

Figure 1

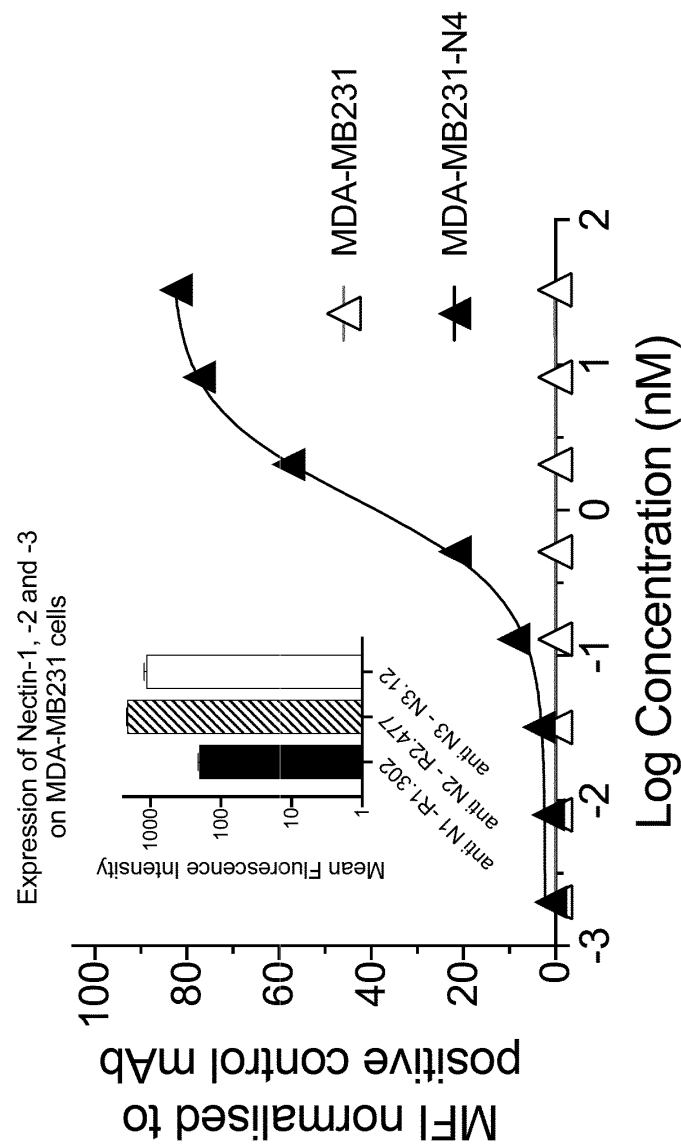


Figure 2

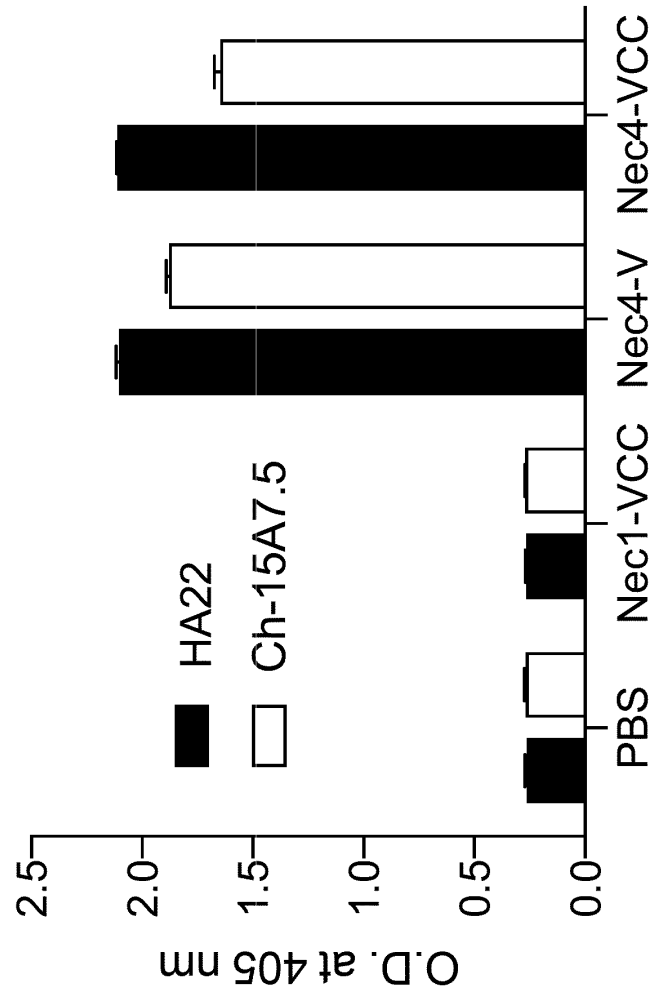


Figure 3

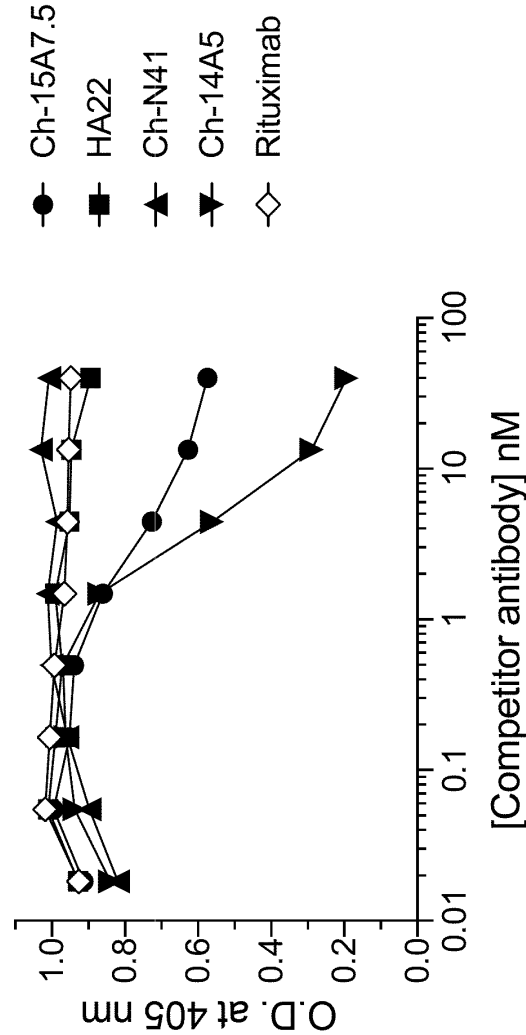


