

Fig. 1

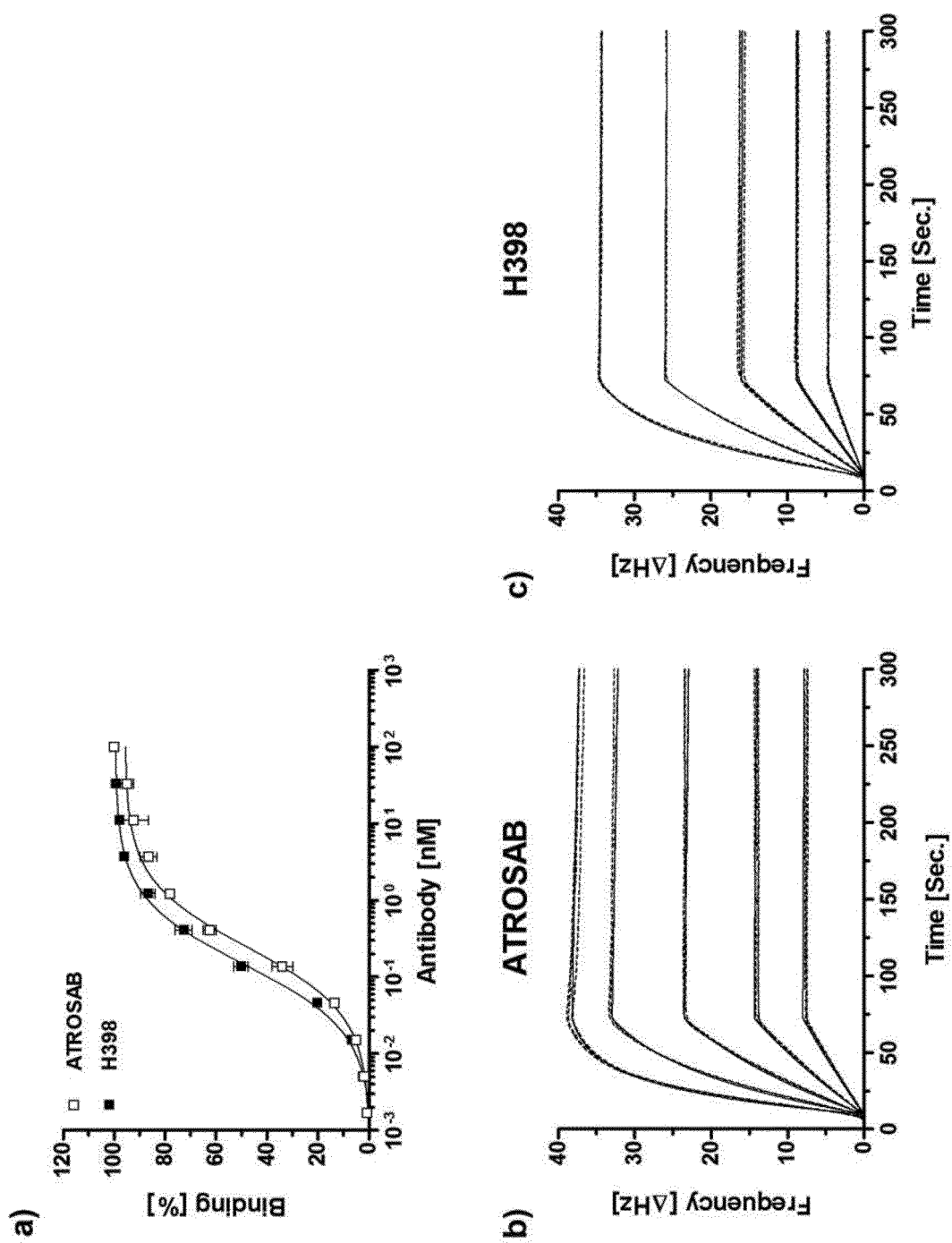


Fig. 2

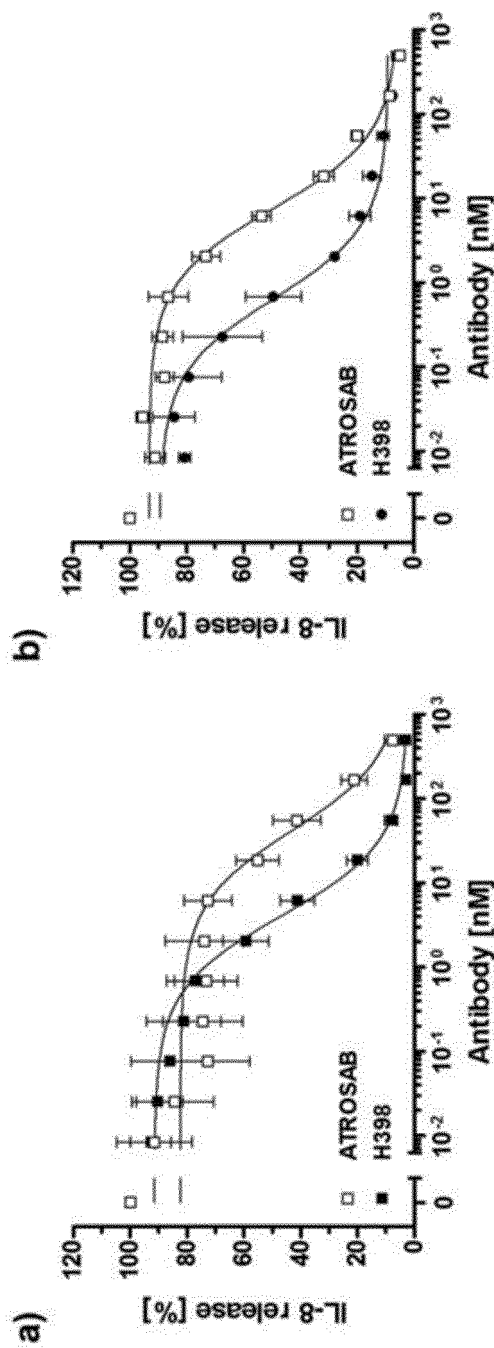


Fig. 3

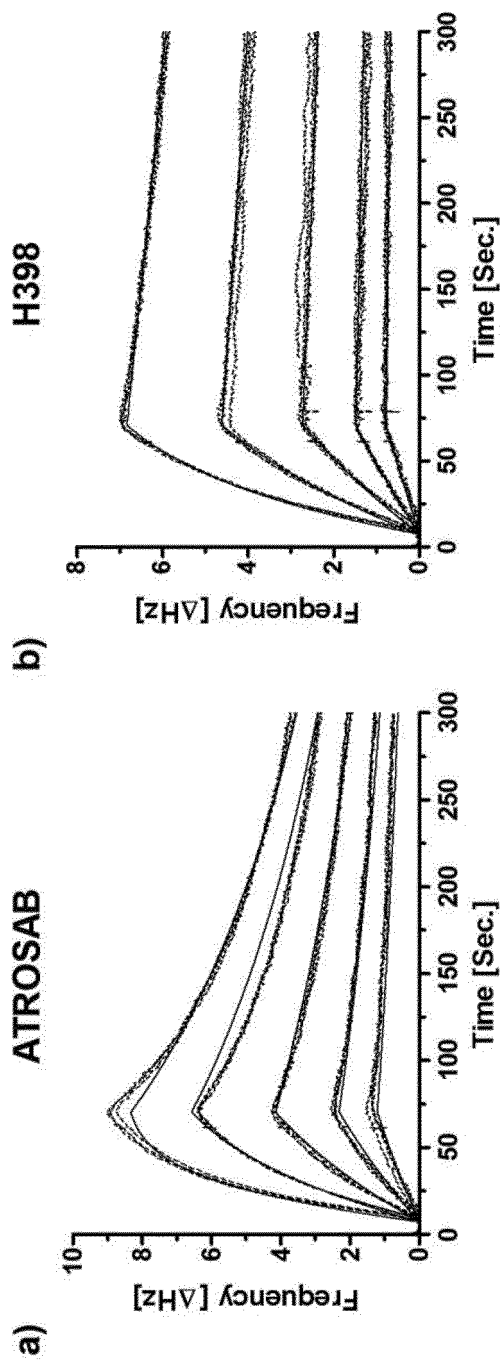


Fig. 4

a)

	FR1	CDRH1	FR2	CDRH2
Kabat	123456789 10 23456789 20 23456789 3	02345	6789 40 23456789	50 2a3456789 60 2345
scFvIZI06.1	QVQLVQSGAEVKKPGSSVKVSCKASGYTFT	DFYIN	WVRQAPGQGLEWIG	EIYPYSGHAYYNEKFA
scFvIG11				..V.TQ.E.K..D....
scFvT12B	H.....			..V.SQ.E.K..D....
scFvFRK13.7	H.....			..V.SQ.E.K..D....

	FR3	CDRH3	FR4
Kabat	6789 70 23456789 80 2abc3456789 90 234	56789 1	003456789 110
scFvIZI06.1	RVTITADKSTSTAYMELSSLRSEDVAVYYCAR	WDFLDY	WGQGTITVTVSS
scFvIG11			
scFvT12B			
scFvFRK13.7			

b)

	FR1	CDRL1	FR2	CDRL2
Kabat	123456789 10 23456789 20 23	4567abcde89 30 234	56789 40 23456789	50 23456
scFvIZI06.1	DIVMTQSPKSLPVTPGEPASISC	RSSQSLHLSNGNTYLH	WYLQKPGQSPQLLIY	TVSNRFS
scFvIG11				
scFvT12B				
scFvFRK13.7	.VQ.....S..SASV.DRVT.T.		..Q....KA.K....	

	FR3	CDRL3	FR4
Kabat	789 60 23456789 70 23456789 80 2345678	99 0 234567	89 100 345678
scFvIZI06.1	GVPDRFSGSGGTDFTLKISRVEAEDVGVYYC	SQSTHVPYT	FGGGTKVEIKR
scFvIG11			
scFvT12B		..G.....	
scFvFRK13.7	...S.....T..SLQP..FAT...	..S.....	

