

Figure 1

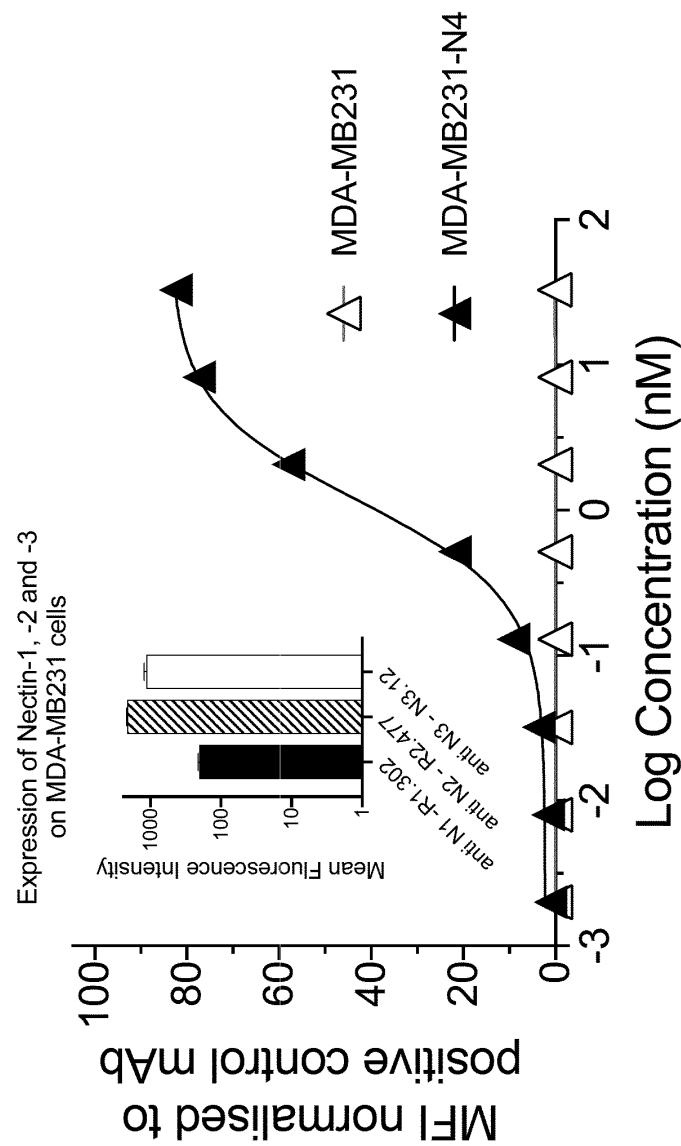


Figure 2

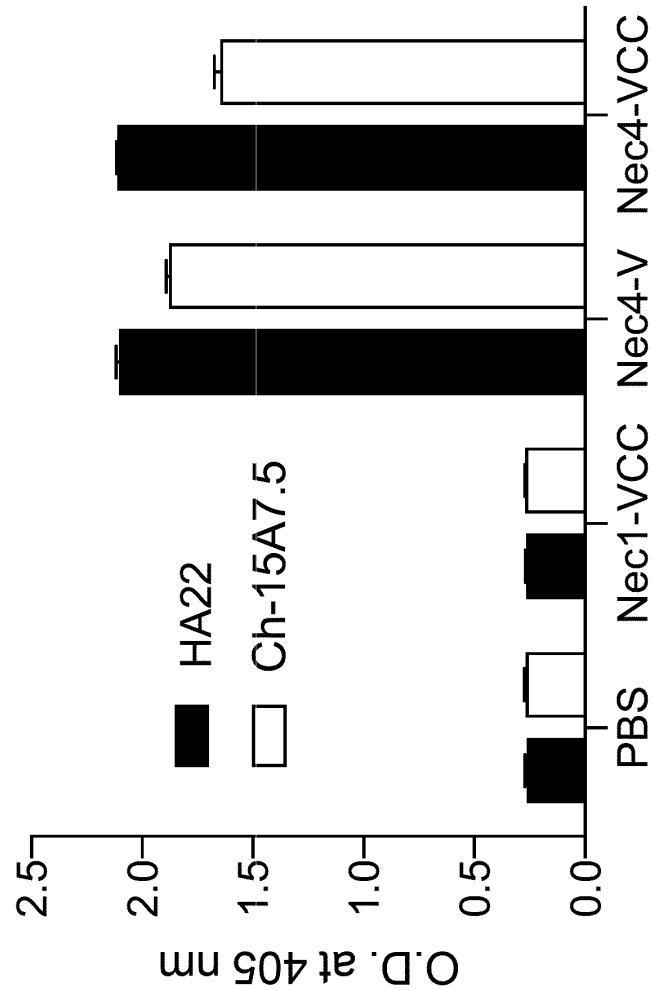


Figure 3

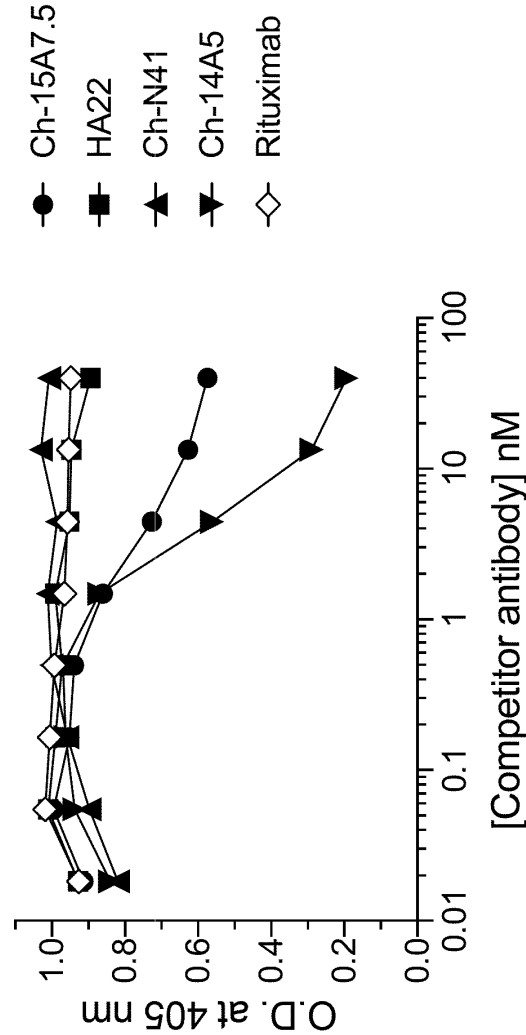


