

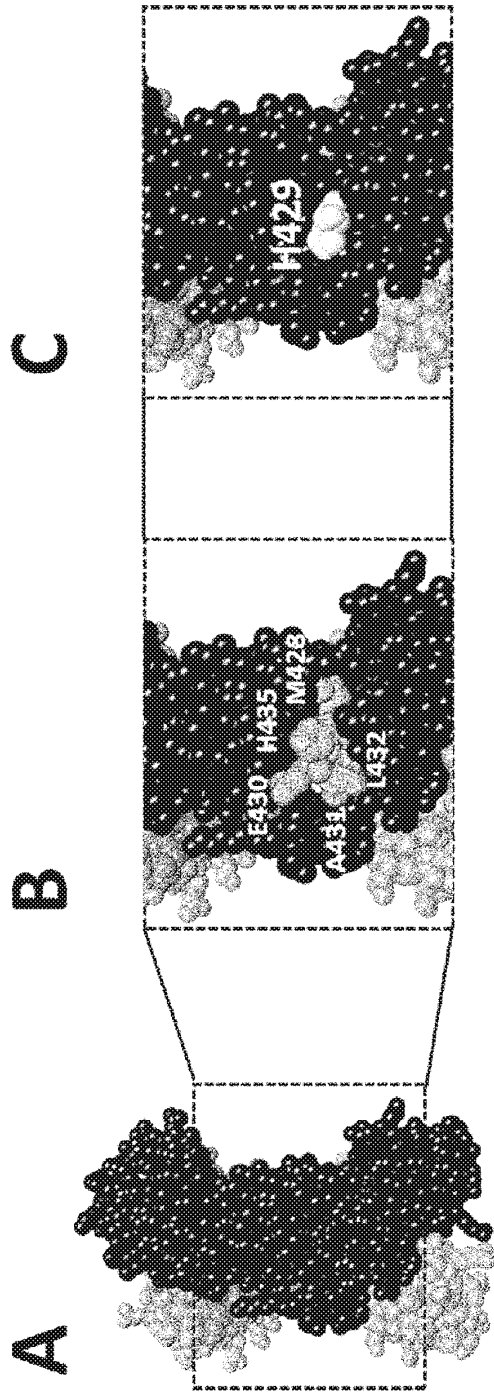
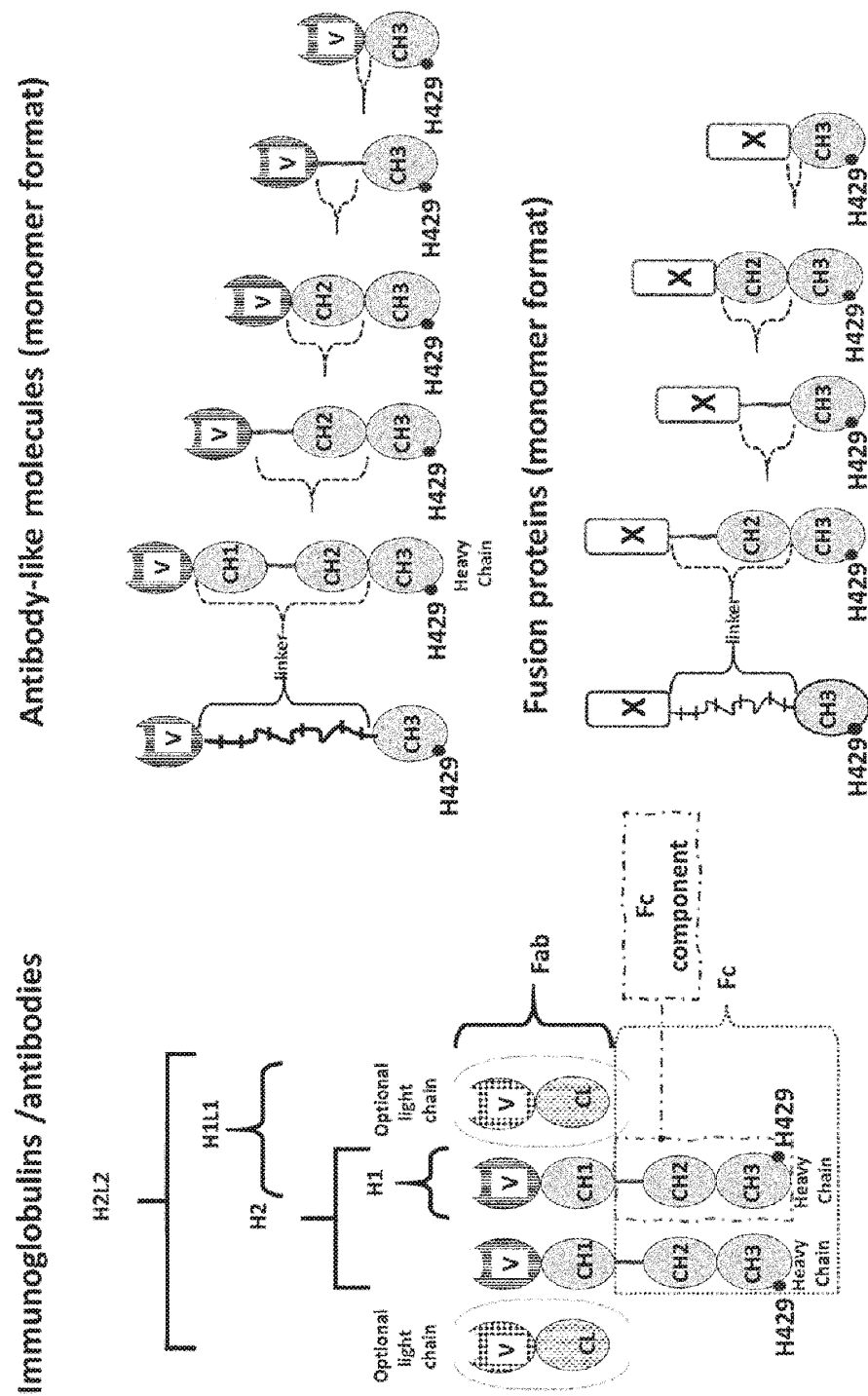