Fig. 5

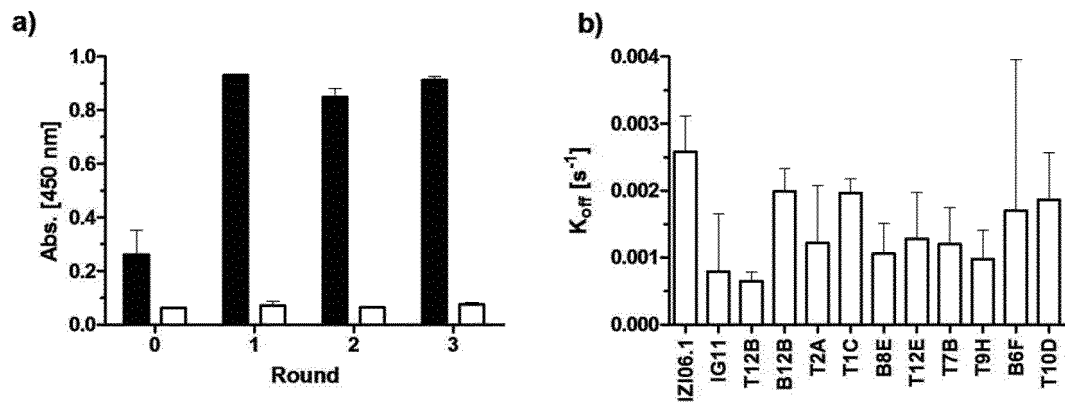


Fig. 6

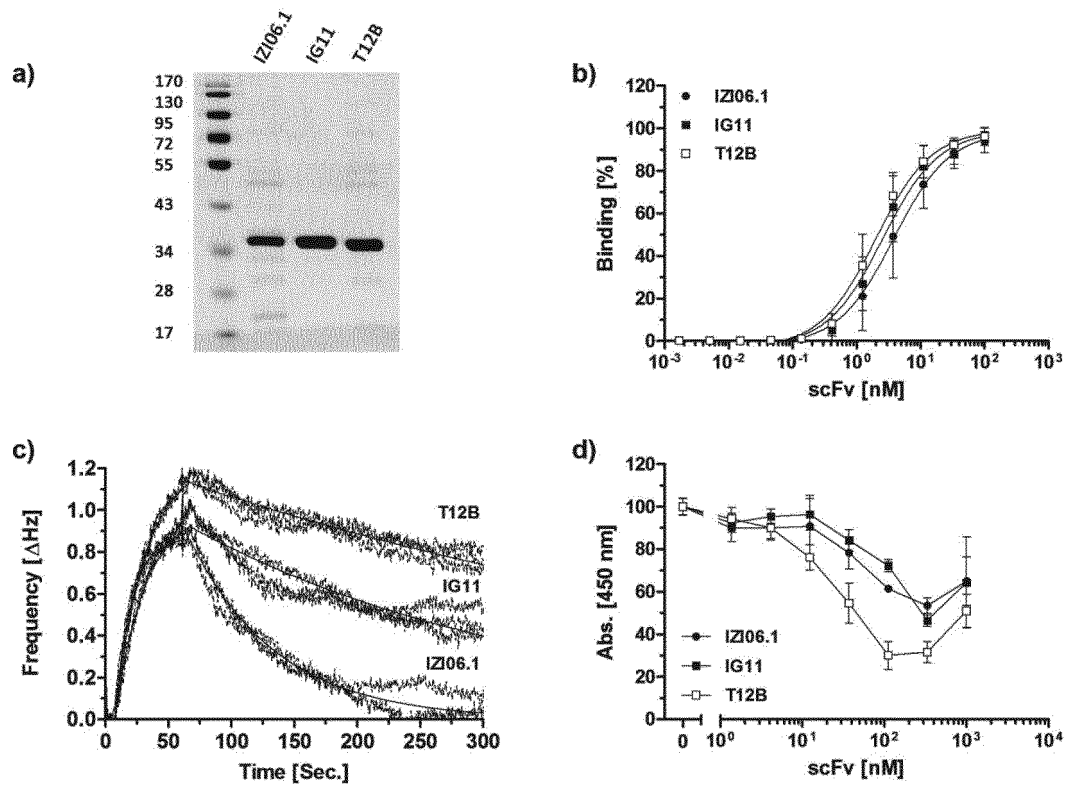


Fig. 7

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a)

	FR1	CDRH1	FR2	CDRH2
Kabat	123456789102345678920234567893	02345	67894023456789	502a3456789602345
scFvIZI06.1	QVQLVQSGAEVKKPGSSVKVSCKASGYTFT	DFYIN	WVRQAPGQGLEWIG	EIYPYSGHAYYNEKFA
FRK13.1	E..GGLV...G.LRL..A...F..S	I.....K....VS	G.....	
FRK13.2	E..GGLV...G.LRL..A...F..S	I.....K....VS	G.....	

	FR3	CDRH3	FR4
Kabat	67897023456789802abc345678990234	567891	003456789110
scFvIZI06.1	RVTITADKSTSTAYMELSSLRSEDVAVYYCAR	WDFLDY	WGQGTITVTVSS
FRK13.1	.F..SR.NAKNSL.LQMN...A.....		
FRK13.2	.F..SA.NAKNSL.LQMN...A.....		

b)

	FR1	CDRL1	FR2	CDRL2
Kabat	12345678910234567892023	4567abcde8930234	567894023456789	5023456
scFvIZI06.1	DIVMTQSPPLSLPVTGPGEPAIS	RSSQSLLSHNGNTYLH	WYLQKPGQSPQLLIY	TVSNRFS
FRK13.1	.IQ.....S..SASV.DRVT.T.	Q....KA.K....		
FRK13.2	.VQ.....S..SASV.DRVT.T.	Q....KA.K....		

	FR3	CDRL3	FR4
Kabat	78960234567897023456789802345678	990234567	89100345678
scFvIZI06.1	GVPDRFSGSGSGTDFTLKISRVEAEDVGVYYC	SQSTHVPYT	FGGGTKVEIKR
FRK13.1	...S.....T..SLQP..FAT...		
FRK13.2	...S.....T..SLQP..FAT...		