Figure 4

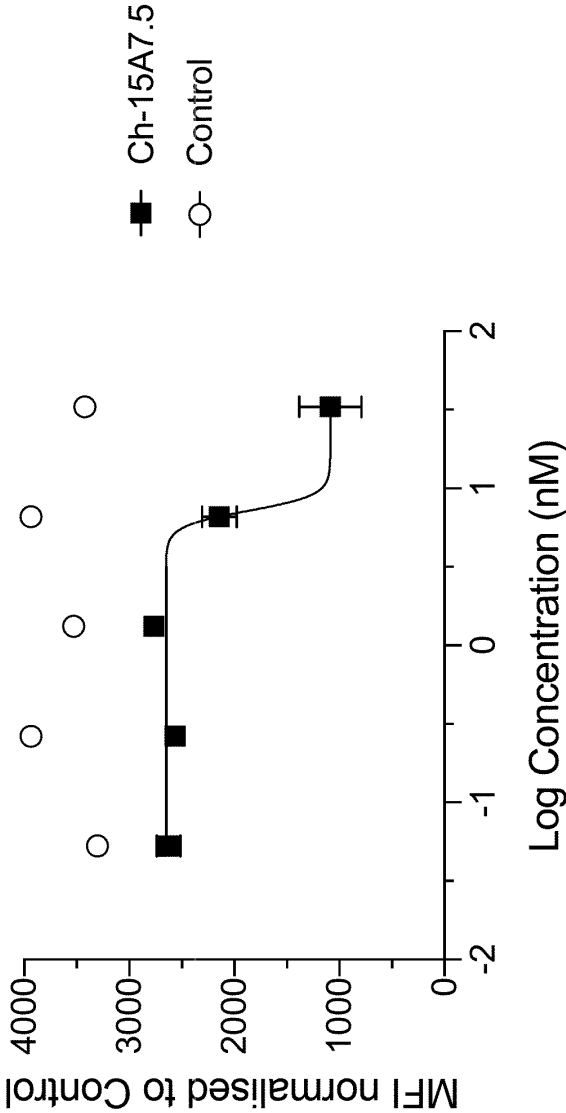


Figure 5

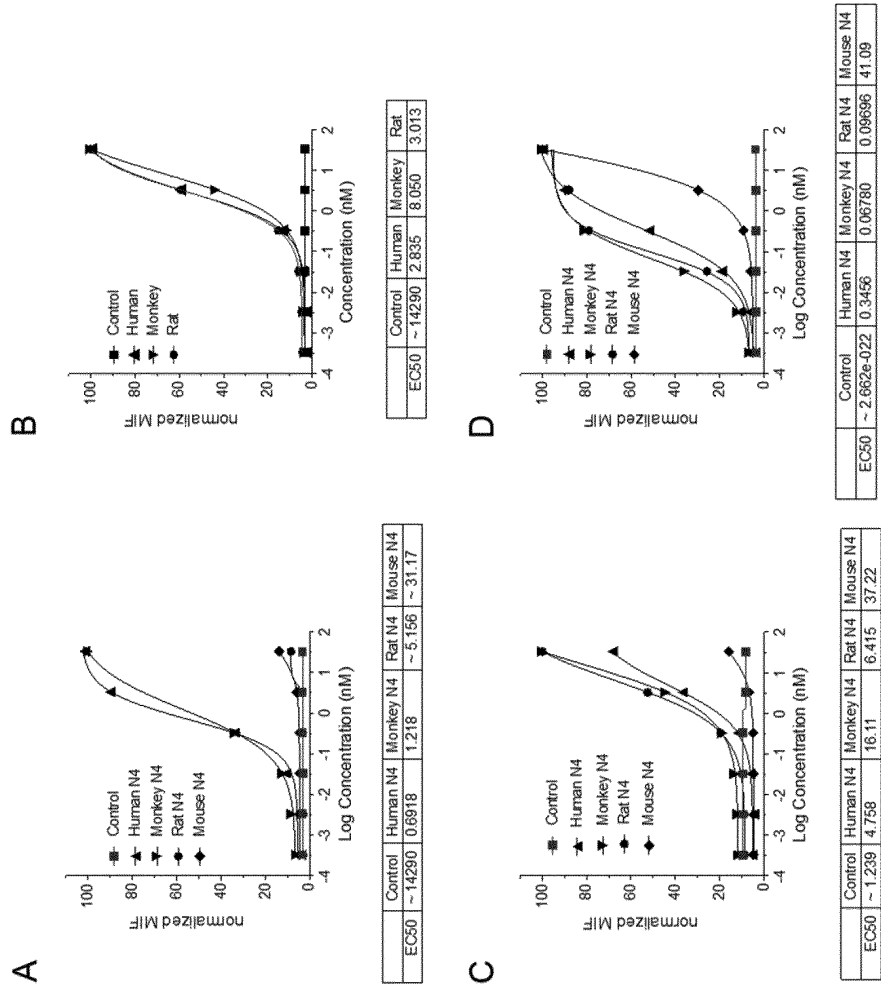
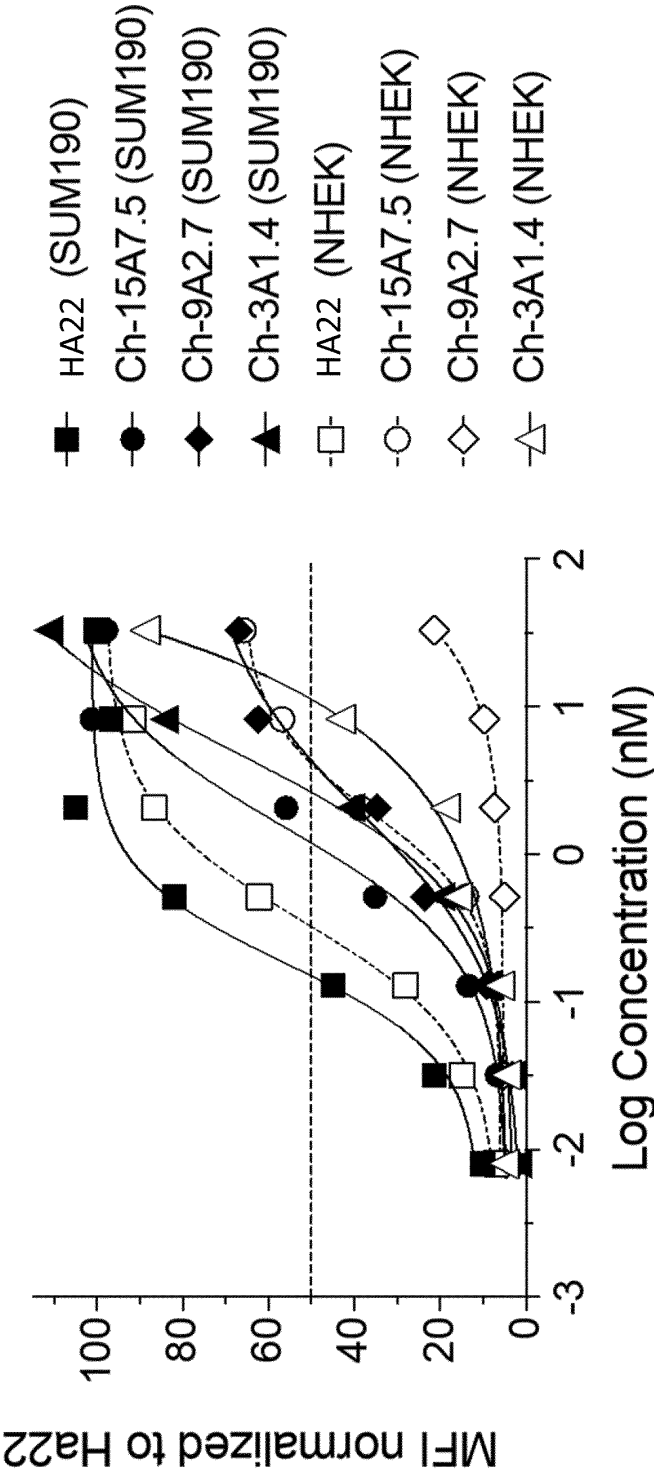