Fig. 1



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CH1	118 (Eu numbering IgG1)
	▼
J00228-IGHG1	ASTKGPSVFPLAPSSKSTSGGTAAALGCLVKDYFP-EPVTVSWNSGALTSGVHTFPAVLQS
X03604-IGHG3	ASTKGPSVFPLAPCSRSTSGGTAAALGCLVKDYFP-EPVTVSWNSGALTSGVHTFPAVLQS
K01316-IGHG4	ASTKGPSVFPLAPCSRSTSESTAALGCLVKDYFP-EPVTVSWNSGALTSGVHTFPAVLQS
J00230-IGHG2	ASTKGPSVFPLAPCSRSTSESTAALGCLVKDYFP-EPVTVSWNSGALTSGVHTFPAVLQS
J00220-IGHA1	ASPTSPKVFPLSLCSTQ-PDGNVVIACLVQGFPPQEP LSVTWSESQGQVTARNFPPSQDA
J00221-IGHA2	ASPTSPKVFPLSLDSTP-QDGNVVVACLQGFPPQEP LSVTWSESQGNVTARNFPPSQDA
	** .*: .***: ****:.* **:*:*..... .:.* :
J00228-IGHG1	S-GLYSLSSVVTVPSSS-LGTQTYICNVNHKPSNTKVDKRV---
X03604-IGHG3	S-GLYSLSSVVTVPSSS-LGTQTYTCNVNHKPSNTKVDKRV---
K01316-IGHG4	S-GLYSLSSVVTVPSSS-LGTQTYTCNVNHKPSNTKVDKRV---
J00230-IGHG2	S-GLYSLSSVVTVPSSS-LGTQTYTCNVNHKPSNTKVDKTV---
J00220-IGHA1	SGDLTYTSSQLTLPLATQCLAGKSVTCHVKHYTNPS-QDVTVP
J00221-IGHA2	SGDLTYTSSQLTLPLATQCPDGKSVTCHVKHYTNPS-QDVTVP
	* .*: ** :*:..... : : *:*.* . : * *
Hinge	216 (Eu numbering IgG1)
	▼
J00228-IGHG1	EPK-----SCDKTHTCPPCP
X03604-IGHG3	ELKTPLEGDTHTCPRCPEPKSCDTPPPCRCP
K01316-IGHG4	ESK-----YGPCCPSCP
J00230-IGHG2	ERK-----CCVE---CPPCP
J00220-IGHA1	-----VPSTPPTSPSTPPTSPSP
J00221-IGHA2	-----VPPPPP
	.
CH2	231 (Eu numbering IgG1)
	▼
J00228-IGHG1	APELLGGPSVFLFPPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVHNAKTK
X03604-IGHG3	APELLGGPSVFLFPPPKPKDTLMISRTPEVTCVVDVSHEDPEVQFKWYVDGVEVHNAKTK
K01316-IGHG4	APELLGGPSVFLFPPPKPKDTLMISRTPEVTCVVDVSHEDPEVQFNWYVDGVEVHNAKTK
J00230-IGHG2	-APPVAGPSVFLFPPPKPKDTLMISRTPEVTCVVDVSHEDPEVQFNWYVDGVEVHNAKTK
J00220-IGHA1	----CCHPRLSLHRPAL-EDLLLGSEANLTCTLTGLR-DASGVTFTWTPSSG--KSAVQG
J00221-IGHA2	----CCHPRLSLHRPAL-EDLLLGSEANLTCTLTGLR-DASGATFTWTPSSG--KSAVQG
	* : . * . : * : . : ** : . : : . : . * . . : *
J00228-IGHG1	PREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK
X03604-IGHG3	PREEQYNSTFRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKTK
K01316-IGHG4	PREEQFNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKGLPSSIEKTISKAK
J00230-IGHG2	PREEQFNSTFRVVSVLTVVHQDWLNGKEYKCKVSNKGLPAPIEKTISKTK
J00220-IGHA1	PPERDLCCGYSVSSVLPGCAEPWNHGTFTCTAAYPESKTPLTATLSKS-
J00221-IGHA2	PPERDLCCGYSVSSVLPGCAQPMNHGTFTCTAAHPKLTPLTANITKS-
	* *: . : * *** : * : : . : . : : : : . : *
CH3	341 (Eu numbering IgG1)
	▼
J00228-IGHG1	GQPREPQVYTLPPSRDELTKNQVSLTCLVRGFYPSDIAVEWESNGQP--ENNYKTT---
X03604-IGHG3	GQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESSGQP--ENNYNTT---
K01316-IGHG4	GQPREPQVYTLPPSQEEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP--ENNYKTT---
J00230-IGHG2	GQPREPQVYTLPPSREEMTKNQVSLTCLVRGFYPSDIAVEWESNGQP--ENNYKTT---
J00220-IGHA1	GNTFRPEVHLLPPSEELALNELVTLTCLARGFSPKDVLVRWLQGSQELPREKYLTVASR
J00221-IGHA2	GNTFRPEVHLLPPSEELALNELVTLTCLARGFSPKDVLVRWLQGSQELPREKYLTVASR
	* : . : * : *** : : : : * : * : * : * : * : * : *
J00228-IGHG1	PPVLDSDGSFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPGK----- (SEQ ID NO:3)
X03604-IGHG3	PPMLDSDGSFFLYSKLTVDKSRWQQGNIFSCVMHEALHNRYTQKSLSLSPGK----- (SEQ ID NO:4)
K01316-IGHG4	PPVLDSDGSFFLYSRLTVDKSRWQEGNVFSCVMHEALHNHYTQKSLSLSLGGK----- (SEQ ID NO:5)
J00230-IGHG2	PPMLDSDGSFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPGK----- (SEQ ID NO:6)
J00220-IGHA1	QEPSSQGTTFQAVTSILRVAEDWKKGDTFSCMVGHEALPLAFTQKTIIDRLAGKPTHVNVSVVMAEVDGTCY (SEQ ID NO:7)
J00221-IGHA2	QEPSSQGTTFQAVTSILRVAEDWKKGDTFSCMVGHEALPLAFTQKTIIDRLAGKPTHVNVSVVMAEVDGTCY (SEQ ID NO:8)
	: . : * : * * * . : : : * : * : * : * : * : * : *