Fig. 8

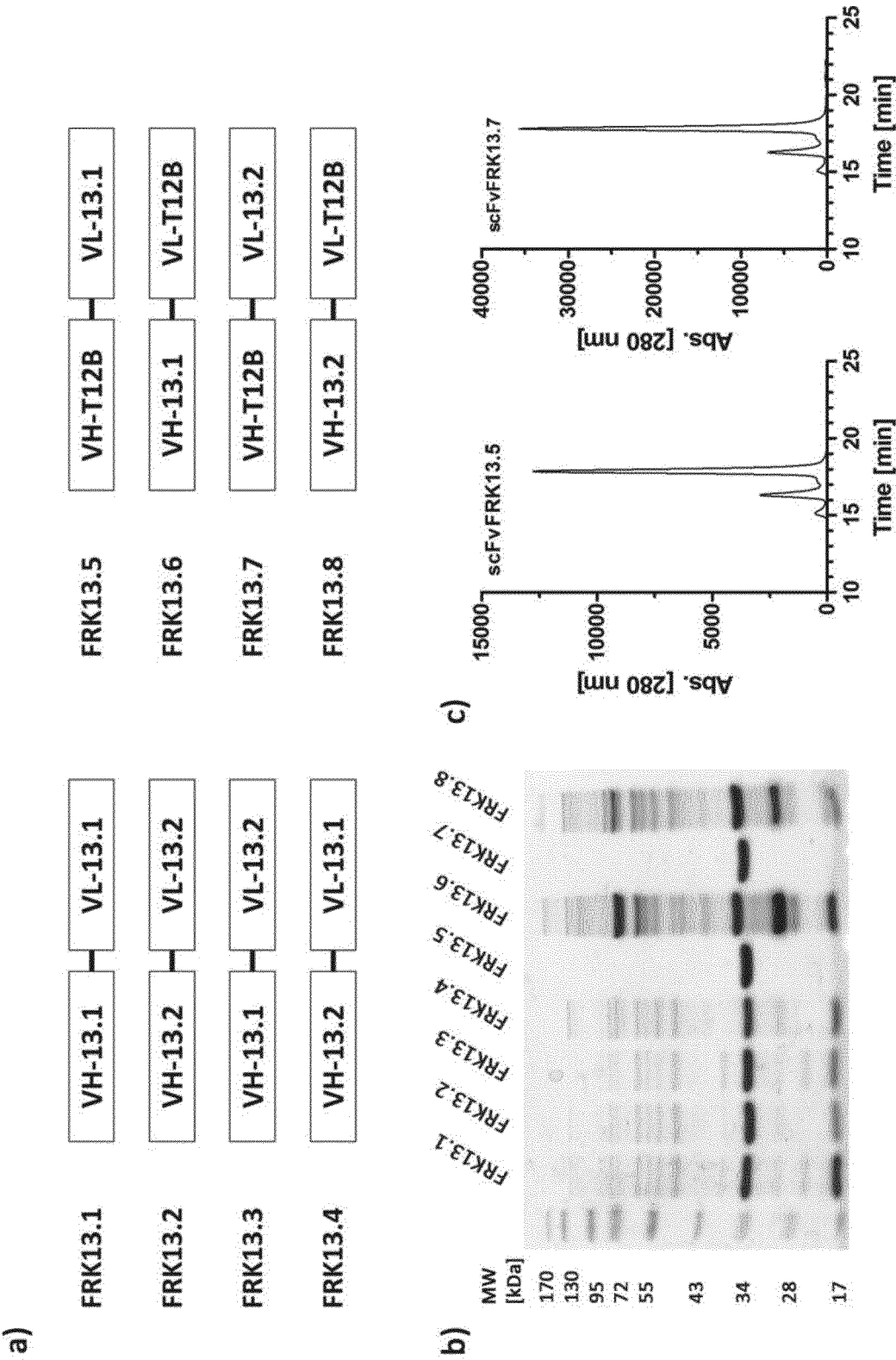


Fig. 9

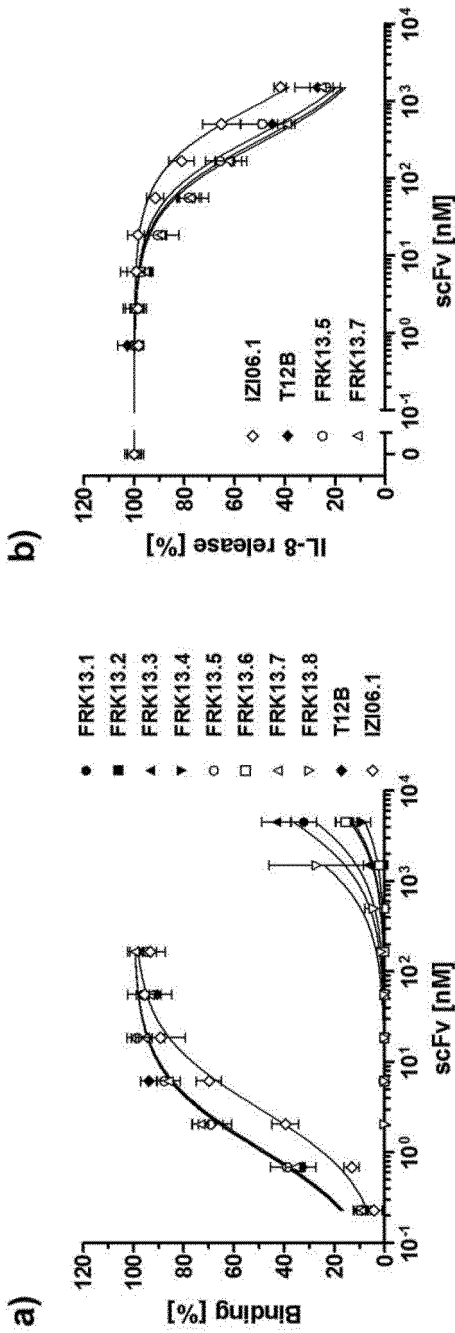


Fig. 10

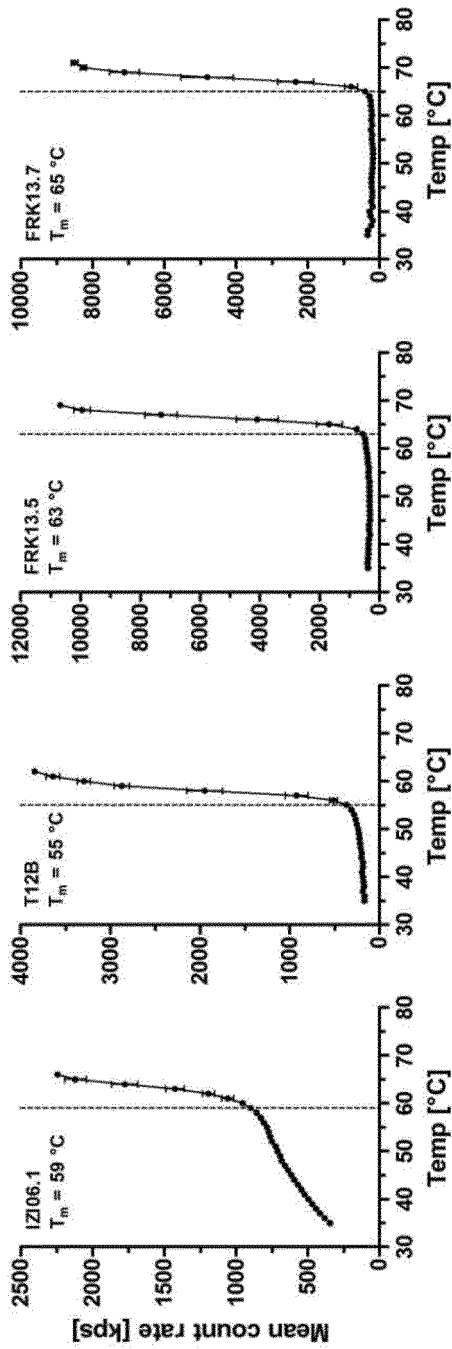


Fig. 11

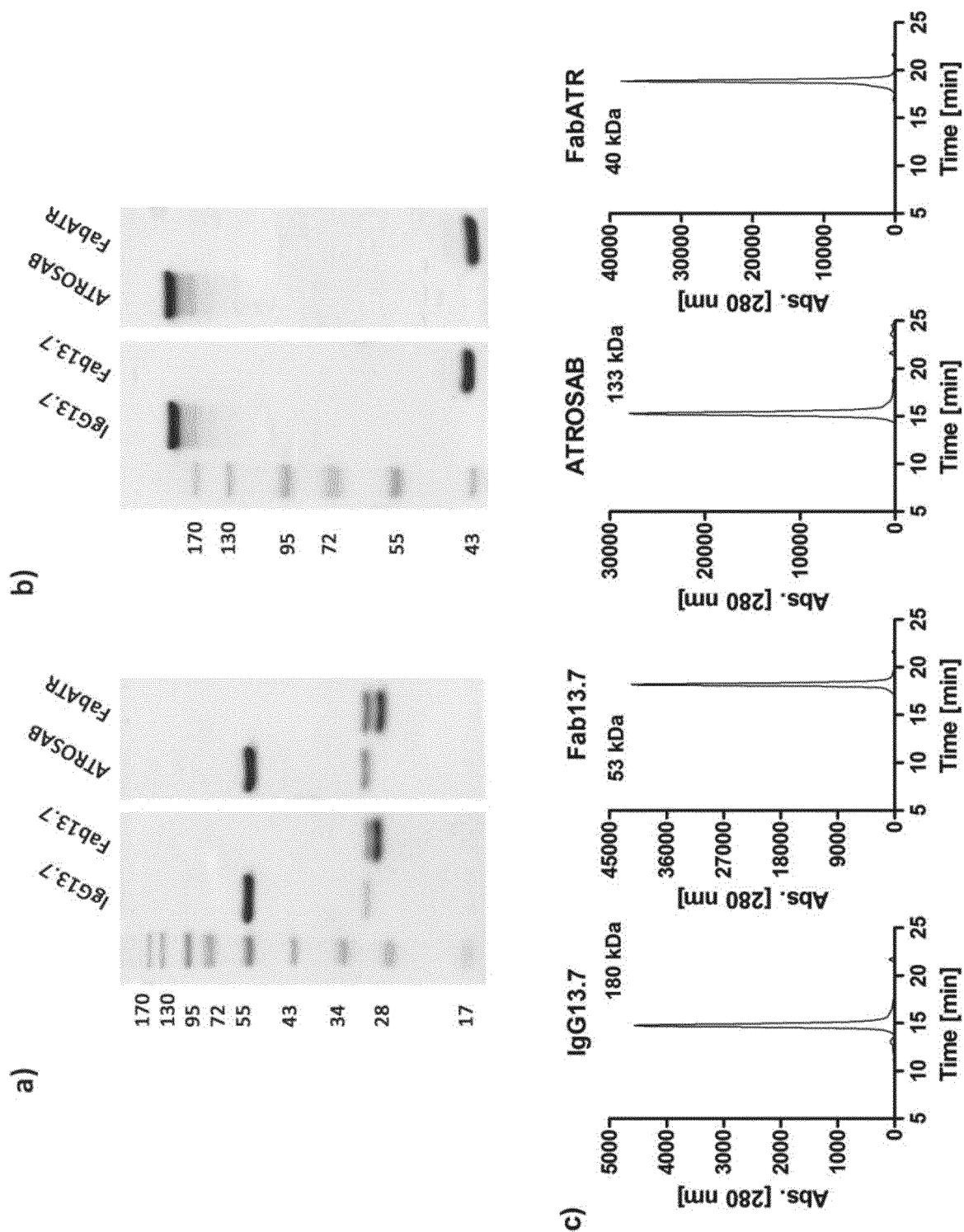