Figure 6



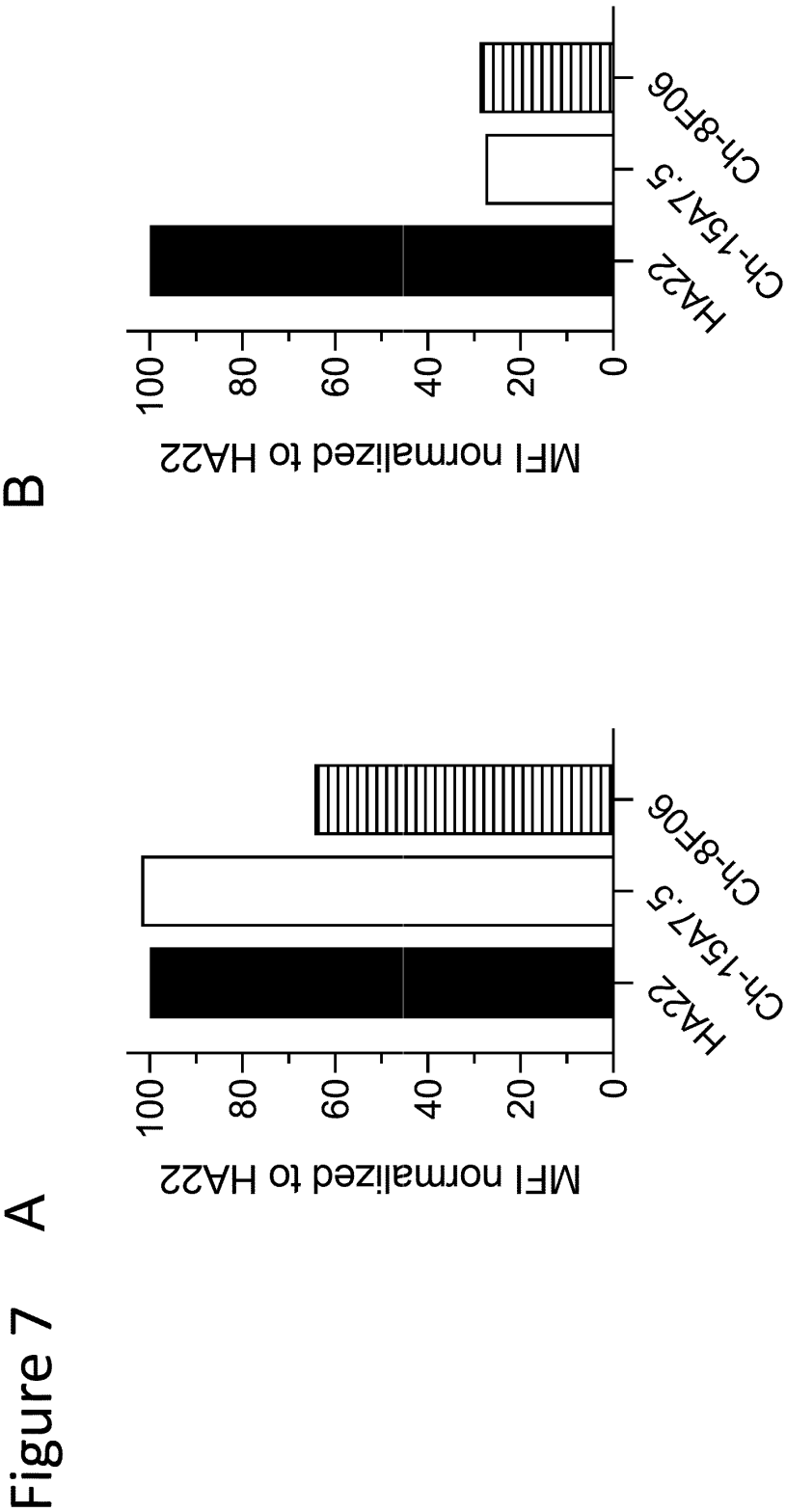


Figure 8

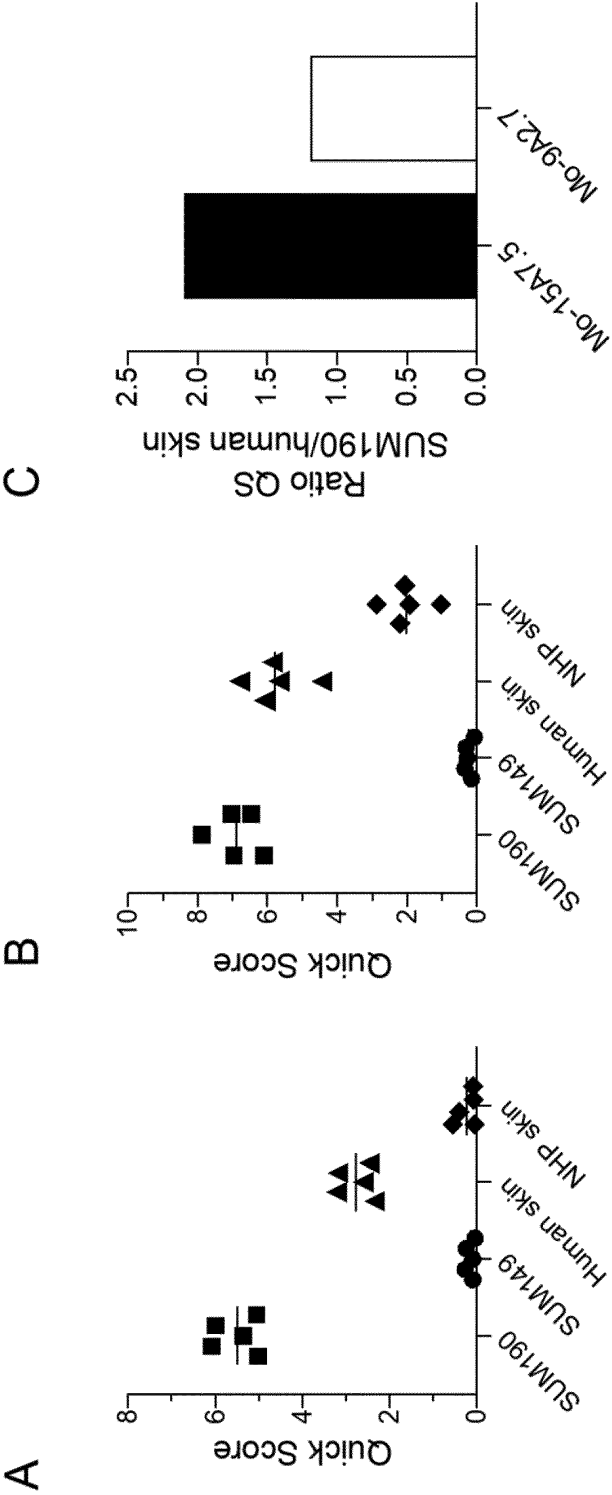


