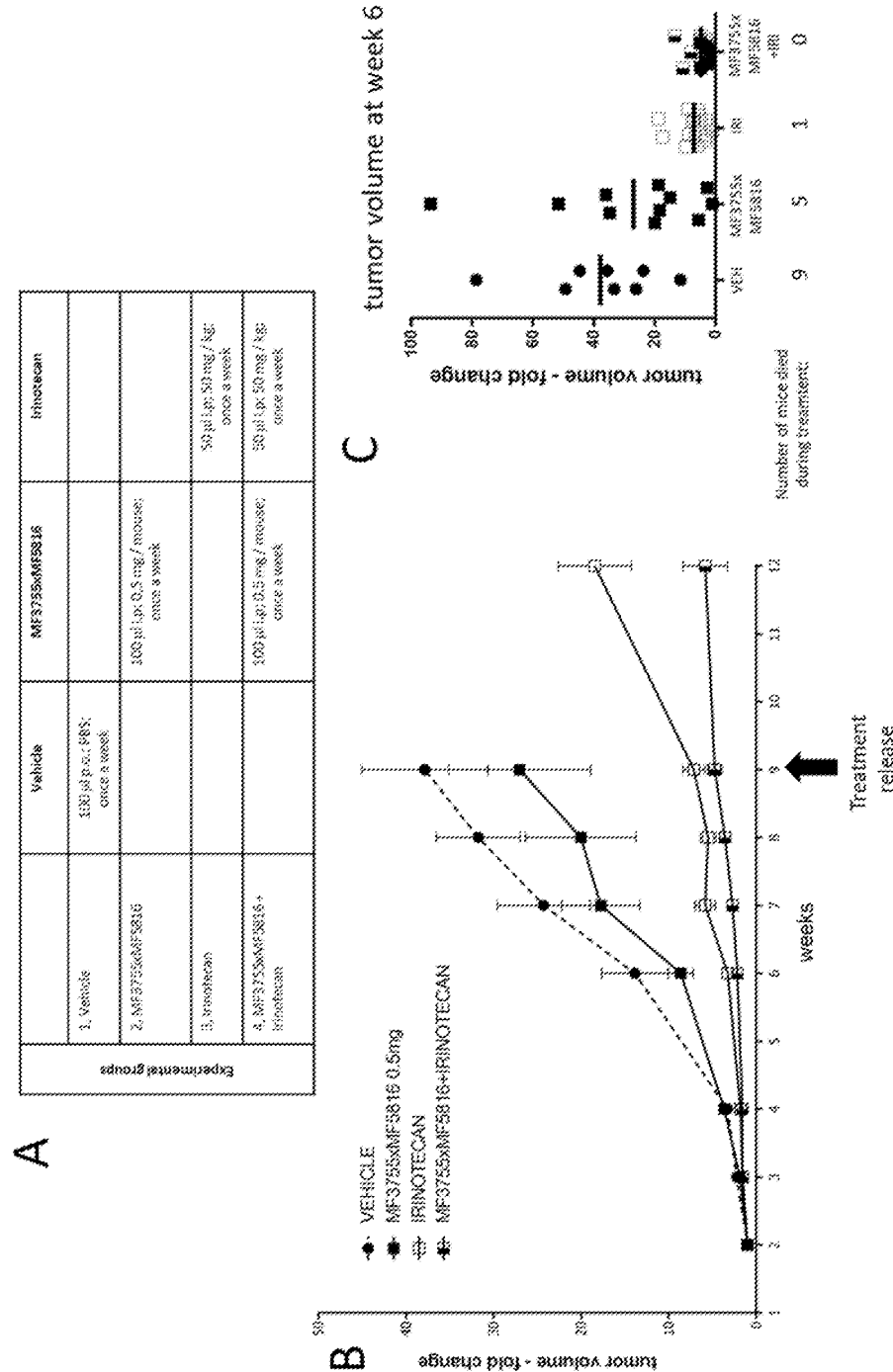
Figure 2

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LENLQ IIRGN MYZEN SYALA VLSNY DANKT GLKEL PMRNL QEILH GAVRF
                                200
SNNPA LCNVE SIQWR DIVSS DFSLN MSMDF QNHLG SCQKC DPSCP NGSCW
GAGEE NCQKL TKIIC AQQCS GRCRG KSPSD CCHNQ CAAGC TGPRE SDCLV
                                300
CRKFR DEATC KDTCP PLMLY NPTTY QMDVN PEGKY SFGAT CVKKC PRNYV
VTDHG SCVRA CGADS YEMEE DGVRK CKKCE GPCRK VCNGI GIGEF KDSLS
                                400
INATN IKHFK NCTSI SGDLH ILPVA FRGDS FTHTP PLDPQ ELDIL KTVKE
ITGFL LIQAW PENRT DLHAF ENLEI IRGRT KQHGG FSLAV VSLNI TSLGL
                                500
RSLKE ISDGD VIISG NKNLC YANTI NWKKL FGTSG QKTKI ISNRG ENSCK
ATGQV CHALC SPEGC WGPEP RDCVS CRNVS RGREC VDKCN LLEGE PREFV
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VGALL LLLVV ALGIG LFMRR RHIVR KRTL RLLQE RELVE PLTPS GEAPN
QALLR ILKET EFKKI KVLGS GAFGT VYKGL WIPEG EKVKI PVAIK ELREA
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YVREH KDNIG SQYLL NWCVQ IAKGM NYLED RRLVH RDLAA RNVLV KTPQH
                                900
VKITD FGLAK LLGAE EKEYH AEGGK VPIKW MALES ILHRI YTHQS DVWSY
GVTVW ELMTF GSKPY DGIPA SEISS ILEKG ERLPQ PPIC TIDVYM IMVKC
                                1000
WMIDA DSRPK FRELI IEFSE MARDP QRYLV IQGDE RMHLP SPTDS NFYRA
LMDEE DMDDV VDADE YLIPQ QGFFS SPSTS RTPLL SSLSA TSNNS TVACI
                                1100
DRNGL QSCPI KEDSF LQRYE SDPTG ALTED SIDDT FLPVP EYINQ SVPKR
PAGSV QNPVY HNQPL NPAPS RDPHY QDPHS TAVGN PEYLN TVQPT CVNST
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Figure 3