Figure 4

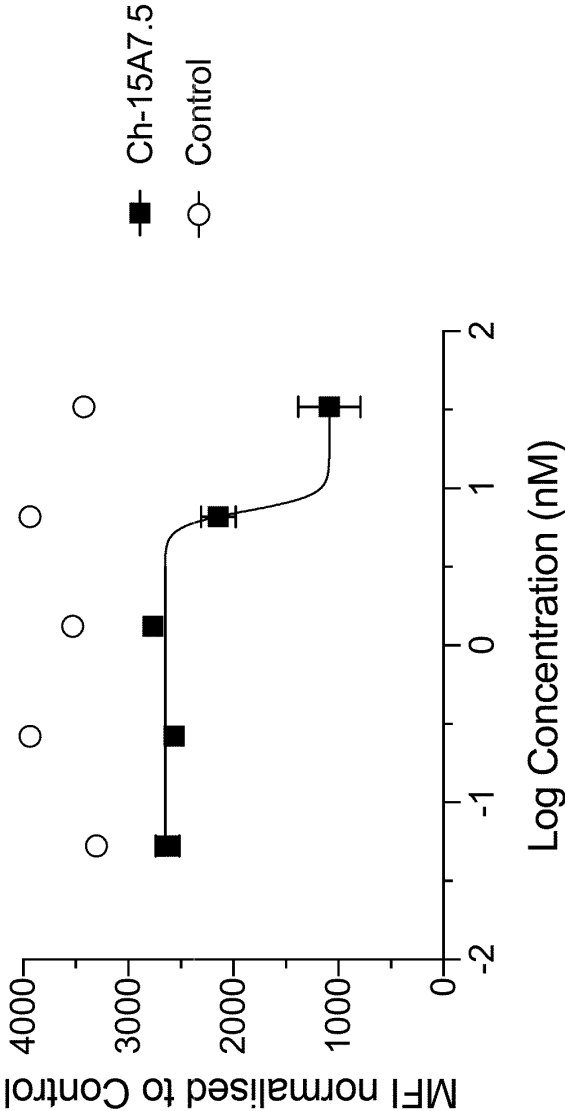


Figure 5

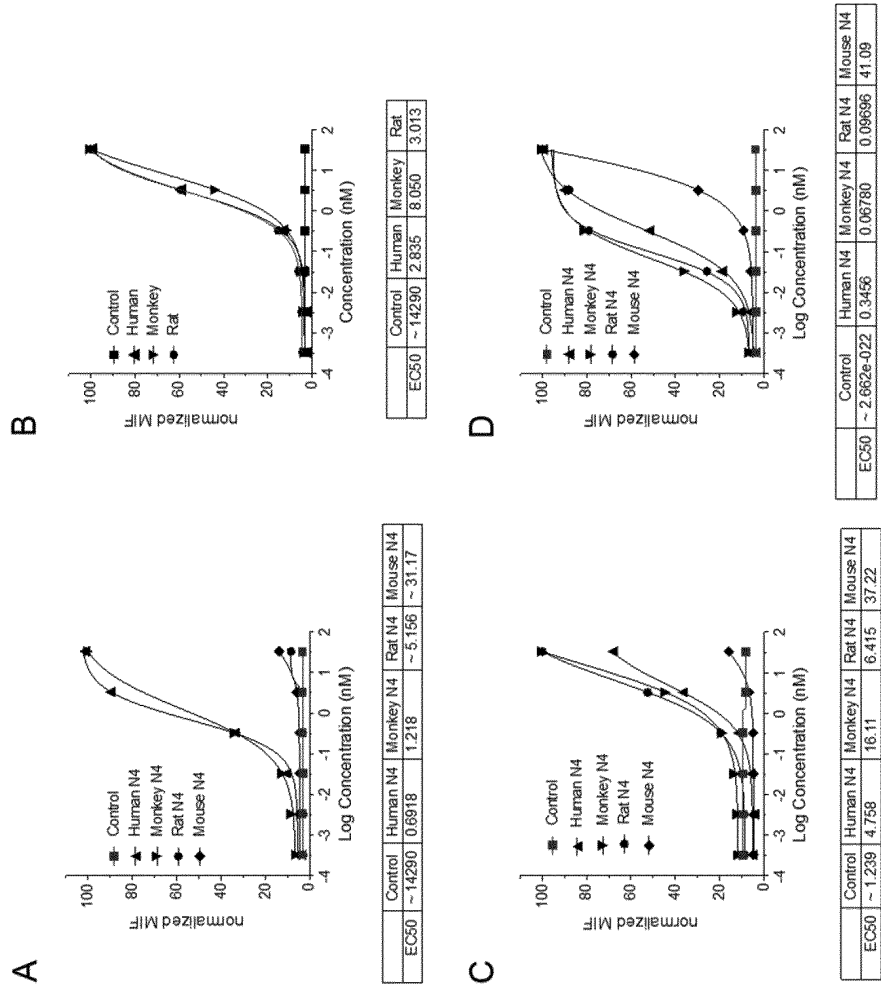
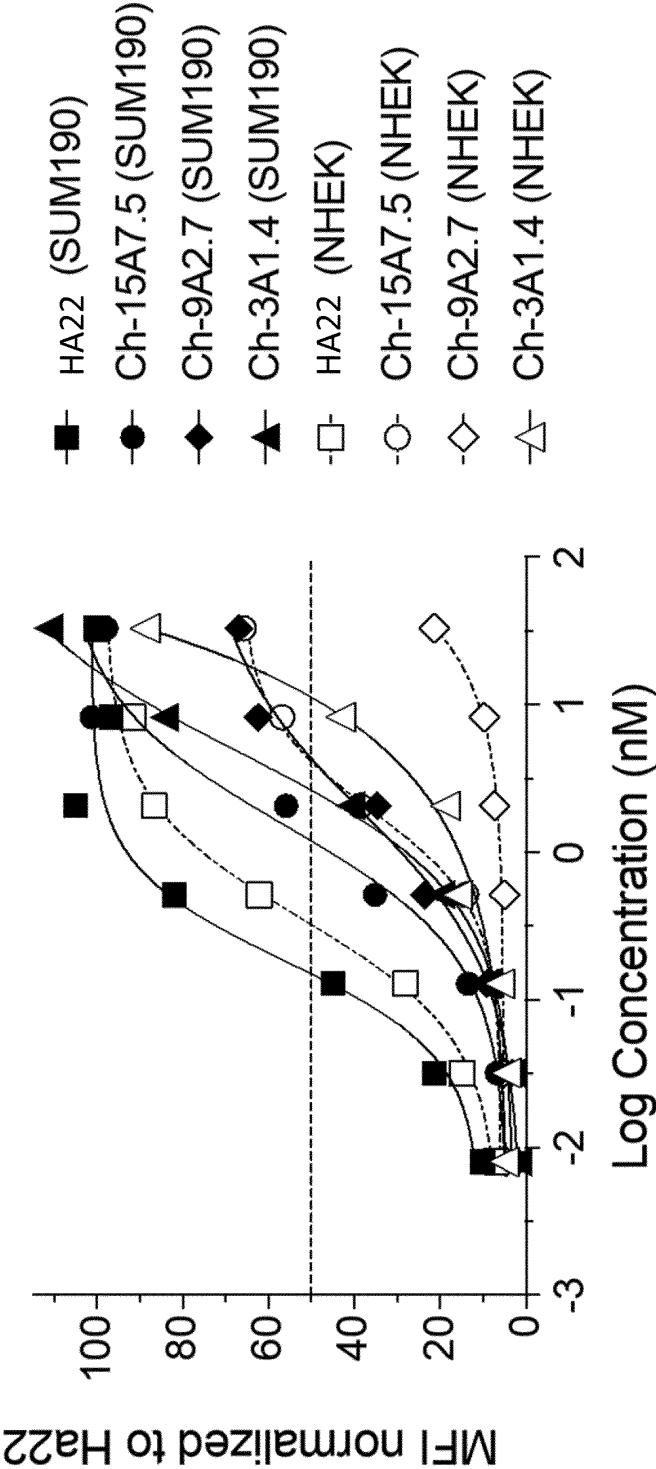