Figure 9

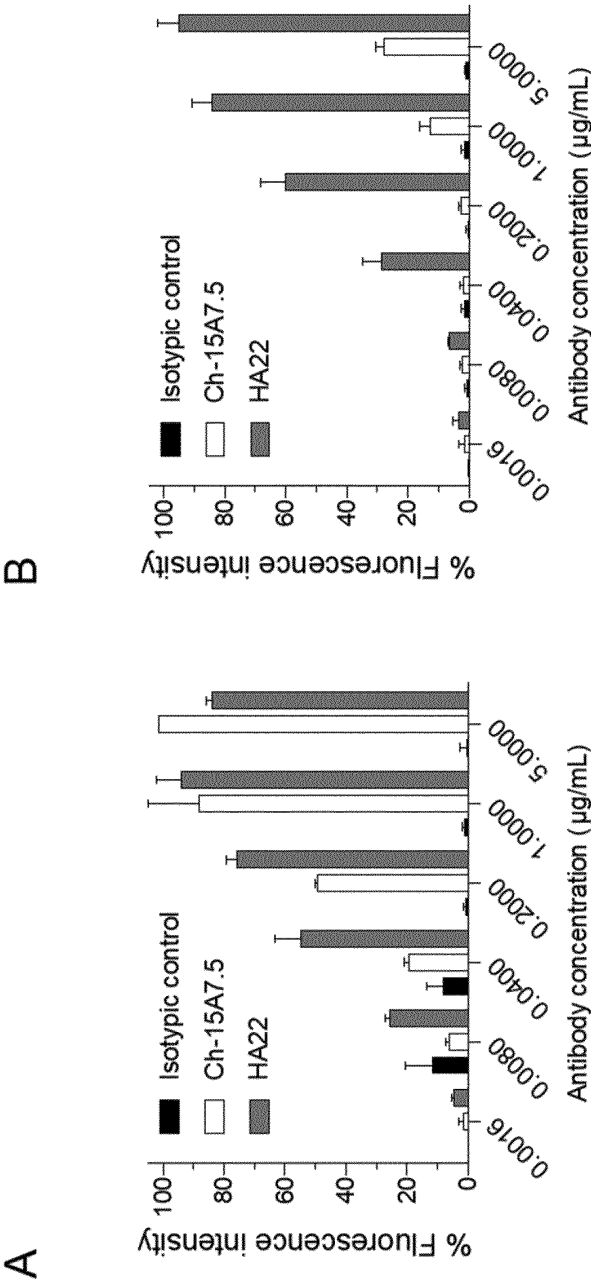
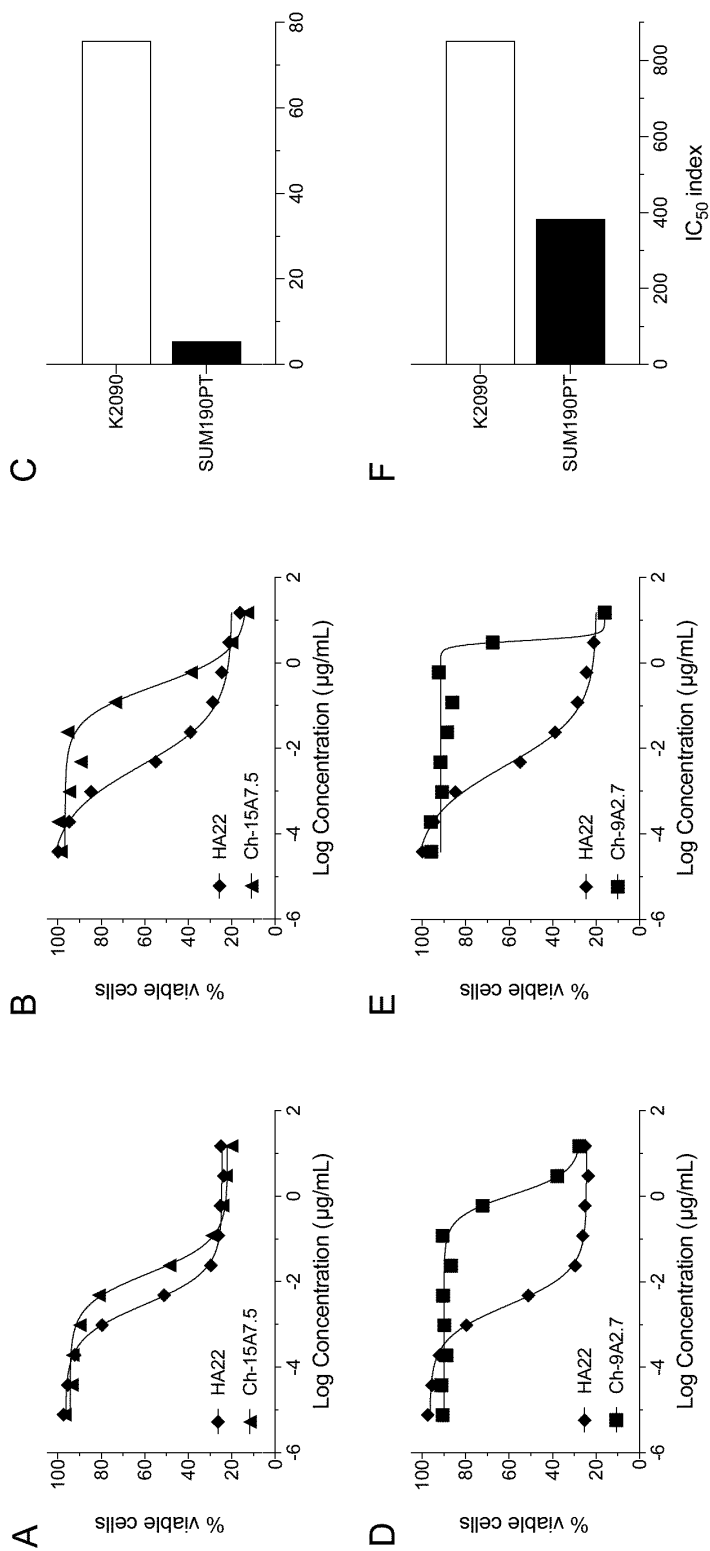