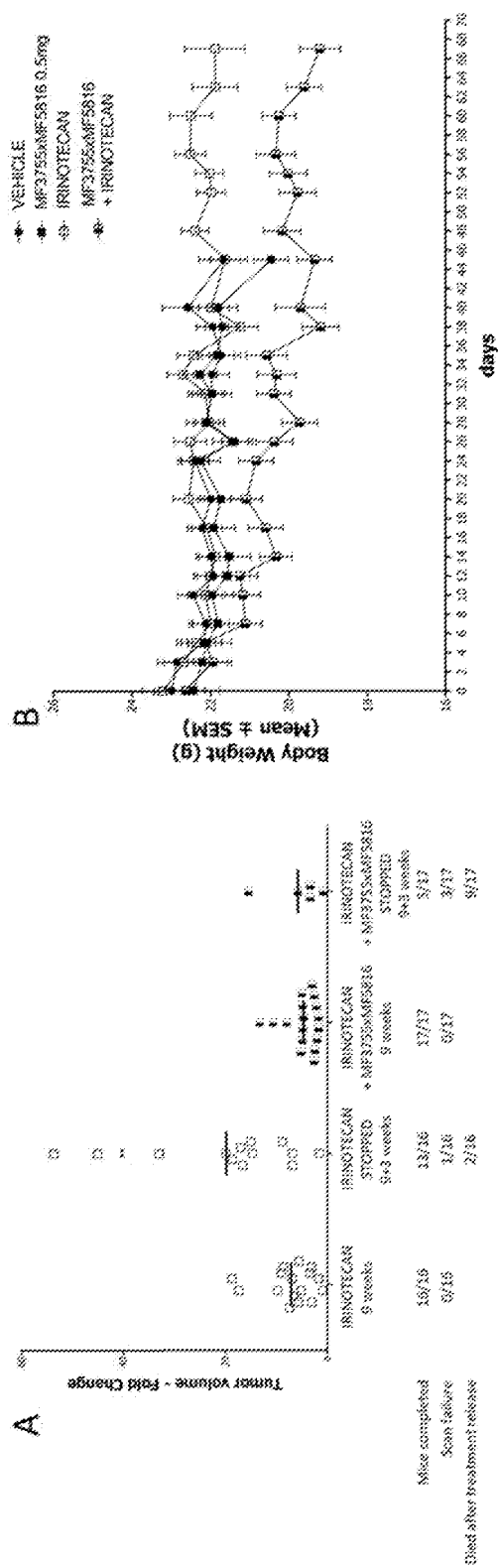
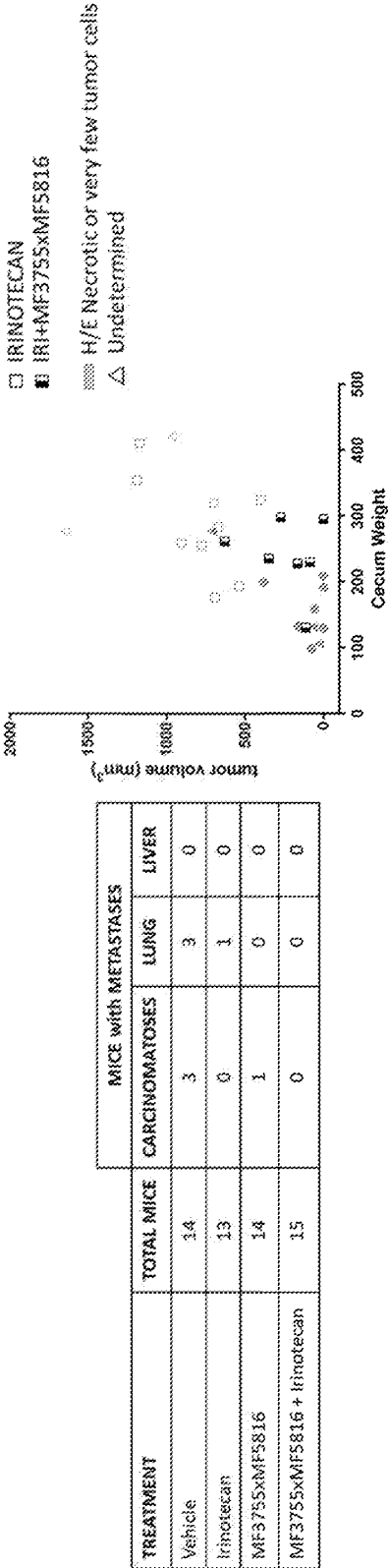