Fig. 12

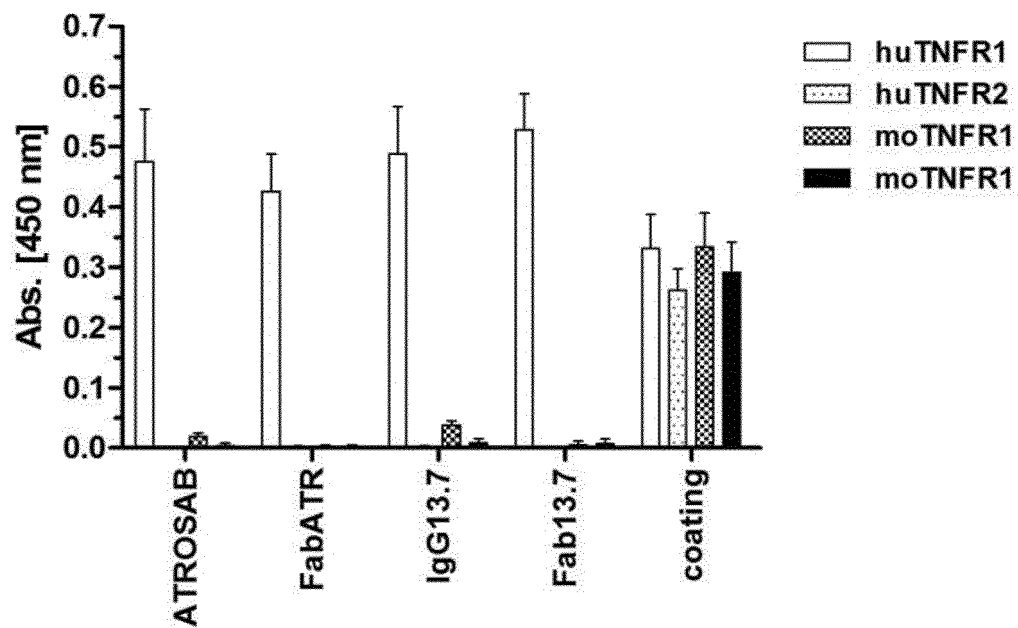


Fig. 13

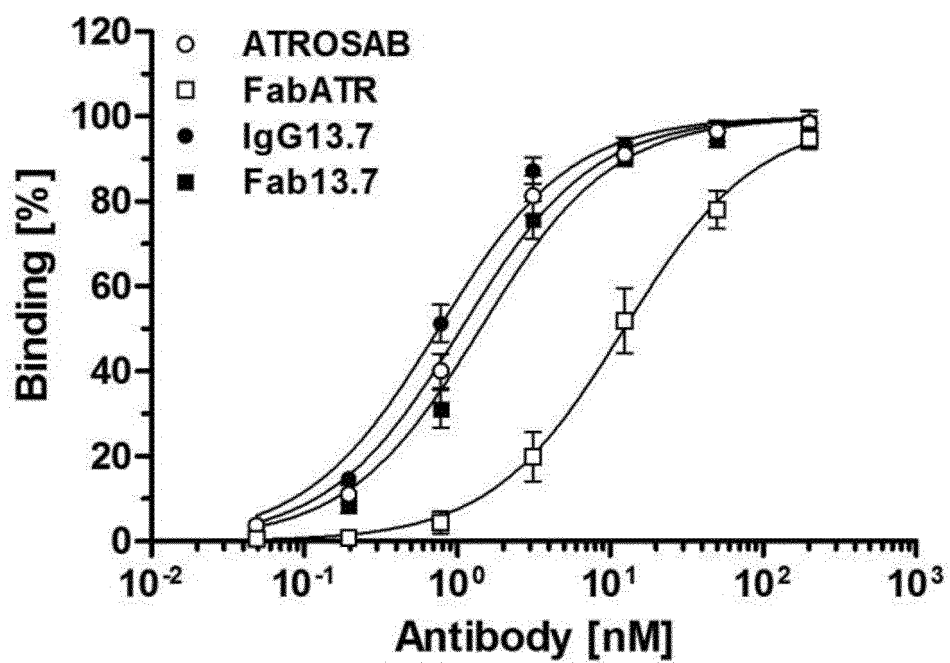


Fig. 14

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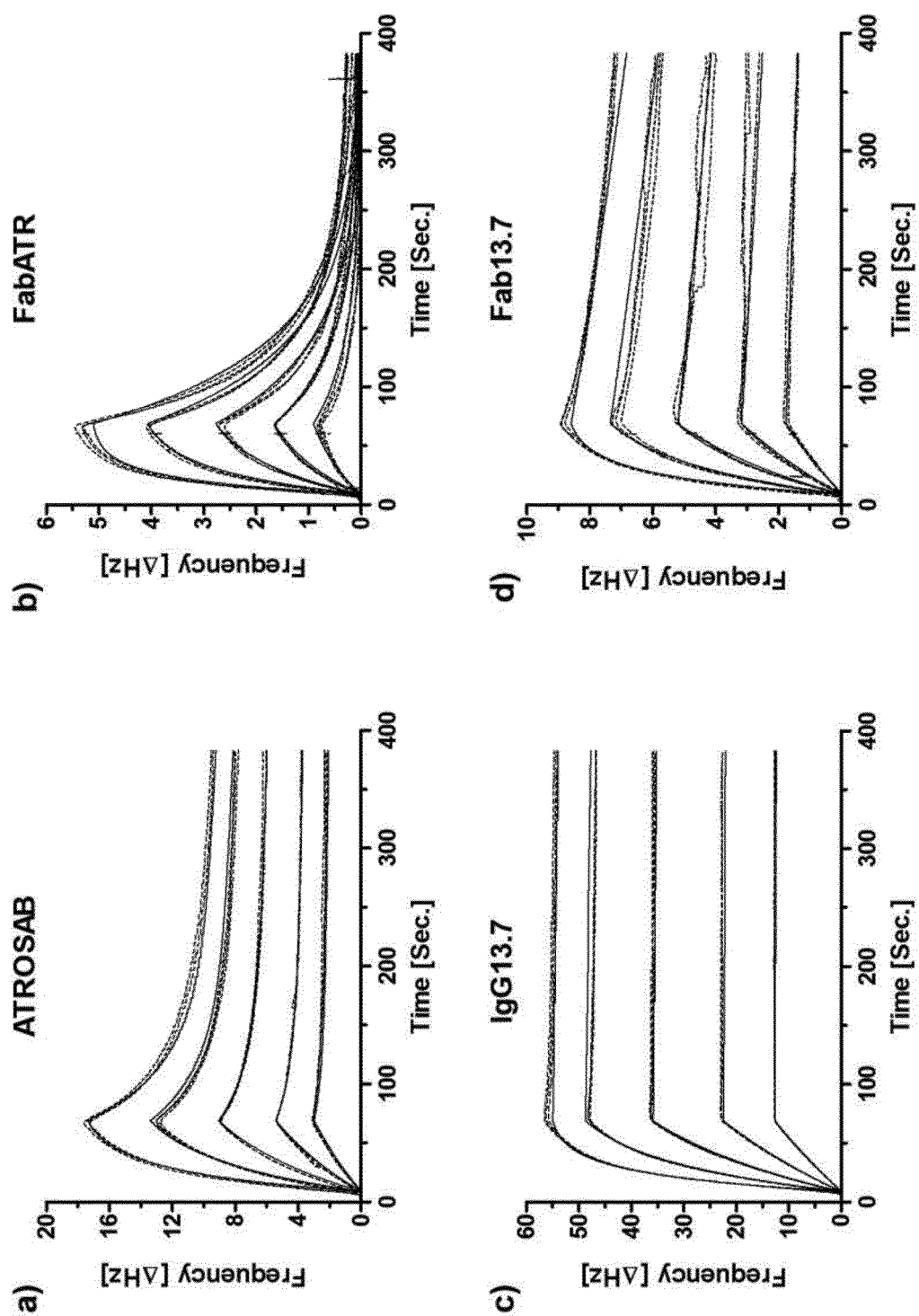