Figure 6



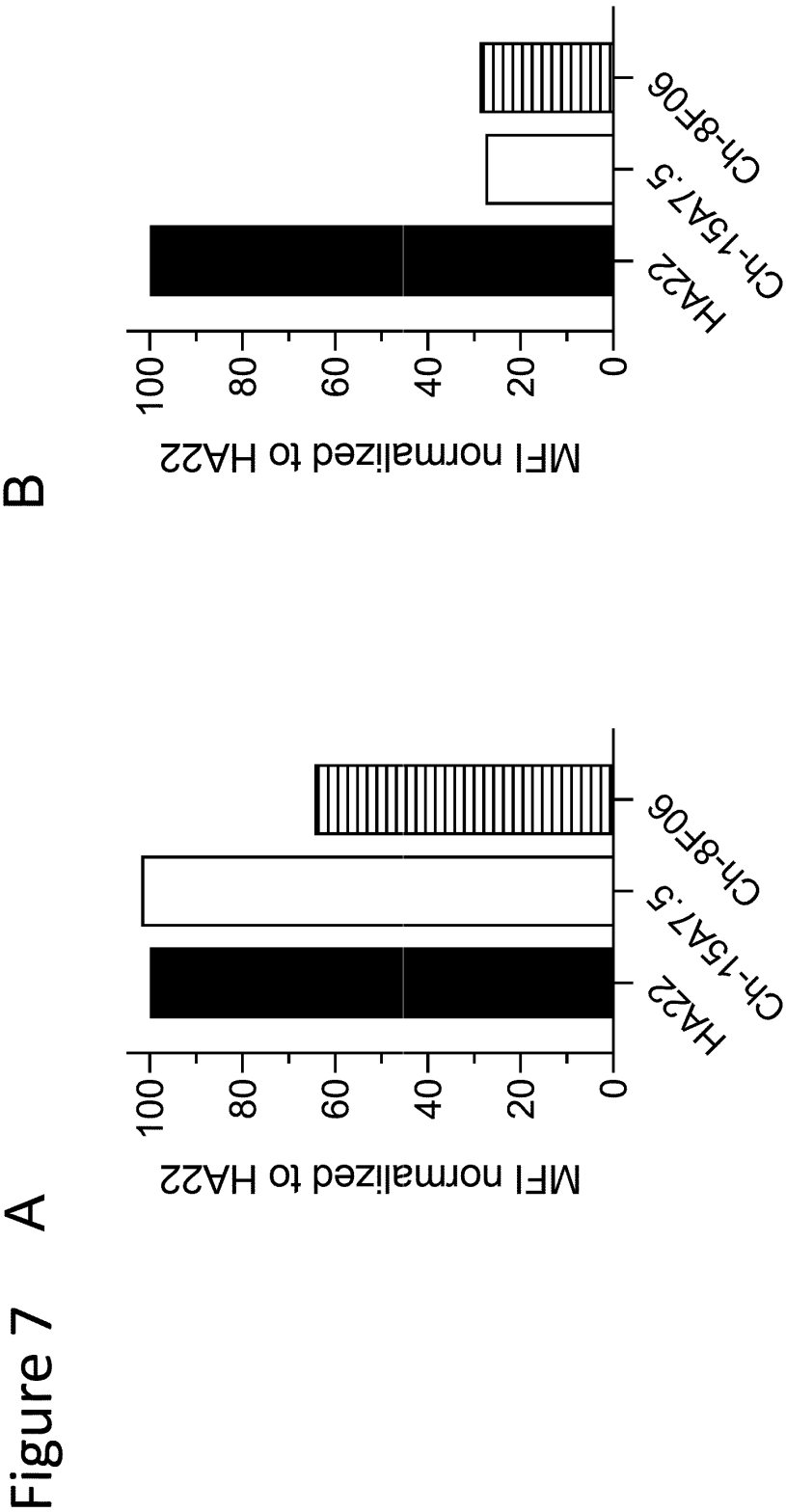


Figure 8

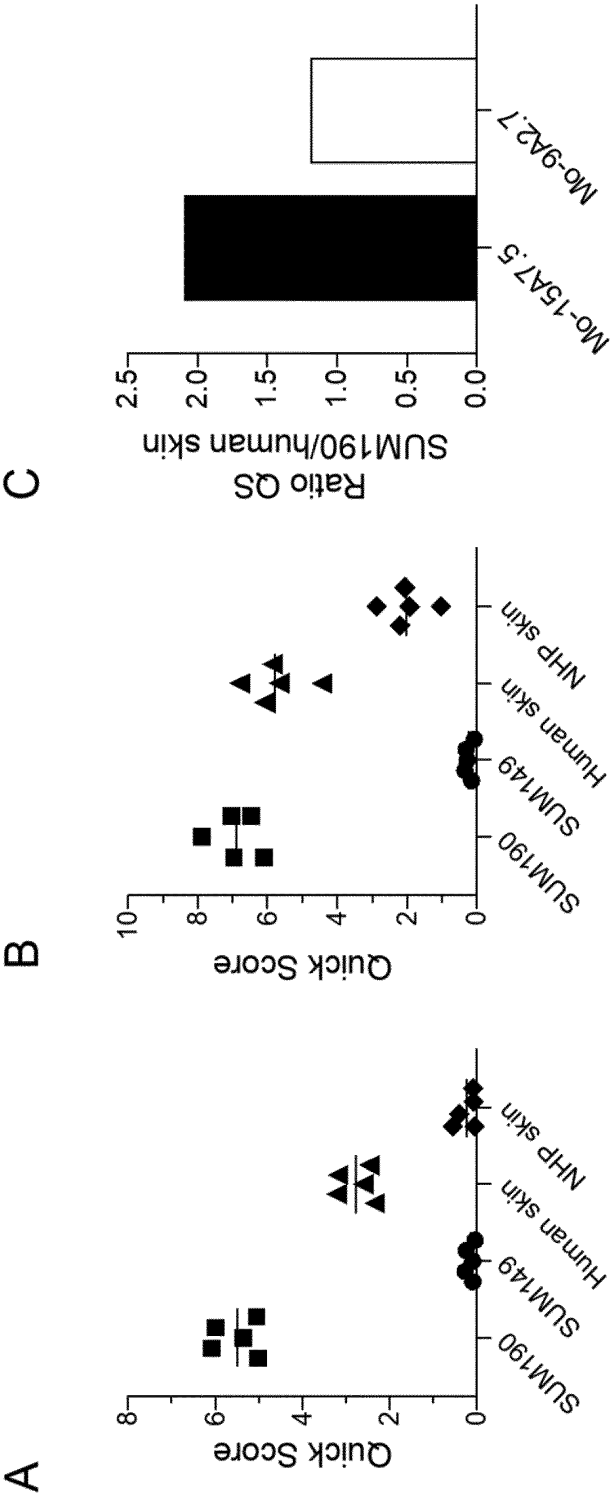