Figure 10



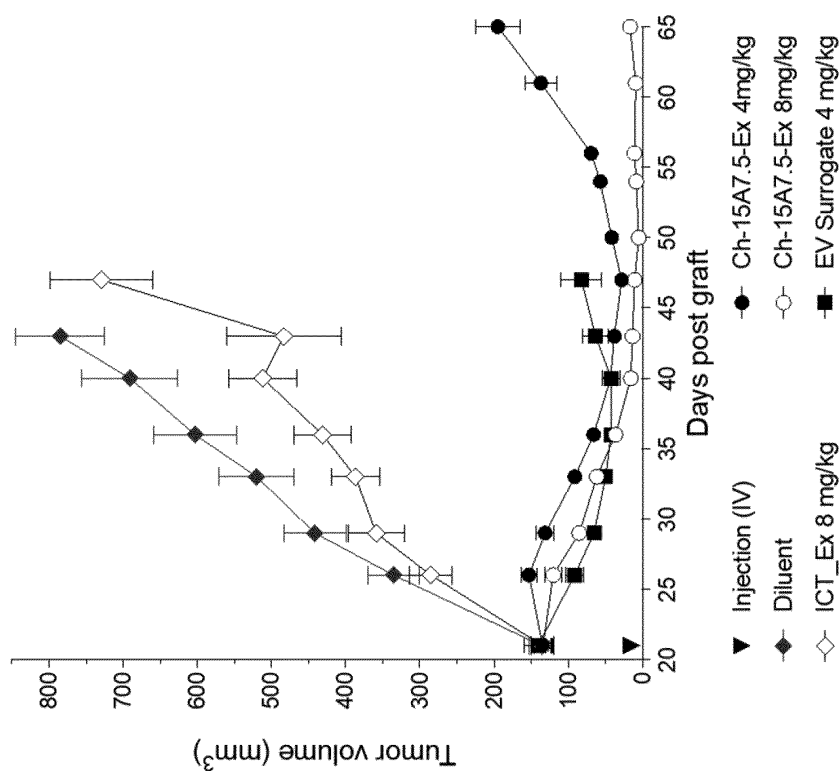
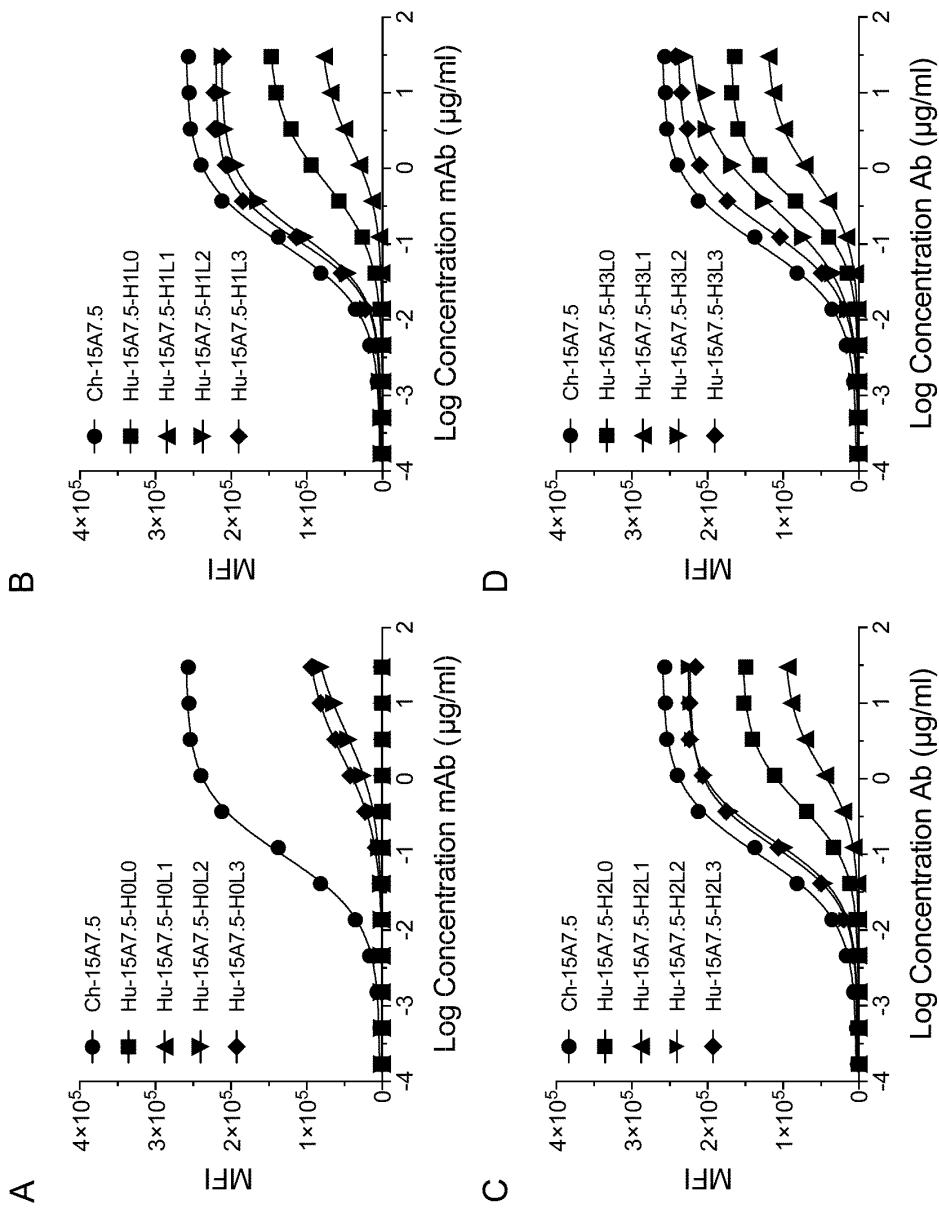