Fig. 15

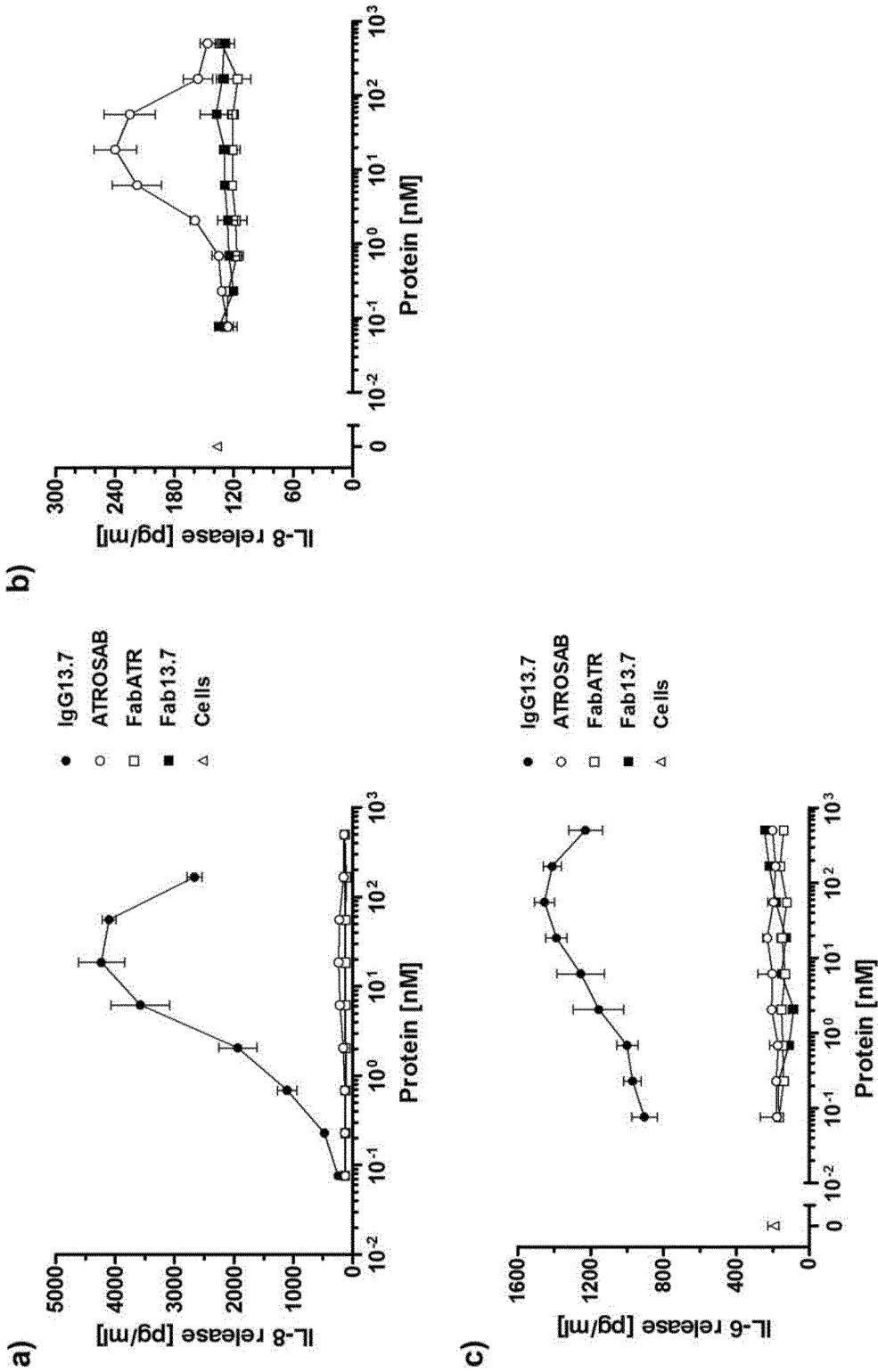


Fig. 16

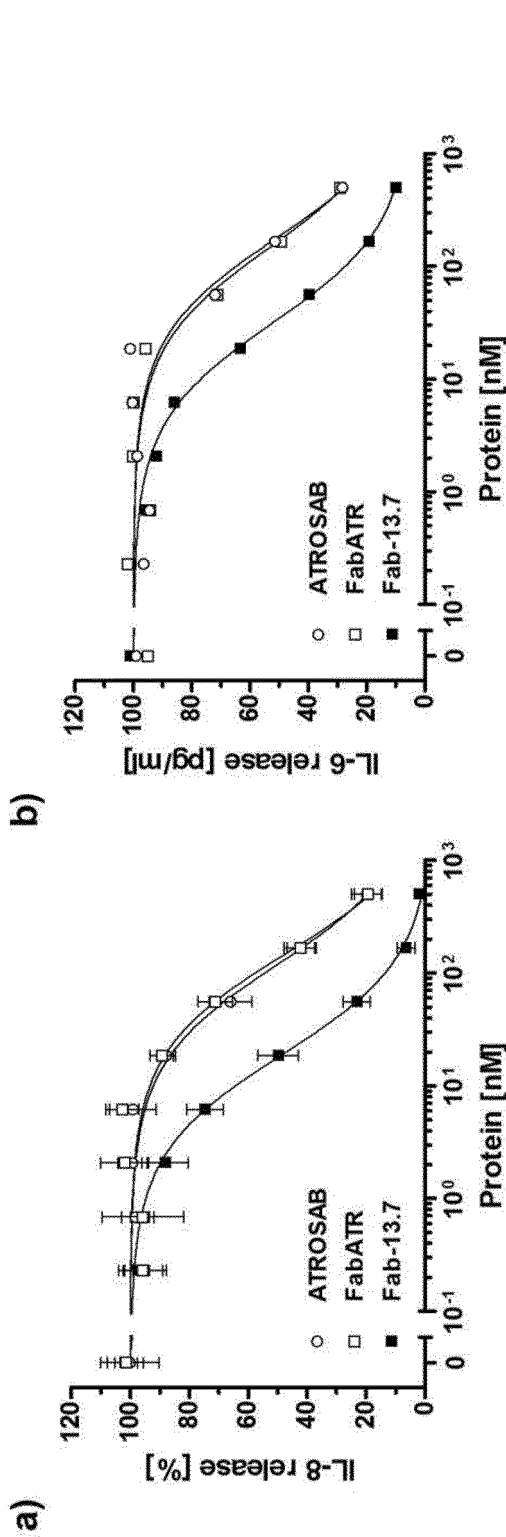


Fig. 17

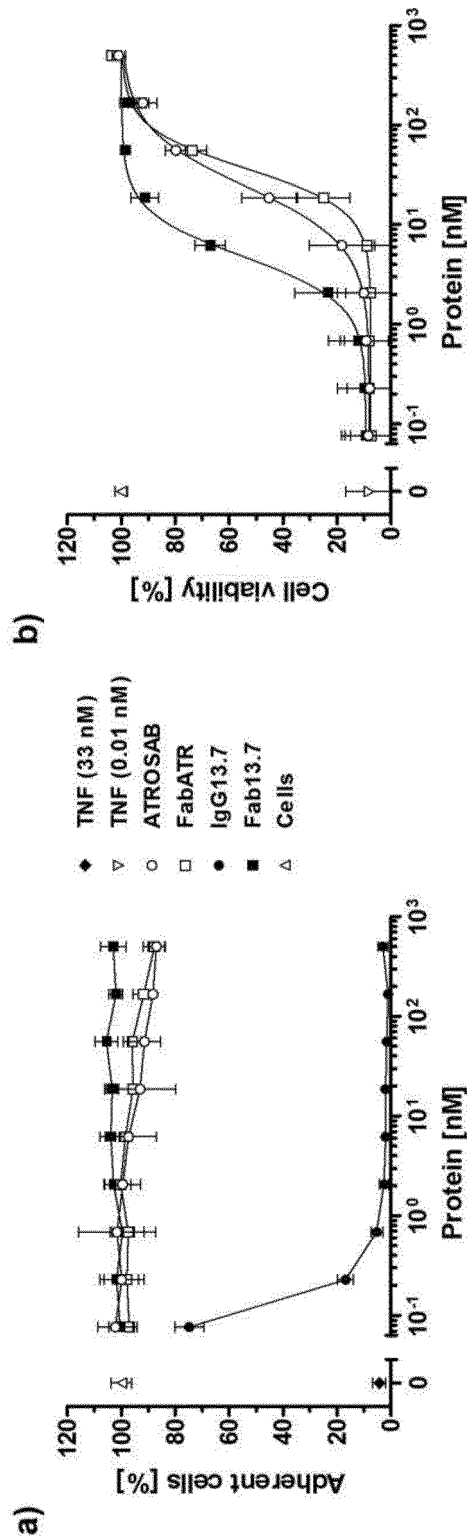


Fig. 18

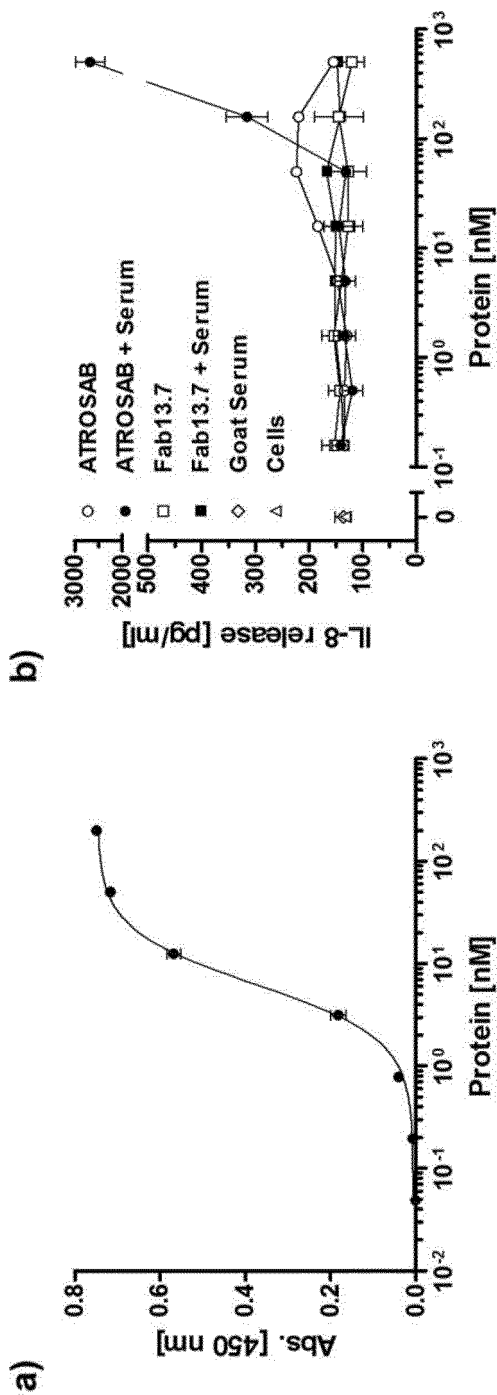


Fig. 19

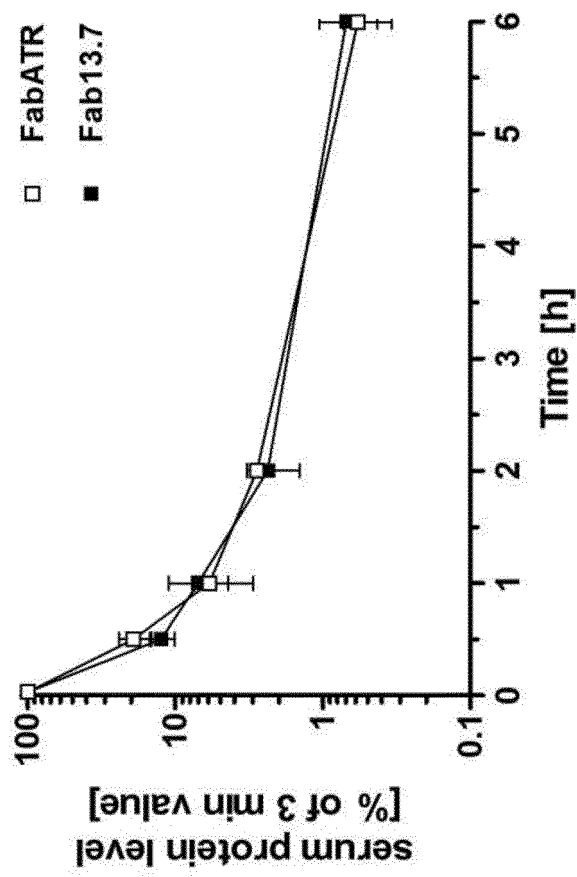
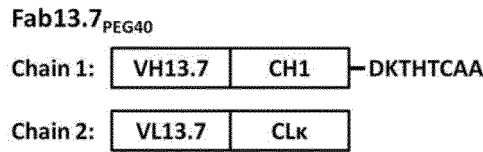
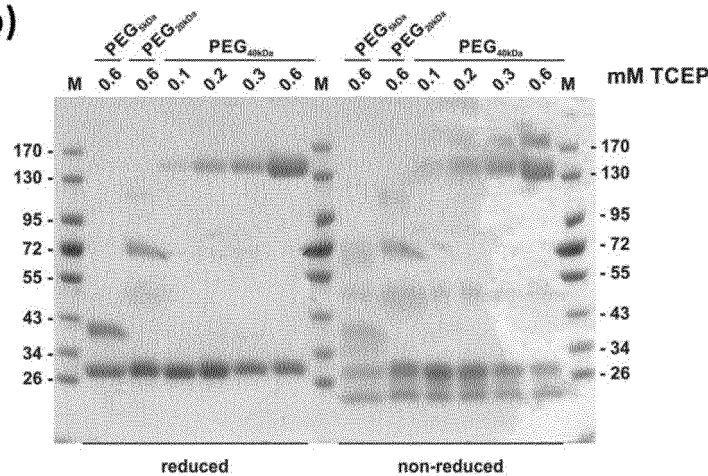