Figure 9

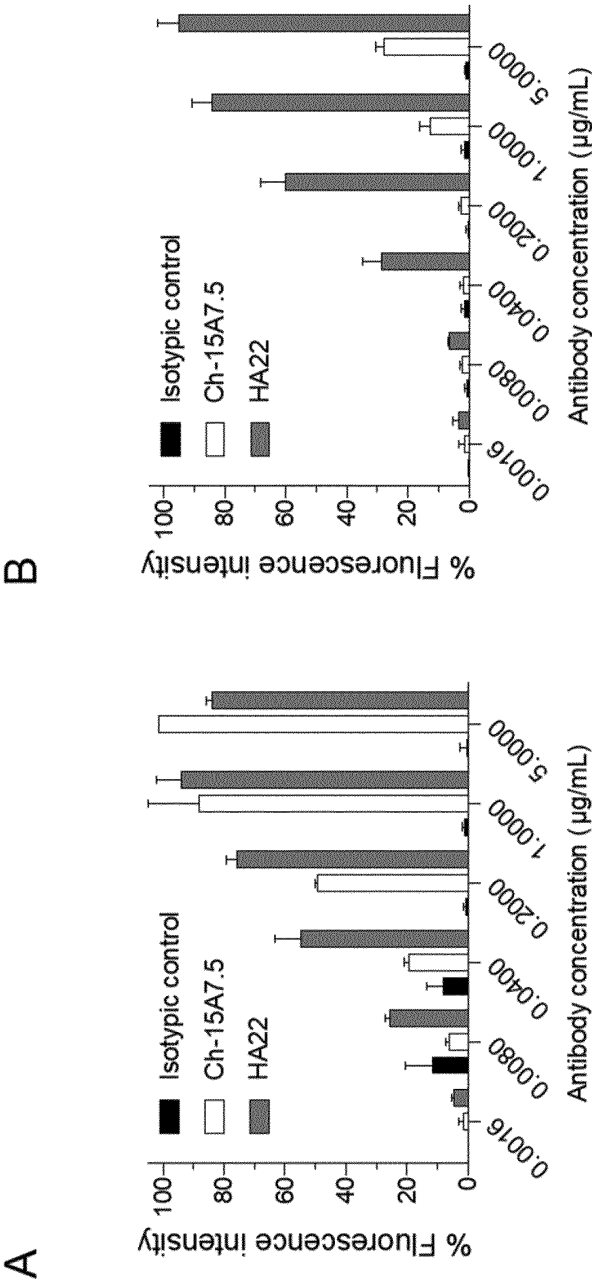
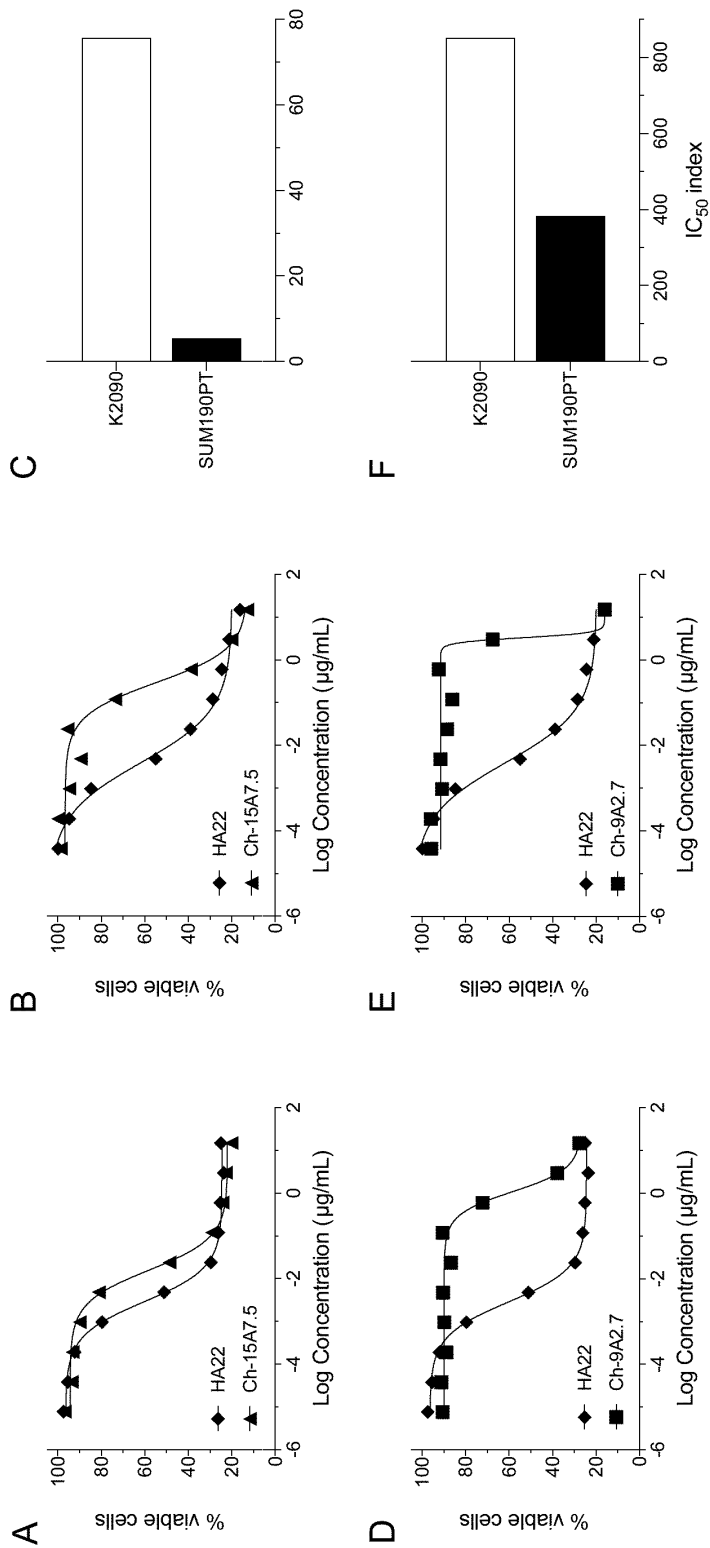