Figure 11

Figure 12



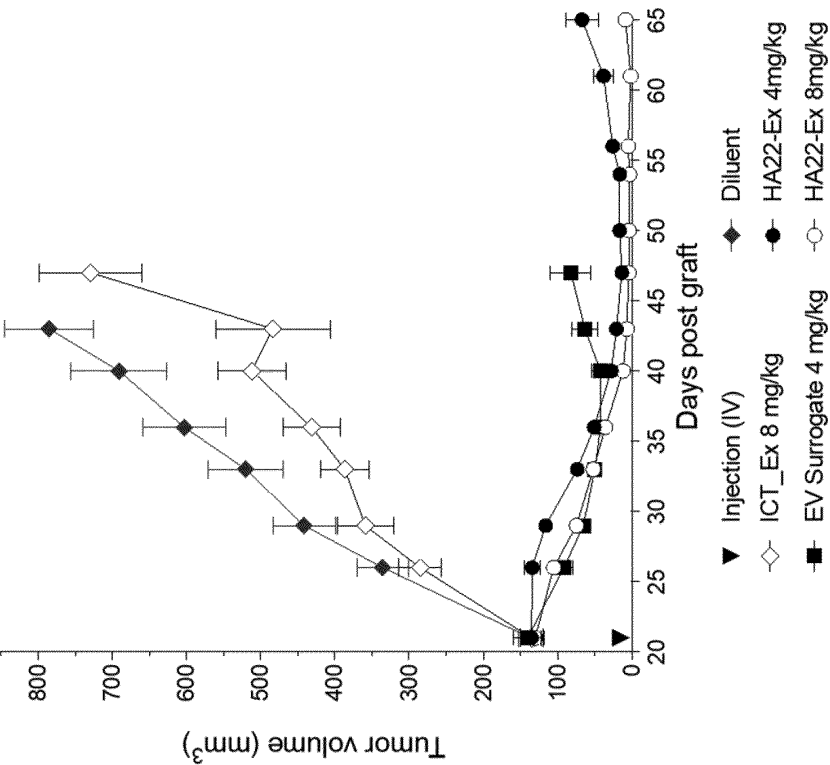


Figure 13

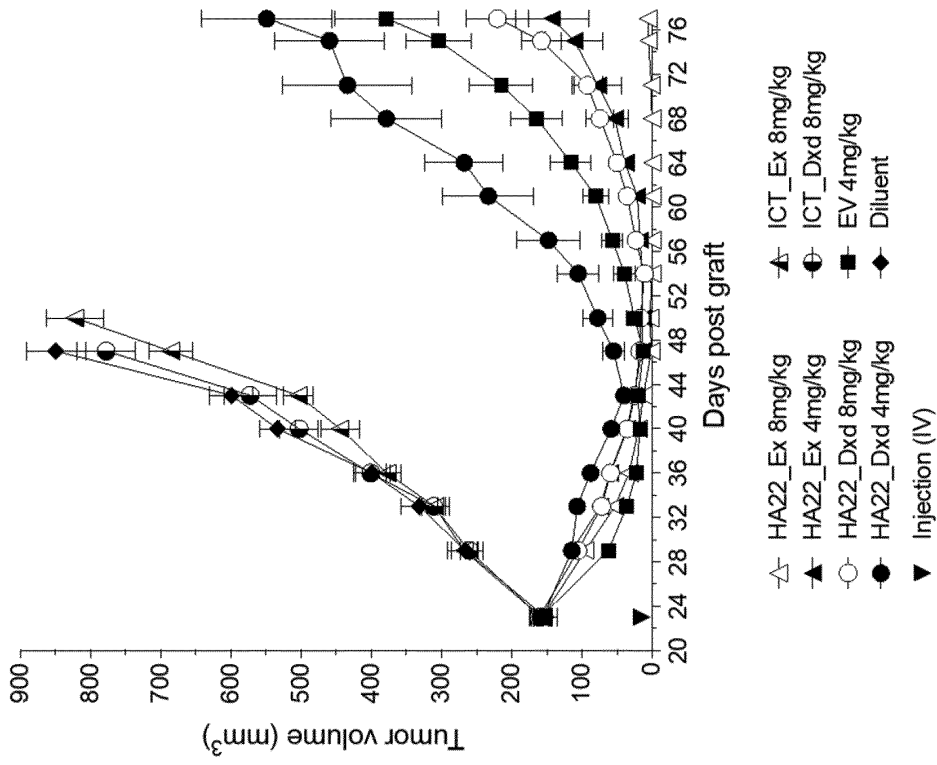


Figure 14

Figure 15

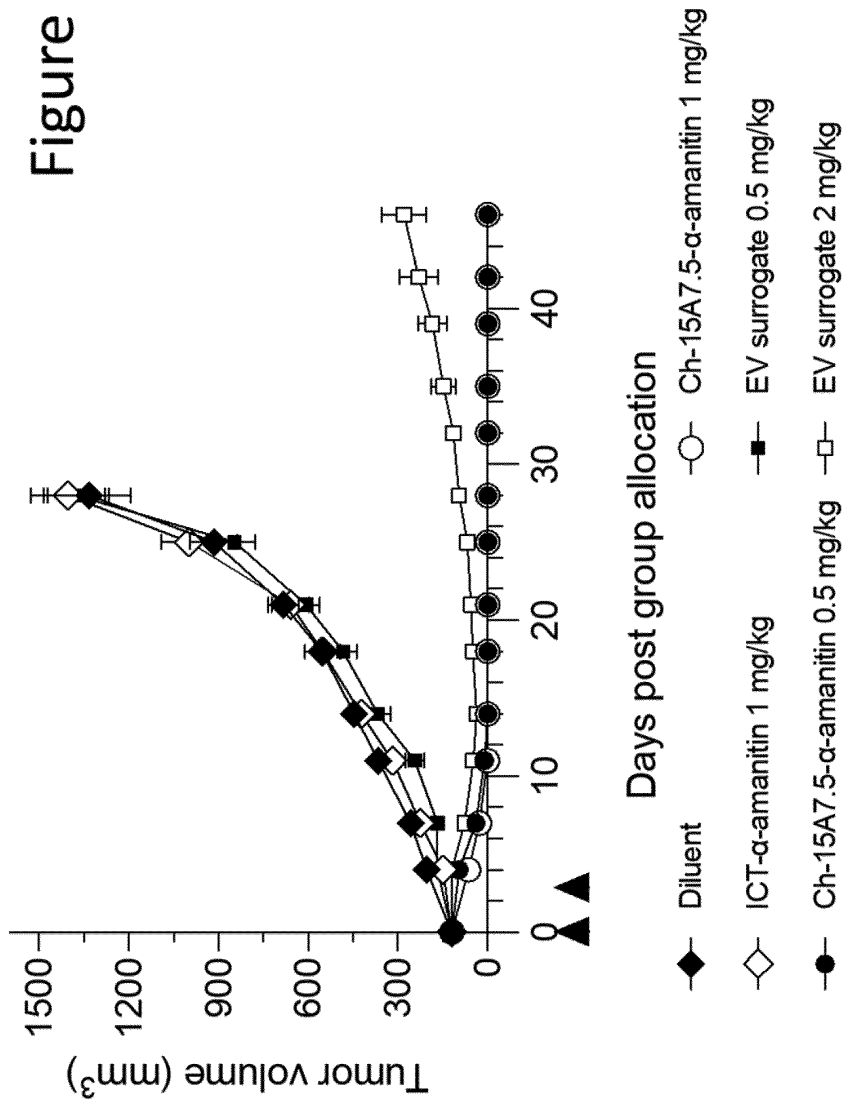
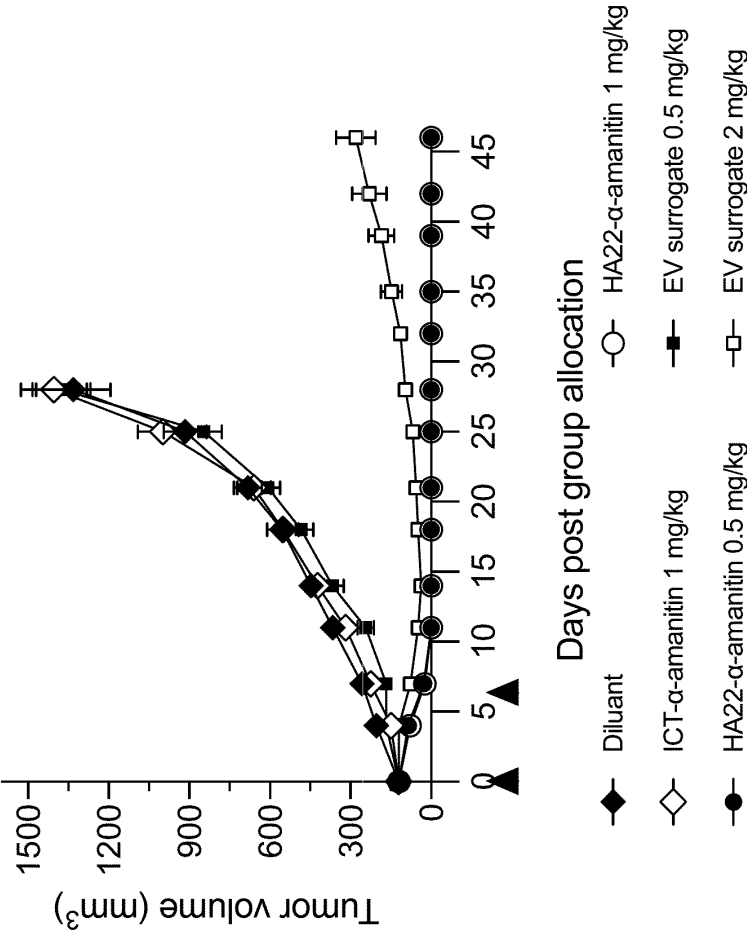