Fig. 20

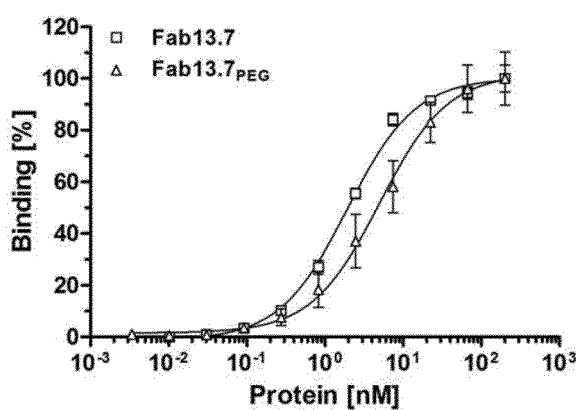
a)



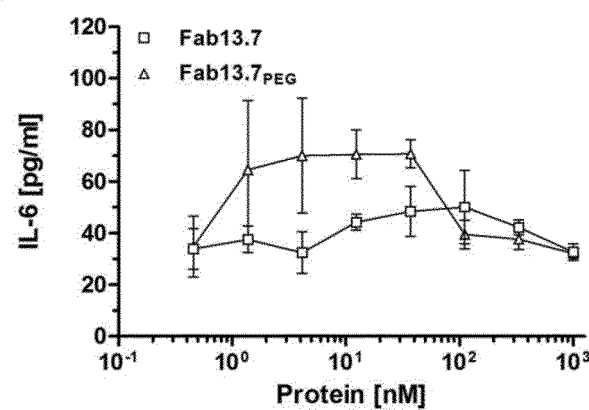
b)



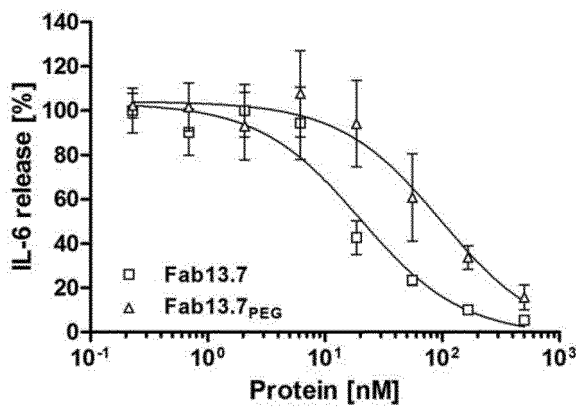
c)



d)



e)



f)

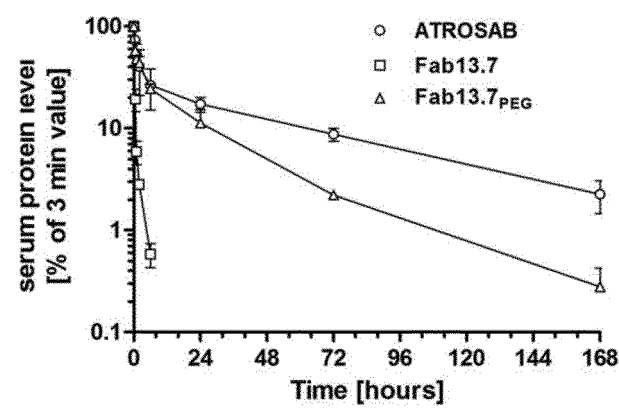
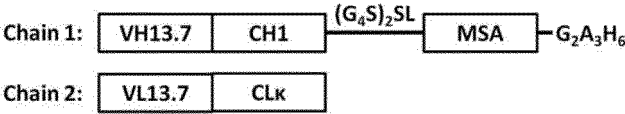


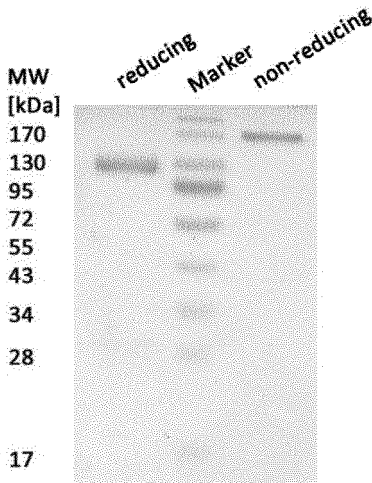
Fig. 21

a)

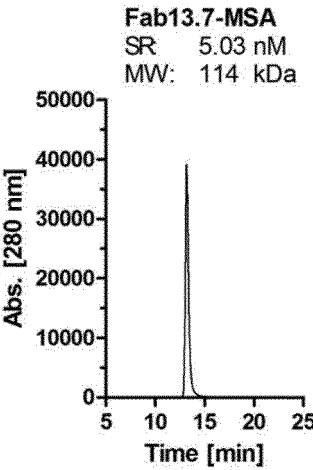
Fab13.7-MSA



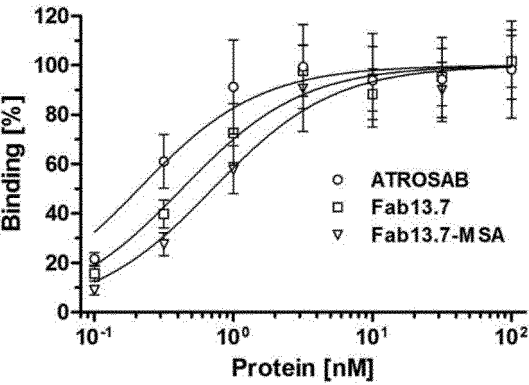
b)



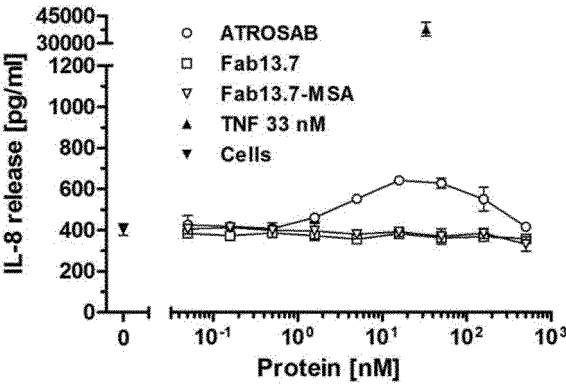
c)



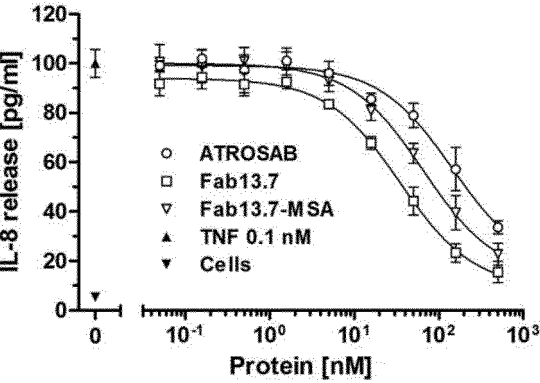
d)



e)



f)



g)

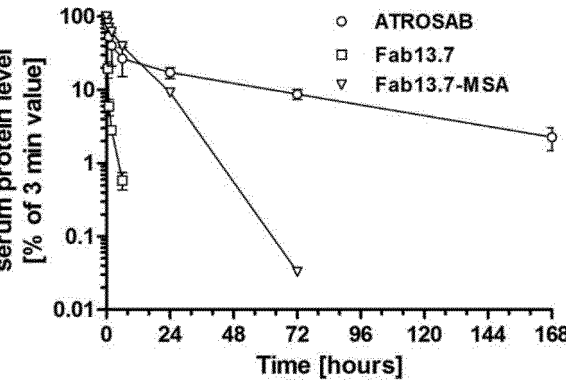
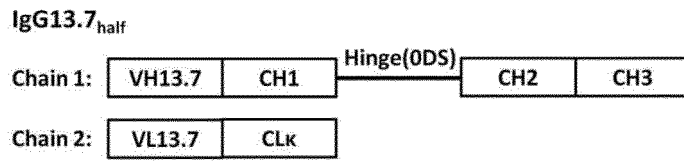
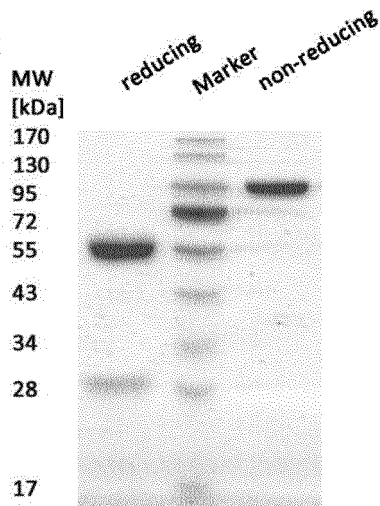


Fig. 22

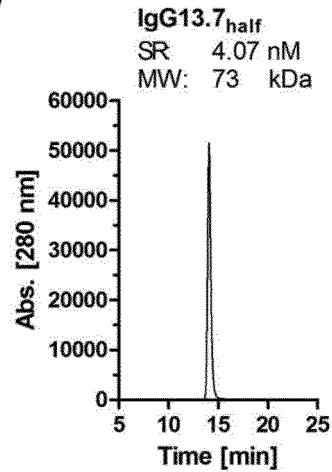
a)



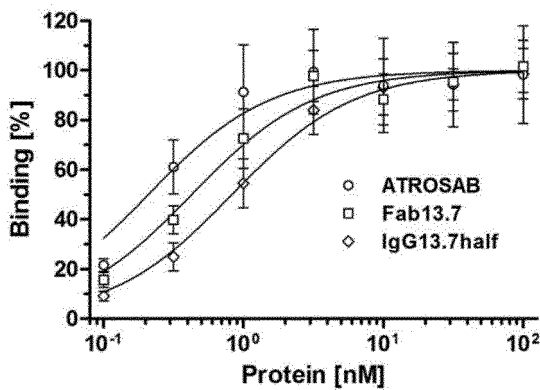
b)