Figure 10



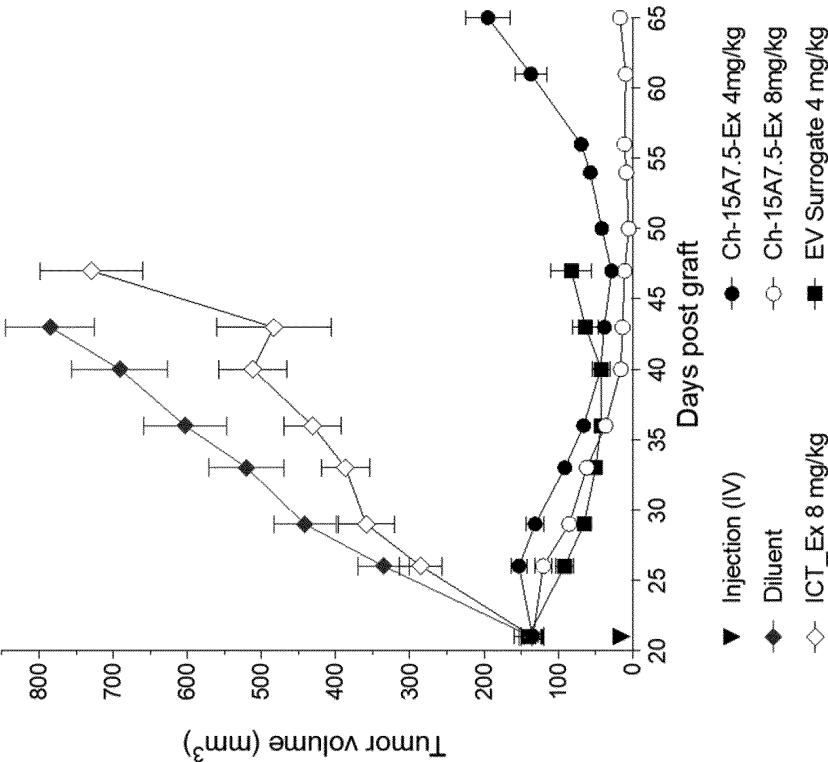
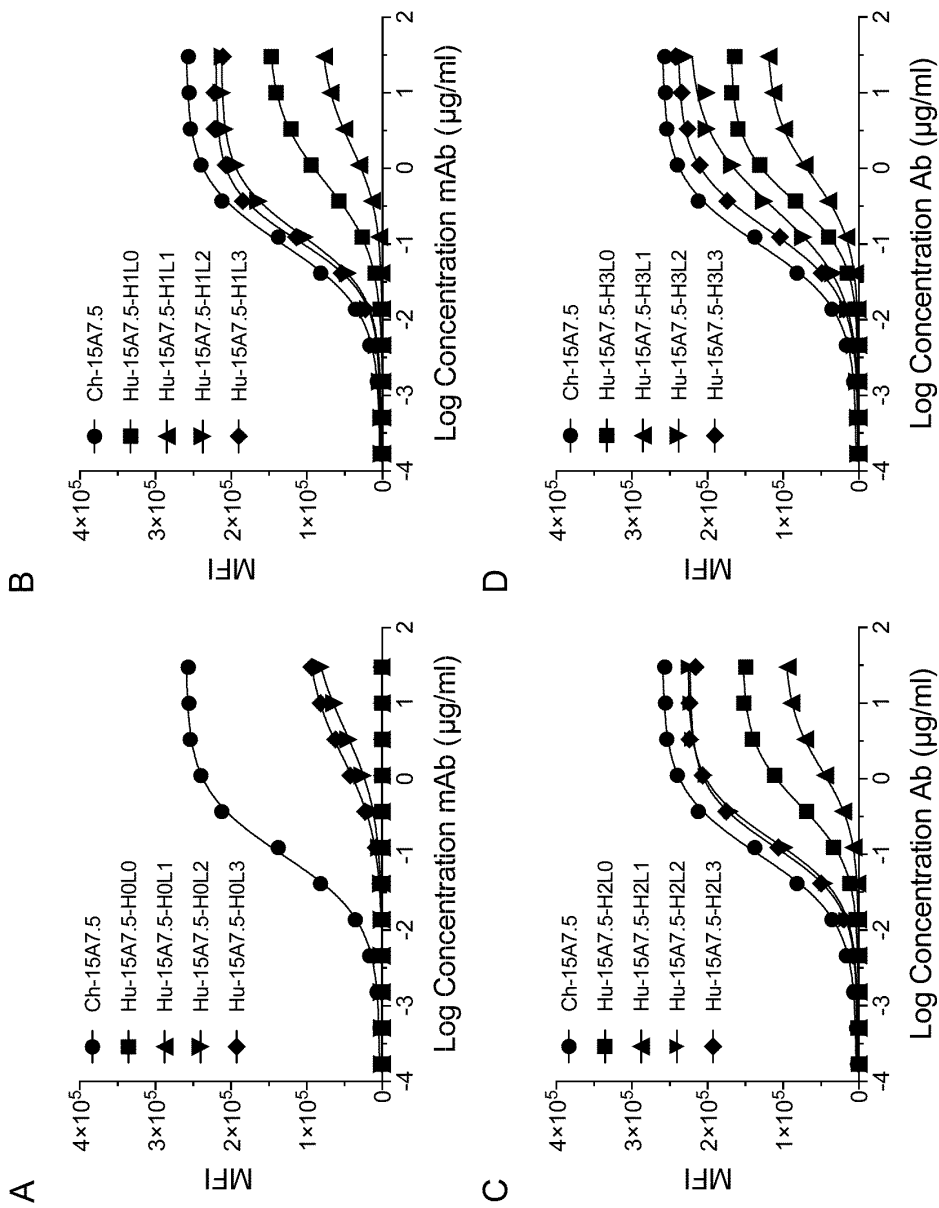