Figure 4

Figure 5



A

B

Figure 6

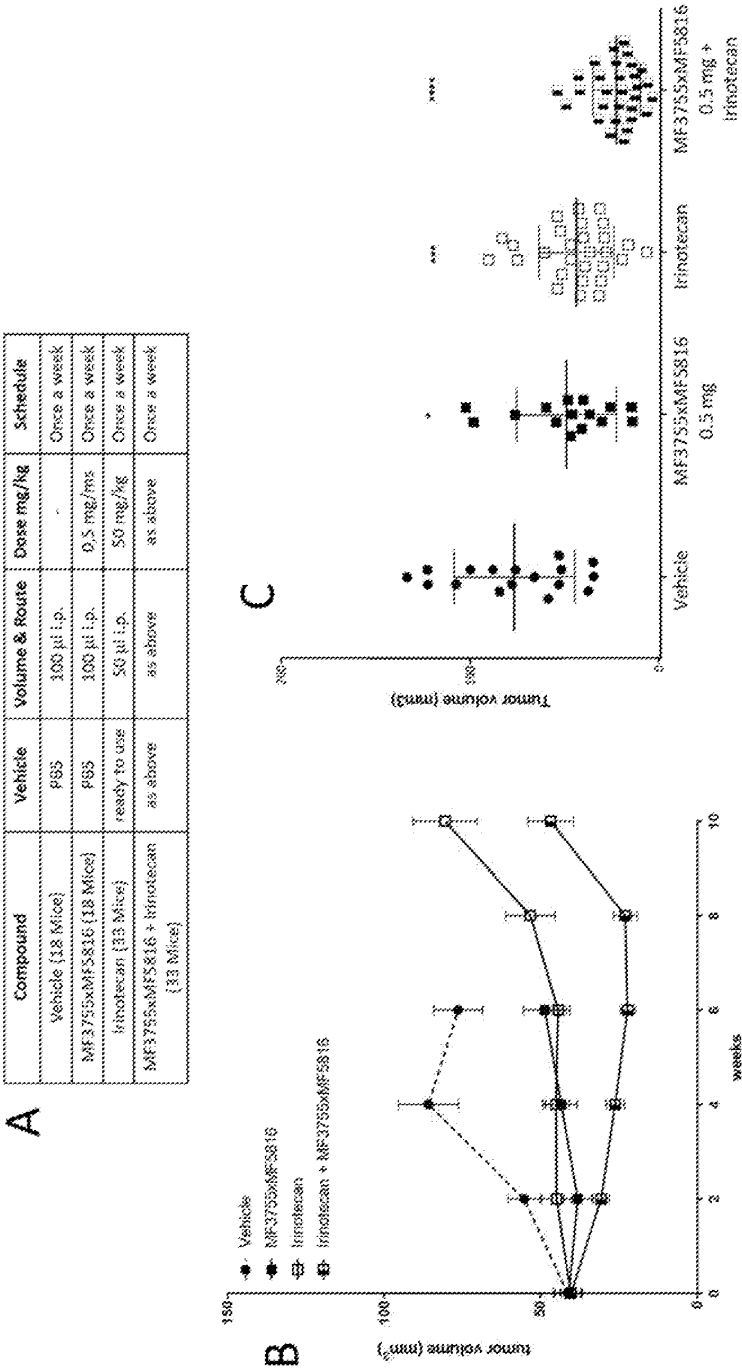


Figure 7

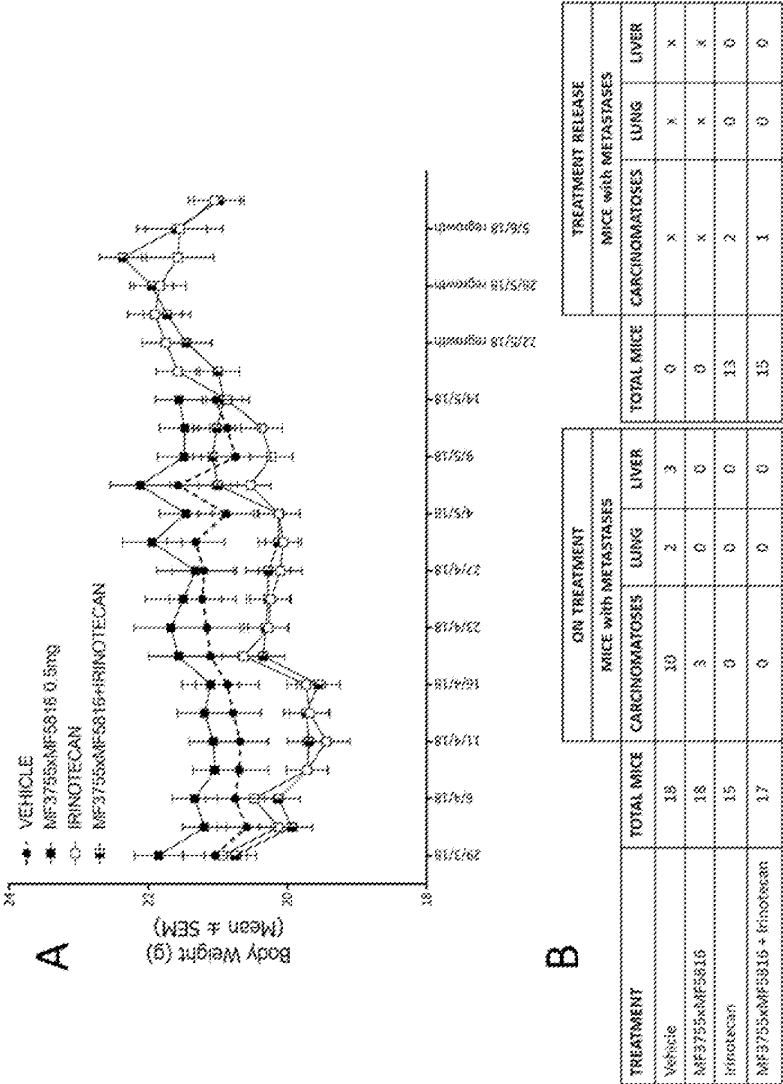


Figure 8

a)

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3370	IGFR	IGVH1-18	QVQLVQSGAEVKKFQASVKISCKASGKITFSSIGISVNRVQAFQGLEWKGWISAKHNTNIAQIQGRVNTTDTSTSTAMELRSLRSDRTAVYICAKINRHRWMDAFYRWQGGELVYSS
3255	EGFR	IGVH7-4-1	QVQLVQSGSSELKPEKASVRLSCASGSDIFNTNIAKNVYQAFPSGSLRWGGINATGDDPTLAQSPGRFVPSLSISVSTALQ21SSSLKALDSATVTCASRAFLKLRFPVWQGGSLVYSS
4280	EGFR	IGVH1-24	QVQLVQSGAEVHPQASVYYSCKVSSITLLEASMKVYRQAFGRGLEWKGSPDEERGRKTFPAQNFGRHYKQEEISADTAHMLSSLSGDSATYICATGCTTETITINLEFENQGGELVYSS
4289	EGFR	IGVH7-4-1	QVQLVQSGSSELKPEKASVYYSCKVSSITFADIAKFWYRQAFPSGSLRWGIIINRGDPTAPQFTERRVPSLSDISVSTALQ101SSELKALDPAVYICADVYKHHISGTEFWQGGELVYSS
5790	IGR5	IGVH4-39	QVQLVQSGEGRVAPFSETSLALCTVYSGSEFSSSSVYRWGINAFPERKLEWISSEFTYSSNNYINAELELSRVITSEDTSKKQFSLKSEVTRASTA VTCASSLTSSSGEYVYFDYRWQGGELVYSS
5803	IGR5	IGVH4-59	QVQLVQSGEGRVAPFSETSLALCTVYSHGSEISYIYNSWIRQAFESAGLSKINQINYYNGESTKNNPSLSKSHVLEIDSSSKQCSLNLSSVTAADPAVYICAGSGCI VTPARSDNYVYKGVWRGSETVYSS
5805	IGR5	IGVH5-51	EVQLVQSGAEVKKPESSTFKIACNSGSEFTFENKIKRKYRQAFPSGSLRWGVIYFESGDNRISGFTQGVTVGAKGSGINATYALQKSTAKASSTAAVYICARENSGSPNFEETWRGSETVYSS