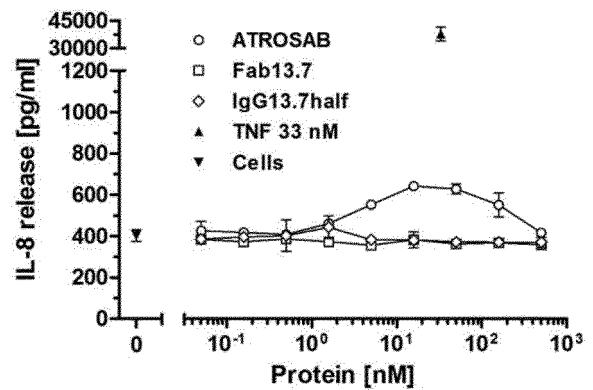
c)



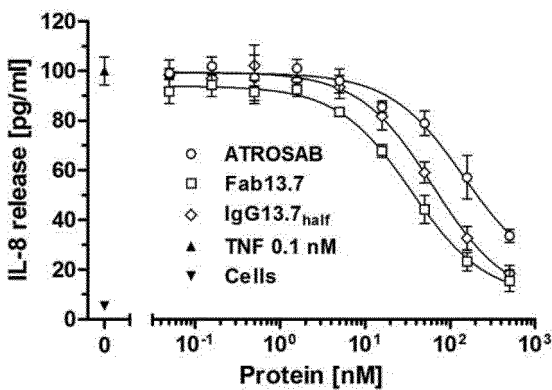
d)



e)



f)



g)

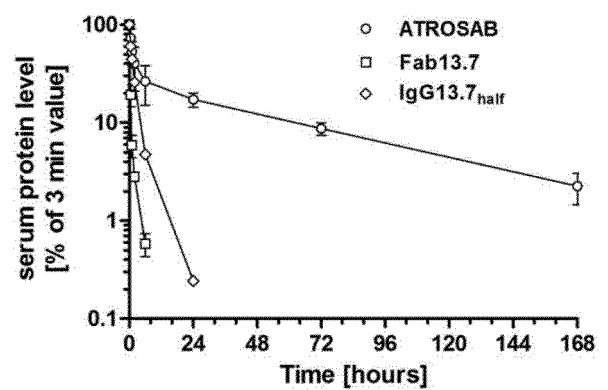
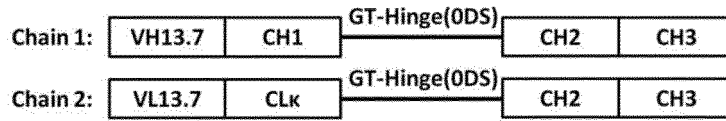


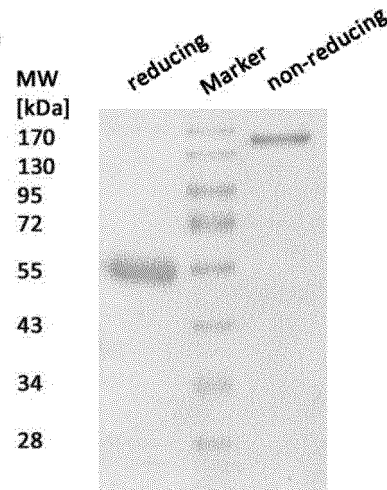
Fig. 23

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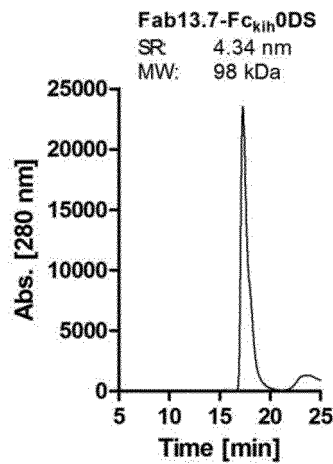
a)

Fab13.7-Fc_{kih}0DS

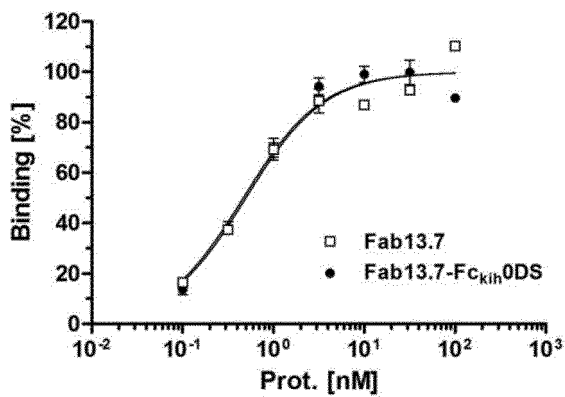
b)



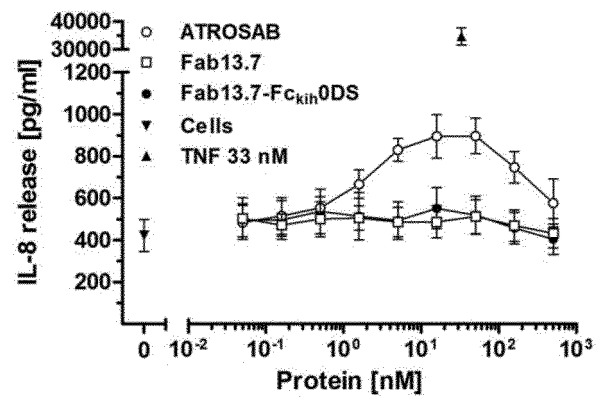
c)



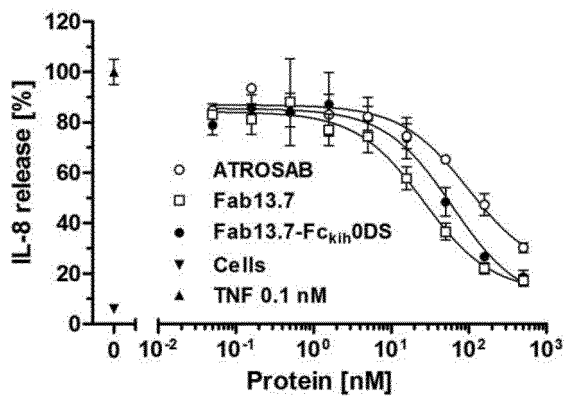
d)



e)



f)



g)

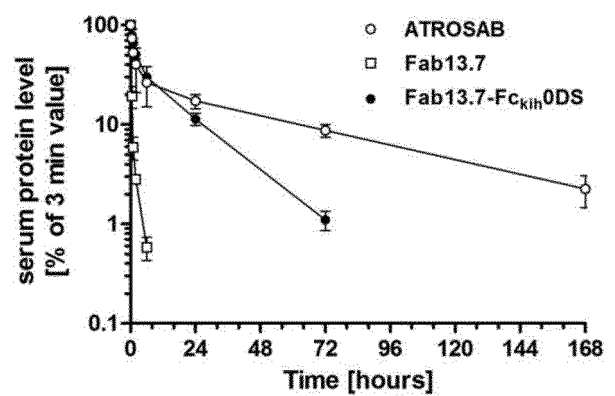
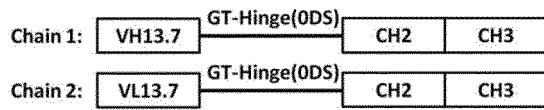


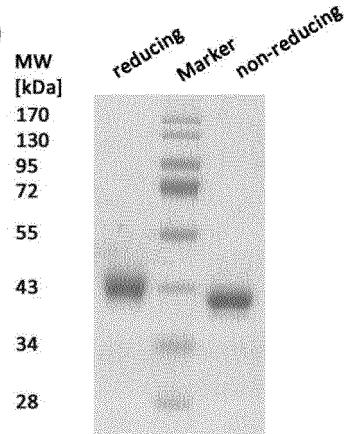
Fig. 24

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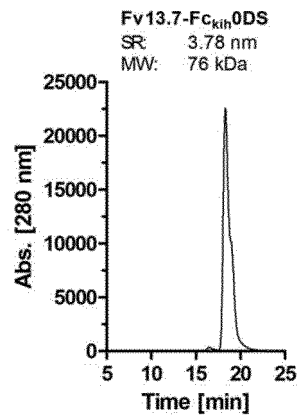
a)

Fv13.7-Fc_{k1h}0DS

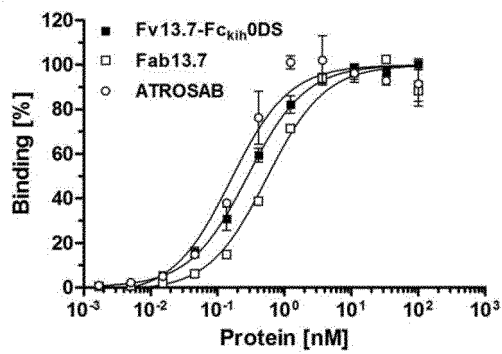
b)



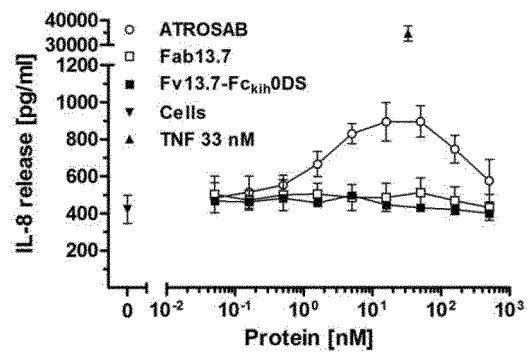
c)



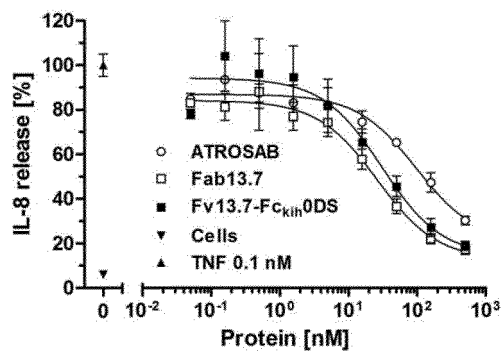
d)