Figure 11

Figure 12



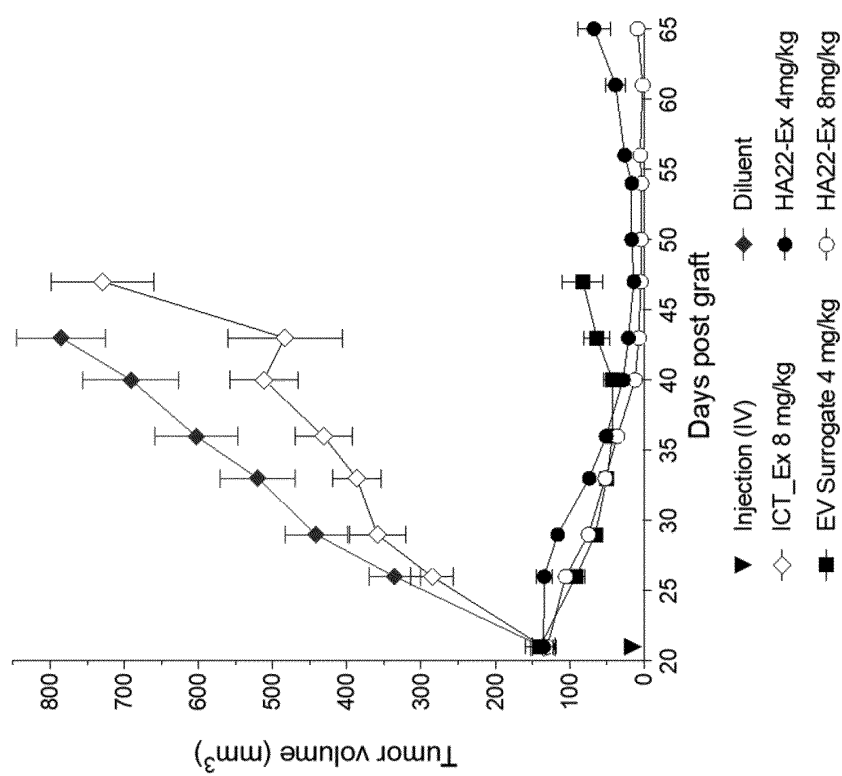


Figure 13

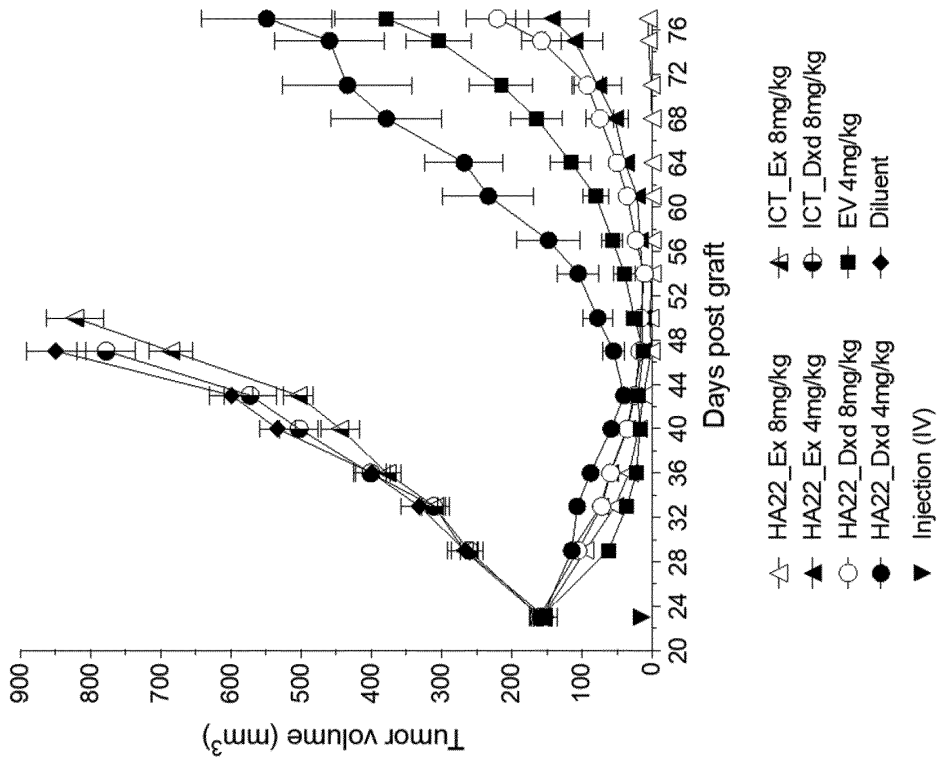


Figure 14

Figure 15

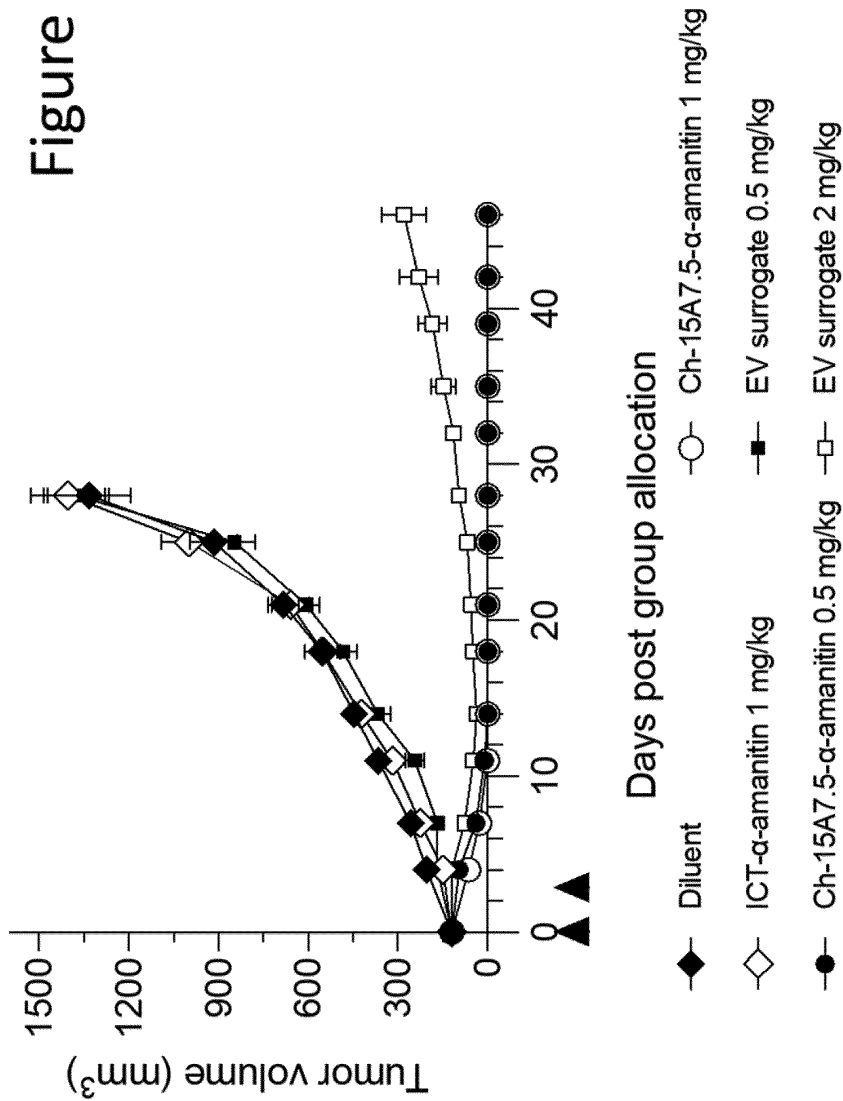
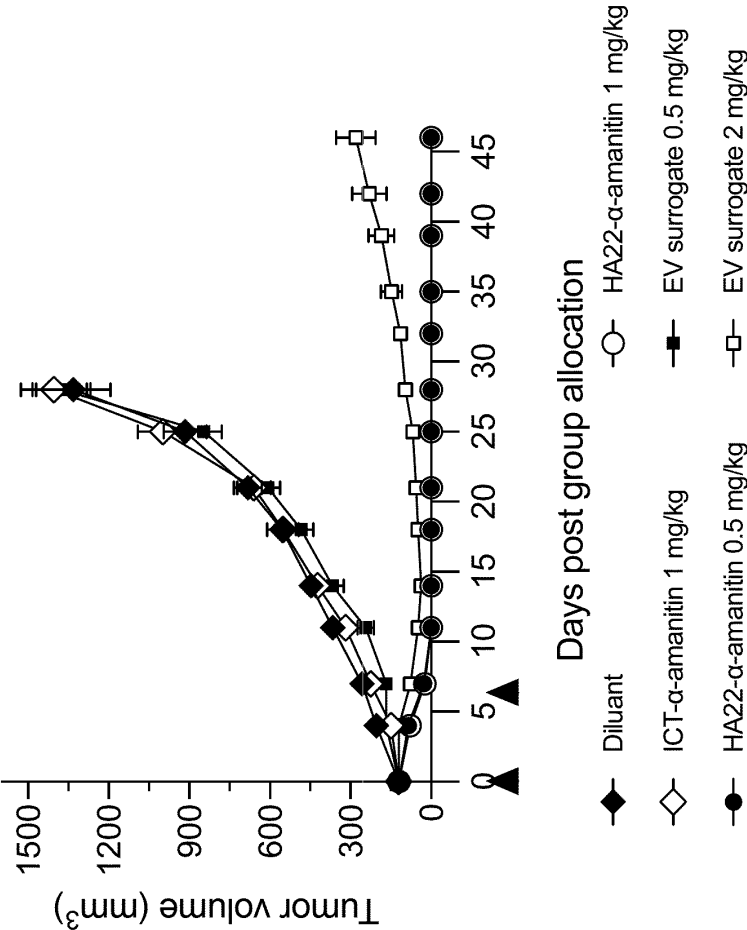