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5817	IGR5	IGVH1-69	QVQLVQSGAEVKKPKGASVYVSCNHSVGGVPSNVALSWYRQAFPSQGLEWKGCIITFEPDNNIAQILQGRVITPAKSSSPAMKCANSTSSSEITALVYICAGSSSEHMDPFWQGGELVYSS
5818	IGR5	IGVH1-69	EVQLVQSGSEVHPFGSSVYVSCKASGSEFTSNTALSWYRQAFPSQGLEWNGSSITPILKKTINHAQFTKQRYVITADNUSGNTINMELSSLSGDSATVYICARETTRARLSIFDSWGQGITVYSS

b)

1337	77	IGMH1-08	EVQLVETSRAEVVKFGASVAVVSCVLAADYIFI	FVDIN	WVRQAPGSGLENHG	WMSAINTSTVAGKIQG	RVITINDISINAYMELSSLSGDIATVYCAR	SLFETITATITHPALDY	NQQTSLATVSS
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Figure 9

a)

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b)

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G T K V E I K

c)

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S F N R G E C -

d)

DIQMTQSPSSLSASVGDRVTITCRASQSISSYLNWYQQKPGKAPKLLIYAA
SSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSYSTPPTFGQGTKVEIK

e)

DIQMTQSPSSLSASVGDRVTITCRASQSISSYLNWYQQKPGKAPKLLIYAA
SSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSYSTP

f)

CDR1 - QSISSY,
CDR2 - AAS
CDR3 - QQSYSTPPT
according to IMGT.