Figure 16



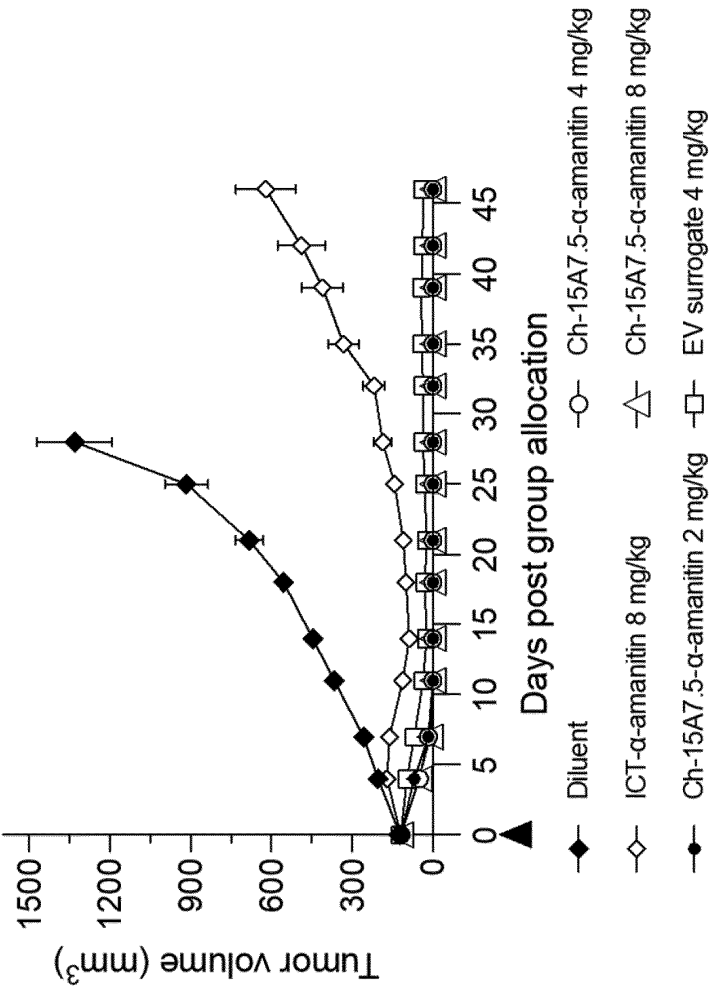


Figure 17

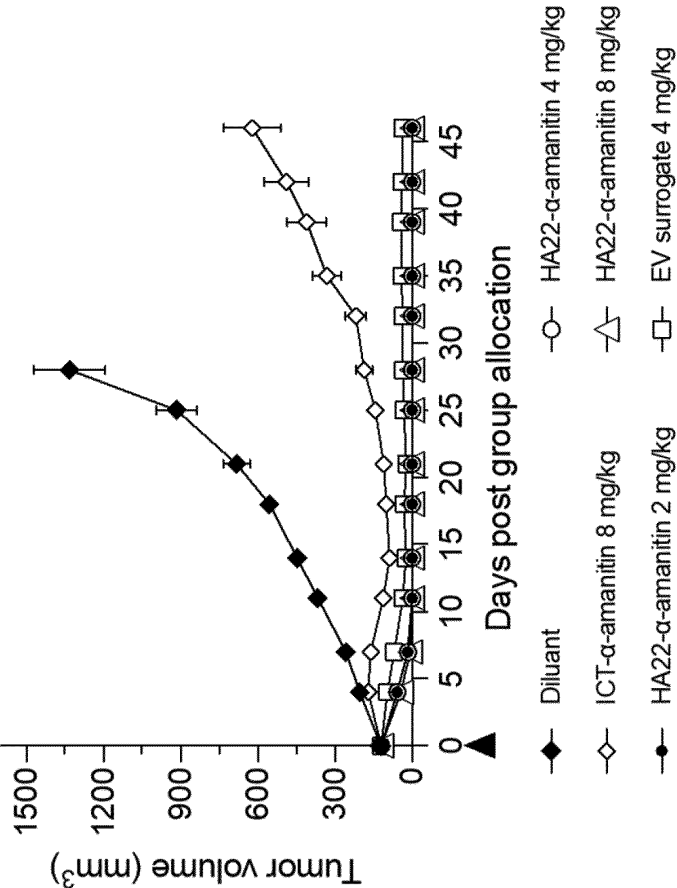


Figure 18

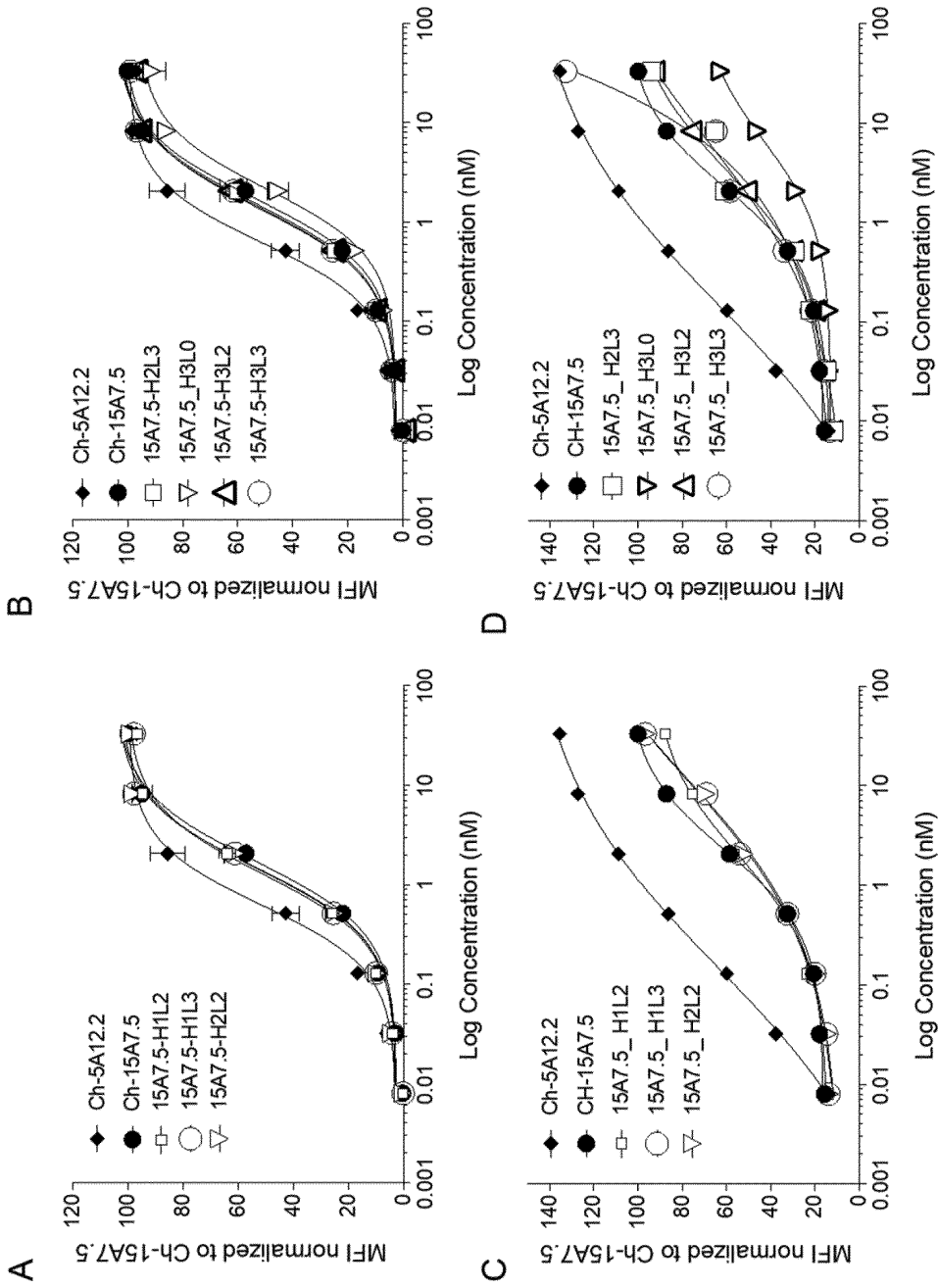


Figure 19

Figure 20

■ Antibody clone 5A12.2

>VH_5A12.2

QIQLQQSGAELVKPGASVTLSCCKTSGFTFNSMYISWLKQKPGQSQSLEWIAWIYAGTGGTRFN
QKFTGKVQLTVDTSSSTAYMQFSSLTTDDSAIYYCAIRSGFVPMDYWGQGTSTVTVSS