Figure 16



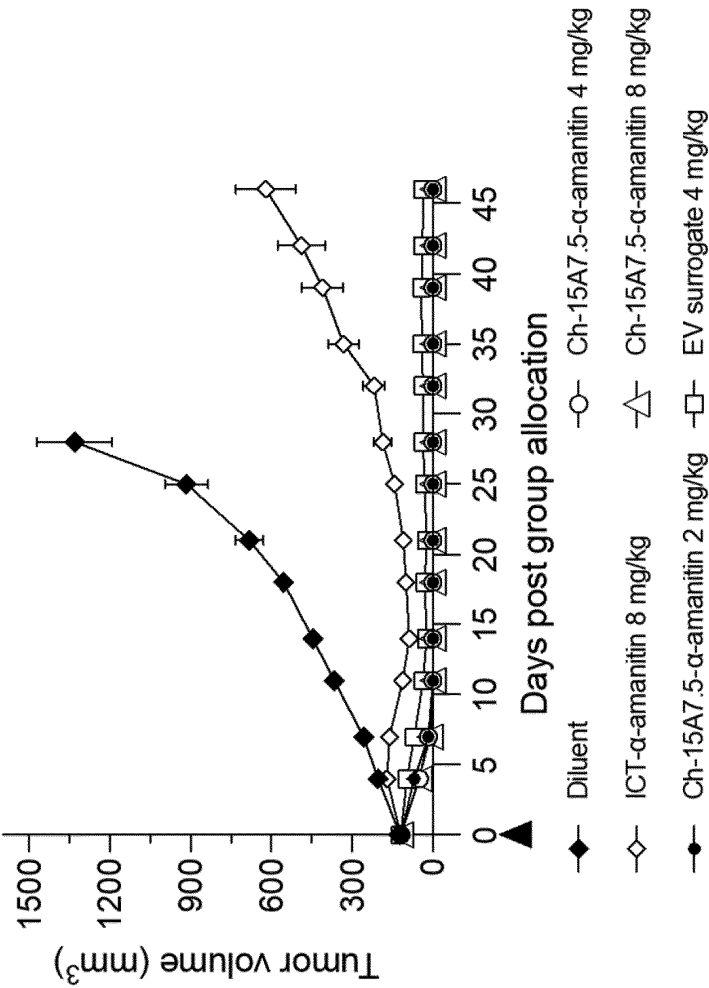


Figure 17

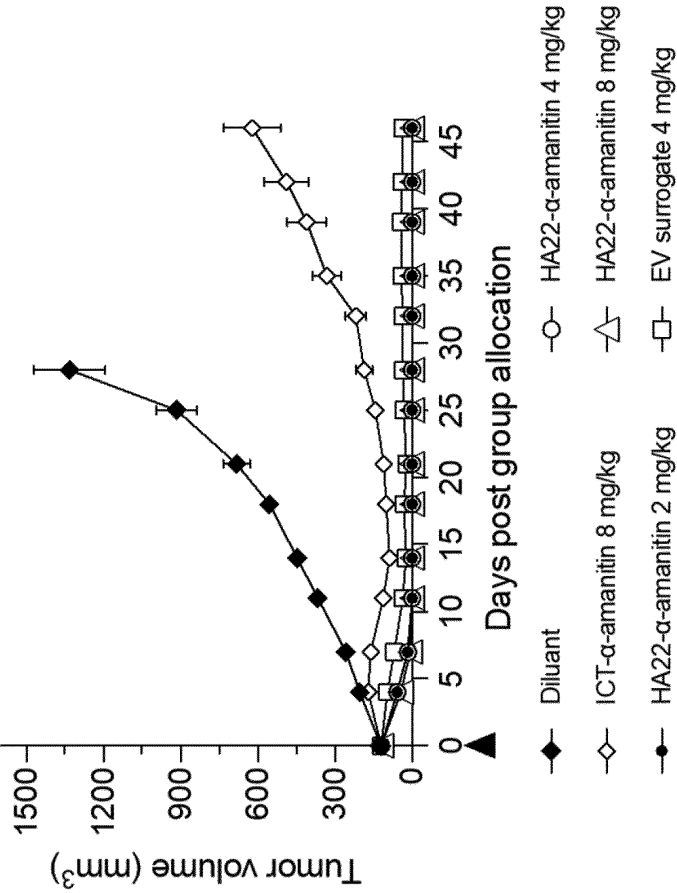


Figure 18

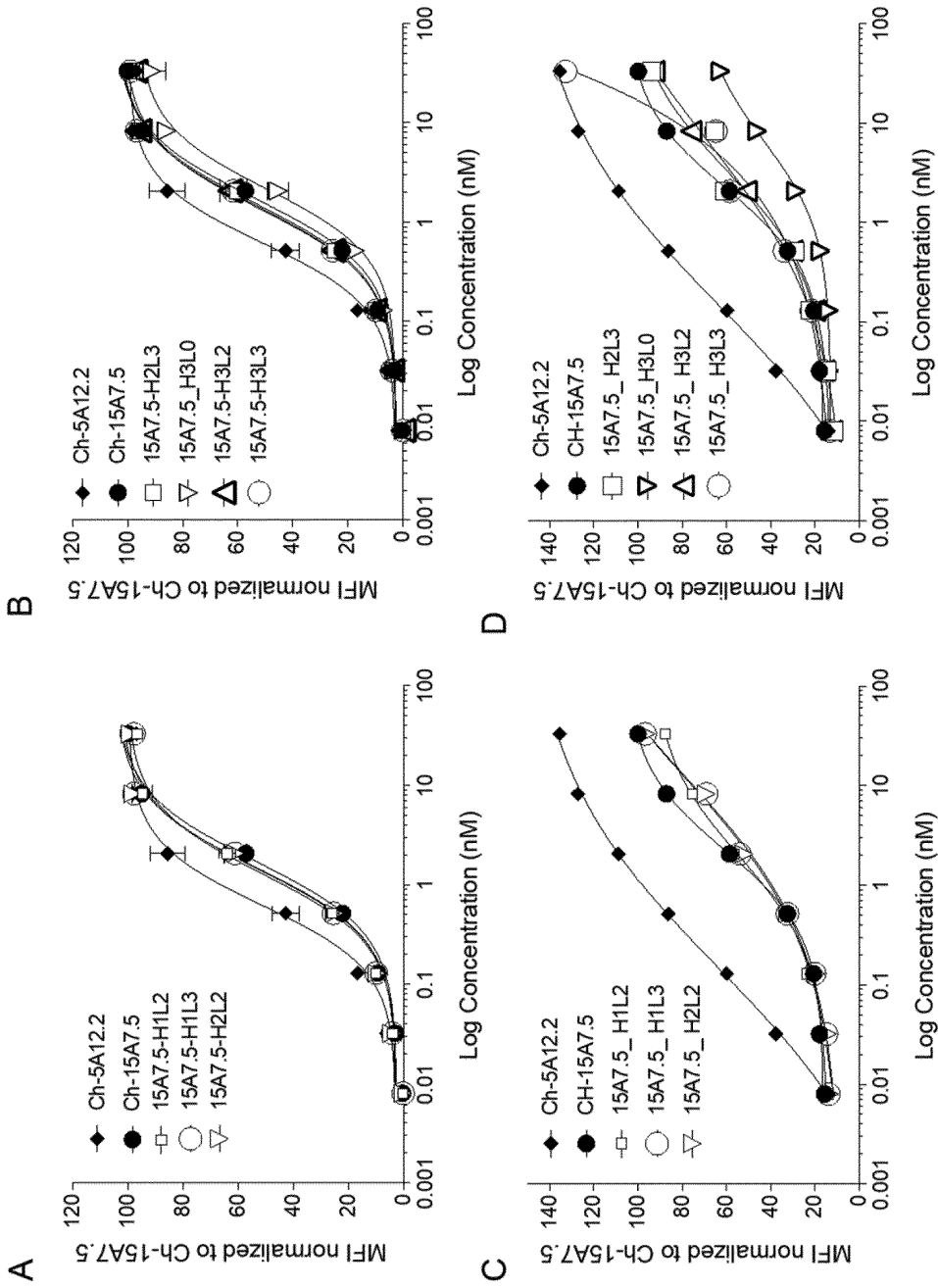


Figure 19

## Figure 20

■ Antibody clone 5A12.2

>VH\_5A12.2

QIQLQQSGAELVKPGASVTLSCCKTSGFTFNSMYISWLKQKPGQSQSLEWIAWIYAGTGGTRFN  
QKFTGKVQLTVDTSSSTAYMQFSSLTTDDSAIYYCAIRSGFVPMDYWGQGTSTTVSS