Figure 10

a)

CH1:

```
gctagcaccaagggcccatcggtcttccccctggcaccctcctccaagagcacctctggg
A S T K G P S V F P L A P S S K S T S G
ggcacagcggccctgggctgcctgggtcaaggactacttccccgaaccggtgacggtgtcg
G T A A L G C L V K D Y F P E P V T V S
tggaactcaggcgccctgaccagcggcgtgcacaccttcccggtgtcctacagtcctca
W N S G A L T S G V H T F P A V L Q S S
ggactctactccctcagcagcgtcgtgaccgtgccctccagcagcttgggcacccagacc
G L Y S L S S V V T V P S S S L G T Q T
tacatctgcaacgtgaatcacaagcccagcaacaccaaggtggacaagagagtt
Y I C N V N H K P S N T K V D K R V
```

b)

Hinge:

```
gagcccaaattcttgtagacaaaactcacacatgccaccgtgcca
E P K S C D K T H T C P P C P
```

c)

CH2:

```
gcacctgaactcctggggggaccgtcagtccttcttccccccaaaacccaaggacacc
A P E L L G G P S V F L F P P K P K D T
ctcatgatctcccgacccctgaggtcacatgcgtgggtgggacgtgagccacgaagac
L M I S R T P E V T C V V V D V S H E D
cctgaggtcaagttcaactggtacgtggacggcgtggaggtgcataatgccaagacaaag
P E V K F N W Y V D G V E V H N A K T K
ccgcgggaggagcagtacaacagcacgtaccgtgtggtcagcgtcctcaccgtcctgcac
P R E E Q Y N S T Y R V V S V L T V L H
caggactggctgaatggcaaggagtacaagtgcaaggtctccaacaaagccctcccagcc
Q D W L N G K E Y K C K V S N K A L P A
cccatcgagaaaaccatctccaaagccaaa
P I E K T I S K A K
```

d)

CH3: L351K and T366K

gggcagccccgagaaccacaggtgtacaccaagcccccatcccgggaggagatgaccaag
G Q P R E P Q V Y T K P P S R E E M T K
aaccaggtcagcctgaagtgcctgggtcaaaggcttctatcccagcgacatcgccgtggag
N Q V S L K C L V K G F Y P S D I A V E
tgggagagcaatgggcagccggagaacaactacaagaccacgcctcccgtgctggactcc
W E S N G Q P E N N Y K T T P P V L D S
gacggctccttcttctctatagcaagctcaccgtggacaagagcaggtggcagcagggg
D G S F F L Y S K L T V D K S R W Q Q G
aacgtcttctcatgctccgtgatgcatgaggctctgcacaaccactacacgcagaagagc
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 -

e)

CH3: L351D and L368E

gggcagccccgagaaccacaggtgtacaccgaccccccatcccgggaggagatgaccaag
G Q P R E P Q V Y T D P P S R E E M T K
aaccaggtcagcctgacctgaggtcaaaggcttctatcccagcgacatcgccgtggag
N Q V S L T C E V K G F Y P S D I A V E
tgggagagcaatgggcagccggagaacaactacaagaccacgcctcccgtgctggactcc
W E S N G Q P E N N Y K T T P P V L D S
gacggctccttcttctctatagcaagctcaccgtggacaagagcaggtggcagcagggg
D G S F F L Y S K L T V D K S R W Q Q G
aacgtcttctcatgctccgtgatgcatgaggctctgcacaaccactacacgcagaagagc
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 -