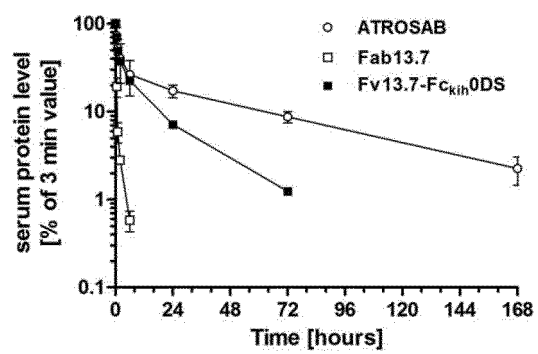
e)



f)



g)



SEQ ID 1: DFYIN

SEQ ID 2: EIYPYSGHAYYNEKFKA

SEQ ID 3: WDFLDY

SEQ ID 4: RSSQSLLHSNGNTYLH

SEQ ID 5: TVSNRFS

SEQ ID 6: SQSTHVPYT

SEQ ID 7: EIXPXXGXAXYNXKFKA

Wherein

X at position 3 is any of Y or V,

X at position 5 is any of Y, T or S,

X at position 6 is any of S or Q,

X at position 8 is any of H or E,

X at position 10 is any of Y or K,

X at position 13 is any of E or D.

SEQ ID 8: SQXTHVPYT

Wherein X at position 3 is any of S or G.

SEQ ID 9: EIVPTQGEAKYNDKFKA

SEQ ID 10: EIVPXQGEAKYNDKFKA

Wherein

X at position 5 is any of S or G

SEQ ID 11: SQXTHVPYT

Wherein

X at position 3 is any of G or S

SEQ ID 12:

QVQLVQSGAEVKKPGSSVKVSCKASGYTFTDFYINWVRQAPGQGLEWIGEIVPTQGE
AKYNDKFKA
RVTITADKSTSTAYMELSSLRSED
TAVYYCARWDFLDYWGQGTTVTVS
S

SEQ ID 13:

HVQLVQSGAEVKKPGSSVKVSCKASGYTFTDFYINWVRQAPGQGLEWIGEIVPSQGE
AKYNDKFKA
RVTITADKSTSTAYMELSSLRSED
TAVYYCARWDFLDYWGQGTTVTVS
S

SEQ ID 14:

QVQLVESGGGLVKPGGSLRLSCAASGFTFSDFYINWIRQAPGKGLEWVSEIYPYSGHA
YYNEKFKARFTISRDNANKNSLYLQMNSLRAEDTAVYYCARWDFLDYWGQGTTVTVSS

SEQ ID 15:

QVQLVESGGGLVKPGGSLRLSCAASGFTFSDFYINWIRQAPGKGLEWVSEIYPYSGHA
YYNEKFKARFTISADNAKNSLYLQMNSLRAEDTAVYYCARWDFLDYWGQGTTVTVSS

SEQ ID 16:

DIVMTQSPLSLPVTPGEPASISCRSSQSLHLSNGNTYLHWYLQKPGQSPQLLIYTVSNR
FSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCSQSTHVPYTFGGGTKVEIKR

SEQ ID 17:

DIVMTQSPLSLPVTPGEPASISCRSSQSLHLSNGNTYLHWYLQKPGQSPQLLIYTVSNR
FSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCSQSTHVPYTFGGGTKVEIKR

SEQ ID 18:

DIQMTQSPSSLSASVGDRVTITCRSSQSLHLSNGNTYLHWYQQKPGKAPKLLIYTVSN
RFSGVPSRFSGSGSGTDFTLTISLQPEDFATYYCSQSTHVPYTFGGGTKVEIK

SEQ ID 19:

DVQMTQSPSSLSASVGDRVTITCRSSQSLHLSNGNTYLHWYQQKPGKAPKLLIYTVSN
RFSGVPSRFSGSGSGTDFTLTISLQPEDFATYYCSQSTHVPYTFGGGTKVEIK

SEQ ID 20:

QVQLVQSGAEVKKPGSSVKVSCKASGYTFTDFYINWVRQAPGQGLEWIGEIPYSGH
AAYNEKFKARVTITADKSTSTAYMELSSLRSEDVAVYYCARWDFLDYWGQGTTVTVSS

SEQ ID 21:

DIVMTQSPLSLPVTPGEPASISCRSSQSLHLSNGNTYLHWYLQKPGQSPQLLIYTVSNR
FSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCSQSTHVPYTFGGGTKVEIKR

SEQ ID 22:

QVQLVQSGAEVKKPGSSVKVSCKASGYTFTDFYINWVRQAPGQGLEWIGEIPYSGH
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SEQ ID 23:

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SEQ ID 24:

DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWY
VDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTI
SKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKT
TPPVLDSDGSFFLYSKLTVDKSRWQQGNVFCSSVMHEALHNHYTQKSLSLSPGK

SEQ ID 25:

HVQLVQSGAEVKKPGSSVKVSCKASGYTFTDFYINWVRQAPGQGLEWIGEIVPSQGE
AKYNDKFKARVTITADKSTSTAYMELSSLRSED TAVYYCARWDFLDYWGQGTTVTVS
SASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSC

SEQ ID 26:

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RFGVPSRFRSGSGSGTDFTLTISSLQPEDFATYYCSQSTHVPYTFGGGTKEIKRTVA
APSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDS
KDSTYLSLSLTLSKADYEKHKVYACEVTHQGLSPVTKSFNRGEC

SEQ ID 27:

HVQLVQSGAEVKKPGSSVKVSCKASGYTFTDFYINWVRQAPGQGLEWIGEIVPSQGE
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SASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCAA

SEQ ID 28:

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SASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL
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AANCDKSLHTLFGDKLCAIPNLRENYGELADCCTKQEPERNECFLQHKDDNPSLPPFE
RPEAEAMCTSFKENPTTFMGHYLHEVARRHPYFYAPELLYYAEQYNEILTQCCAEADK
ESCLTPKLDGVKEKALVSSVRQRMKCSSMQKFGERAFAKAWAVARLSQTFPNADFAEI
TKLATDLTKVNKECCHGDLLECADDRAELAKYMCENQATISSKLQTCCKDLLKKAHC
LSEVEHDTMPADLPAIAADFVEDQEVCKNYAEAKDVFLGTFLEYSSRRHPDYSVSLLL
RLAKKYEATLEKCCAEANPPACYGTVLAEFQPLVEEPKNLVKTNCDLYEKLGEYGFQN
AILVRYTQKAPQVSTPTLVEAARNLGRVGTKCCTLPEDQRLPCVEDYLSAILNRVCLLH
EKTPVSEHVTKCCSGSLVERRPCFSALTVDETYVPKEFKAETFTFHSICTLPEKEKQI
KKQTALAEVLVHKPKATAEQLKTVMD DFAQLDTCCKAADKDTCFSTEGPNLVGGAA
AHHHHHH

SEQ ID 29:

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AKYNDKFKARVTITADKSTSTAYMELSSLRSED TAVYYCARWDFLDYWGQGTTVTVS
SASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTSPSPAP
ELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTK
PREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQV
YTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTAPVLDSDGSFRL
RSDLTVDKSRWQQGNV FSCSVMHEALHNHYTQKSLSLSPGK

SEQ ID 30:

HVQLVQSGAEVKKPGSSSVKVSCKASGYTFTDFYINWVRQAPGQGLEWIGEIVPSQGE
AKYNDKFKARVTITADKSTSTAYMELSSLRSEDVAVYYCARWDFLDYWGGGTTVTVS
SASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCGTDKHTSPSP
APPVAGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKT
KPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKGLPSSIEKTISKAKGQPREPQ
VYTLPPSRDELTKNQVSLSCAVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSGGSFF
LVSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

SEQ ID 31:

DVQMTQSPSSLSASVGDRVITICRSSQSLLSHNGNTYLHWYQQKPGKAPKLLIYTVSN
RFSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCSQSTHVPYTFGGGTKEIKRTVA
APSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDS
KDSTYLSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGECGTDKHTSPSP
APPVAGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKT
KPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKGLPSSIEKTISKAKGQPREPQ
VYTLPPSRDELTKNQVSLWCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSGGSF
FLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

SEQ ID 32:

HVQLVQSGAEVKKPGSSSVKVSCKASGYTFTDFYINWVRQAPGQGLEWIGEIVPSQGE
AKYNDKFKARVTITADKSTSTAYMELSSLRSEDVAVYYCARWDFLDYWGGGTTVTVS
SGTDKHTSPSPAPPVAGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFN
WYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKGLPSSIE
KTISKAKGQPREPQVYTLPPSRDELTKNQVSLSCAVKGFYPSDIAVEWESNGQPENNY
KTTTPVLDSGGSFFLVSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

SEQ ID 33:

DVQMTQSPSSLSASVGDRVITICRSSQSLLSHNGNTYLHWYQQKPGKAPKLLI
YTVSNRFSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCSQSTHVPYTFGGGTKEI
KGTDKHTSPSPAPPVAGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFN
WYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKGLPSSIE
KTISKAKGQPREPQVYTLPPSRDELTKNQVSLWCLVKGFYPSDIAVEWESNGQPENN
YKTTTPVLDSGGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

SEQ ID 34:

DKTHTCAA

SEQ ID 35:

DKTHTCPPCPAPELLGG

SEQ ID 36:

SASV

Fig. 25 (continued)

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SEQ ID 37:
DRV T

SEQ ID 38:
SLQP

SEQ ID 39
GGLV

SEQ ID 40
NAKNSL

SEQ ID 41
LQMN

SEQ ID 42
GTDKTHTSPPCPAPPVAG

SEQ ID 43
GTDKTHTCPPSPAPPVAG

SEQ ID 44
GTDKTHTSPPSPAPPVAG