>VK\_5A12.2

SIVMTQTPKFLLSAGDRVTITCKASQSVSNDVAWYQQKPGQSPKLLIYYASNRYTGVPDR  
FTGSGYGTDFTFITSTVQAEDLAVYFCQQDYSSPWTFGGGKLEIK

CDR : IMGT nomenclature

## Figure 21

■ Antibody clone 9A2.7

>VH\_9A2.7

QVQLQQPGAELVRPGASVKLSCKASGYNFTTFWINWVKQRPQGQGLEWIGNIYPSDSYANY  
NQKFKDKATLTVDKSSTTAYMQLSSPTSEDSAVYYCTRPSTYFGRNSFAYWGQGTLLVTVSA

>VK\_9A2.7

DIVMTQSPSSLVSVGEKVTMSCKSSQSLLYSVNHKNYLAWYQQKPGQSPKLLIYWASTR  
ESGVPDRFTGSGSGTDFSLTISSVKAEDLAWYYCHQYYTYPLTFFGAGTKLELK

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  
YNEKFKGKATLTSDKSSSTAYMELSSLTSEDSAVYYCVTLFAYWGQGLTVSA

>VK\_8F06

QIVLTQSPAIMASPGEKVTMTCSASSISYMHWYQQKPGTSPKRWYDTSKLASGVPARF  
SGSGSGTSYSLTISSEAEADAATYYCHQRSSYPFTFGSGTKLEIK

CDR : IMGT nomenclature

## Figure 24

- Parental antibody clone 15A7.5

>VH\_15A7.5

EVKLVESGGGLVQPGGSRKLSCAASGFTFSNYGMAWVRQAPGKGP EWVAFISNLAYGI  
NYADTVTGRFTISRENAKNTLYLEMRLRSEDTAMYYCARGARATGWFAYWGQGTLLVT  
 VSA

>VK\_15A7.5

DIVMTQSQKFMSTSIGDRVSVTCKASQNVDTHTVAWYQEKPGQSPKALIYSASYRYSGV  
 DRFTGSGGTDFTLTISNVQSEDLADYFCQQYNSYPLJFGGGTKLEIK

CDR : IMGT nomenclature, Kabat nomenclature

## Figure 25

- Humanized Variants 15A7.5

> H0\_15A7.5

EVQLVESGGGLVQPGGSLRLSCAA<sup>S</sup>GFTF<sup>S</sup>NYG<sup>M</sup>MWVRQAPGKGLEWV<sup>F</sup>ISNLAYG<sup>N</sup>  
YADSVKG<sup>R</sup>FTISRDNAKNSLYLQMNSLRAEDTAVYY<sup>C</sup>A<sup>R</sup>GARATGWFA<sup>W</sup>YGGGTLVTVS

> H1\_15A7.5

EVQLVESGGGLVQPGGSLRLSCAA<sup>S</sup>GFTF<sup>S</sup>NYG<sup>M</sup>A<sup>W</sup>VRQAPGKGLEWV<sup>S</sup>FISNLAYG<sup>N</sup>  
YADTVTG<sup>R</sup>FTISRDNAKNSLYLQMNSLRAEDTAVYY<sup>C</sup>A<sup>R</sup>GARATGWFA<sup>W</sup>YGGGTLVTSS

> H2\_15A7.5

EVQLVESGGGLVQPGGSLRLSCAA<sup>S</sup>GFTF<sup>S</sup>NYG<sup>M</sup>A<sup>W</sup>VRQAPGKGLEWV<sup>AF</sup>ISNLAYG<sup>N</sup>  
NYADTVTG<sup>R</sup>FTISRDNAKNSLYLQMNSLRAEDTAVYY<sup>C</sup>A<sup>R</sup>GARATGWFA<sup>W</sup>YGGGTLVTSS

> H3\_15A7.5

EVQLVESGGGLVQPGGSLRLSCAA<sup>S</sup>GFTF<sup>S</sup>NYG<sup>M</sup>A<sup>W</sup>VRQAPGKGP<sup>EWV</sup>AFISNLAYG<sup>N</sup>  
NYADTVTG<sup>R</sup>FTISRDNAKNSLYLQMNSLRAEDTAVYYCARGARATGWFA<sup>W</sup>YGGGTLVTSS

> L0\_15A7.5

DIQMTQSPSSLSASVGDRVTIT<sup>C</sup>RA<sup>S</sup>QNV<sup>DTH</sup>V<sup>AW</sup>FQQKPGKAPKSLI<sup>Y</sup>SAS<sup>Y</sup>LQSGVPS  
 RFSGSGSGTDFTLTISLQPEDFATYY<sup>C</sup>QQYNSYPLT<sup>F</sup>GGGTKVEIK

> L1\_15A7.5

DIQMTQSPSSLSASVGDRVTIT<sup>C</sup>KA<sup>S</sup>QNV<sup>DTH</sup>V<sup>AW</sup>FQQKPGKAPKSLI<sup>Y</sup>SAS<sup>Y</sup>RY<sup>S</sup>G<sup>V</sup>  
 PSRFSGSGSGTDFTLTISLQPEDFATYY<sup>C</sup>QQYNSYPLT<sup>F</sup>GGGTKVEIK

> L2\_15A7.5

DIQMTQSPSSLSASVGDRVTIT<sup>C</sup>KA<sup>S</sup>QNV<sup>DTH</sup>V<sup>AW</sup>YQQKPGKAPK<sup>ALI</sup>SAS<sup>Y</sup>RY<sup>S</sup>G<sup>V</sup>  
 PSRFSGSGSGTDFTLTISLQPEDFATYY<sup>C</sup>QQYNSYPLT<sup>F</sup>GGGTKVEIK

> L3\_15A7.5

DIQMTQSPSSLSASVGDRVTIT<sup>C</sup>KA<sup>S</sup>QNV<sup>DTH</sup>V<sup>AW</sup>YQQKPGK<sup>SPKALI</sup>SAS<sup>Y</sup>RY<sup>S</sup>G<sup>V</sup>  
 VPSRFSGSGSGTDFTLTISLQPEDFATYY<sup>C</sup>QQYNSYPLT<sup>F</sup>GGGTKVEIK

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 <sup>2</sup> |
|---------------|------------|----------------------|----------------------|----------------|
| Ch-15A7.5     | 45.9       | 7.52 <sup>E+04</sup> | 3.45 <sup>E-03</sup> | 0.98           |
| 15A7.5_H1L2   | 52         | 8.01 <sup>E+04</sup> | 4.16 <sup>E-03</sup> | 0.97           |
| 15A7.5_H1L3   | 50         | 8.24 <sup>E+04</sup> | 4.12 <sup>E-03</sup> | 0.97           |
| 15A7.5_H2L2   | 59.7       | 7.79 <sup>E+04</sup> | 4.65 <sup>E-03</sup> | 0.97           |
| 15A7.5_H2L3   | 60         | 8.00 <sup>E+04</sup> | 4.80 <sup>E-03</sup> | 0.97           |
| 15A7.5_H3L2   | 55.5       | 8.81 <sup>E+04</sup> | 4.89 <sup>E-03</sup> | 0.97           |
| 15A7.5_H3L3   | 58.1       | 7.86 <sup>E+04</sup> | 4.57 <sup>E-03</sup> | 0.97           |
| 15A7.5_H0L3   | Irrelevant | Irrelevant           | Irrelevant           | 0.92           |