>VK_5A12.2

SIVMTQTPKFLLSAGDRVTITCKASQSVSNDVAWYQQKPGQSPKLLIYYASNRYTGVPDR
FTGSGYGTDFTFITSTVQAEDLAVYFCQQDYSSPWTFGGGKLEIK

CDR : IMGT nomenclature

Figure 21

■ Antibody clone 9A2.7

>VH_9A2.7

QVQLQQPGAELVRPGASVKLSCKASGYNFTTFWINWVKQRPQGQGLEWIGNIYPSDSYANY
NQKFKDKATLTVDKSSTTAYMQLSSPTSEDSAVYYCTRPSTYFGRNSFAYWGQGTLLVTVSA

>VK_9A2.7

DIVMTQSPSSLVSVGEKVTMSCKSSQSLLYSVNHKNYLAWYQQKPGQSPKLLIYWASTR
ESGVPDRFTGSGSGTDFSLTISSVKAEDLAVYYCHQYYTYPLTFGAGTKLELK

CDR : IMGT nomenclature

Figure 22

■ Antibody clone 3A1.4

>VH_3A1.4

DVQLQESGPSLVKPSQTLSTCSVTGDSITSGYWNWIRKFPGNKLEYMGYISNSGITYYNP
SLKSRISITRDTSKNQYFLQLNSVTAEDTATYYCIRFGSTMILYYTMDYWGGQTSVTVSS

>VK_3A1.4

DIVMTQSPVTLSTPGDRVSLSCRASQSDYLHWYQQKSKQSPRLLIKYASKSISGIPSRF
SGSGGSNFTLSINSVEPEDVGVYYCQNGHSFPLTFGAGTKLELK

CDR : IMGT nomenclature

Figure 23

■ Antibody clone 8F06

>VH_8F06

EVQLQQSGPELVKPGASVKMSCKASGYTFTSYVMHWVKQKPGQGLEWIGYINPYNDGTK
YNEKFKGKATLTSDKSSSTAYMELSSLTSEDSAVYYCVTLFAYWGQGLVTVSA

>VK_8F06

QIVLTQSPAIMASPGEKVTMTCSASSSISYMHWYQQKPGTSPKRWYDTSKLASGVPARF
SGSGSGTSYSLTISSEAEADAATYYCHQRSSYPFTFGSGTKLEIK

CDR : IMGT nomenclature

Figure 24

- Parental antibody clone 15A7.5

>VH_15A7.5

EVKLVESGGGLVQPGGSRKLSCAASGFTFSNYGMAWVRQAPGKGPEWVAFISNLAYGI
NYADTVTGRFTISRENAKNTLYLEMRSRSEDTAMYYCARGARATGWFAYWGQGTLLVT
 VSA

>VK_15A7.5

DIVMTQSQKFMSTSIGDRVSVTCKASQNVDTHTVAWYQEKPGQSPKALIYSASYRYSGV
 DRFTGSGGTDFTLTISNVQSEDLADYFCQQYNSYPLJFGGGTKLEIK

CDR : IMGT nomenclature, Kabat nomenclature

Figure 25

- Humanized Variants 15A7.5

> H0_15A7.5

EVQLVESGGGLVQPGGSLRLSCAAS^SGFTF^SNYG^MMWVRQAPGKGLEWV^FISNLAYG^N
YADSVKG^RFTISRDNAKNSLYLQMNSLRAEDTAVYY^CA^RGARATGWFAY^WGQGTLVTVS

> H1_15A7.5

EVQLVESGGGLVQPGGSLRLSCAAS^SGFTF^SNYG^MA^WVRQAPGKGLEWV^SFISNLAYG^N
YADTVTG^RFTISRDNAKNSLYLQMNSLRAEDTAVYY^CA^RGARATGWFAY^WGQGTLVTVSS

> H2_15A7.5

EVQLVESGGGLVQPGGSLRLSCAAS^SGFTF^SNYG^MA^WVRQAPGKGLEWV^{AF}ISNLAYG^N
NYADTVTG^RFTISRDNAKNSLYLQMNSLRAEDTAVYY^CA^RGARATGWFAY^WGQGTLVTVSS

> H3_15A7.5

EVQLVESGGGLVQPGGSLRLSCAAS^SGFTF^SNYG^MA^WVRQAPGKGP^{EWV}AFISNLAYG^N
NYADTVTG^RFTISRDNAKNSLYLQMNSLRAEDTAVYYCARGARATGWFAYWGQGTLVTVSS

> L0_15A7.5

DIQMTQSPSSLSASVGDRVTIT^CRA^SQNV^{DTH}V^{AW}FQQKPGKAPKSLI^YSAS^YLQSGVPS
 RFSGSGSGTDFTLTISLQPEDFATYY^CQQYNSYPLT^FGGGTKVEIK

> L1_15A7.5

DIQMTQSPSSLSASVGDRVTIT^CKA^SQNV^{DTH}V^{AW}FQQKPGKAPKSLI^YSAS^YRY^SG^V
 PSRFSGSGSGTDFTLTISLQPEDFATYY^CQQYNSYPLT^FGGGTKVEIK

> L2_15A7.5

DIQMTQSPSSLSASVGDRVTIT^CKA^SQNV^{DTH}V^{AW}YQQKPGKAPK^{ALI}SAS^YRY^SG^V
 PSRFSGSGSGTDFTLTISLQPEDFATYY^CQQYNSYPLT^FGGGTKVEIK

> L3_15A7.5

DIQMTQSPSSLSASVGDRVTIT^CKA^SQNV^{DTH}V^{AW}YQQKPGK^{SPKALI}SAS^YRY^SG^V
 VPSRFSGSGSGTDFTLTISLQPEDFATYY^CQQYNSYPLT^FGGGTKVEIK

CDR : IMGT nomenclature / Kabat nomenclature / anchor IMGT and/or Kabat / **back-mutations**

Figure 26

Humanized 15A7.5 variants

Clone/variant	KD (nM)	Ka (1/Ms)	Kdis (1/s)	R ²
Ch-15A7.5	45.9	7.52 ^{E+04}	3.45 ^{E-03}	0.98
15A7.5_H1L2	52	8.01 ^{E+04}	4.16 ^{E-03}	0.97
15A7.5_H1L3	50	8.24 ^{E+04}	4.12 ^{E-03}	0.97
15A7.5_H2L2	59.7	7.79 ^{E+04}	4.65 ^{E-03}	0.97
15A7.5_H2L3	60	8.00 ^{E+04}	4.80 ^{E-03}	0.97
15A7.5_H3L2	55.5	8.81 ^{E+04}	4.89 ^{E-03}	0.97
15A7.5_H3L3	58.1	7.86 ^{E+04}	4.57 ^{E-03}	0.97
15A7.5_H0L3	Irrelevant	Irrelevant	Irrelevant	0.92