H₄₂₉

Fig. 3

CH3 or equivalent CH3 341 (Eu numbering IgG1

IGHG1-J00228
 IGHG3-X03604
 IGHG4-K01316
 IGHG2-J00230
 IGHG1-J00220
 IGHG2-J00221
 IGHG-CH4-J00222
 IGHM-CH4-X57331
 IGHG-K02879

[illegible]

IIGH1-J00228	PV----	LDSGSEFFLYSKLTVDKSRWQGNVFCSCVMHEALHNHYT--QKSLSLSPGK-----	(SEQ ID NO:114)
IIGH3-X03604	PM----	LDSGSEFFLYSKLTVDKSRWQGNIFCSCVMHEALHNRF--QKSLSLSPGK-----	(SEQ ID NO:115)
IIGH4-K01316	PV----	LDSGSEFFLYSKLTVDKSRWQEGNVFCSCVMHEALHNHYT--QKSLSLSLGK-----	(SEQ ID NO:116)
IIGH2-J00230	PM----	LDSGSEFFLYSKLTVDKSRWQGNVFCSCVMHEALHNHYT--QKSLSLSPGK-----	(SEQ ID NO:117)
IIGH1-J00220	SRPESQGTTFPAVTSILRVAAEDWKKGDTFCSCVGHGALPLAFT--QKTIIDLAKGPTHNVSVVMAEVDGTCY (SEQ ID NO:118)		
IIGH2-J00221	SRPESQGTTFPAVTSILRVAAEDWKKGDTFCSCVGHGALPLAFT--QKTIIDLAKGPTHNVSVVMAEVDGTCY (SEQ ID NO:119)		
IIGH-CH4-J00222	PR--	KTGSGEFFVESRLVETRAEWEQKDEFTICRAVHEAASPSQTQRAVSVNPGK-----	(SEQ ID NO:9)
IIGHM-CH4-X57331	PMPEQAPG-RYFAHSILTVSEEEENWTGETYTCVAAHEALPNRV--ERTVDKSTGKPTLYNVSLVMSDGTAGTCY (SEQ ID NO:10)		
IIGHD-K02879	-RPFPQPRSTTFWAWSVLRVAPPSPQATYTCVSGHEDSRLLNARSLEVSYYVDH-----		(SEQ ID NO:11)

























H429

Fig. 4

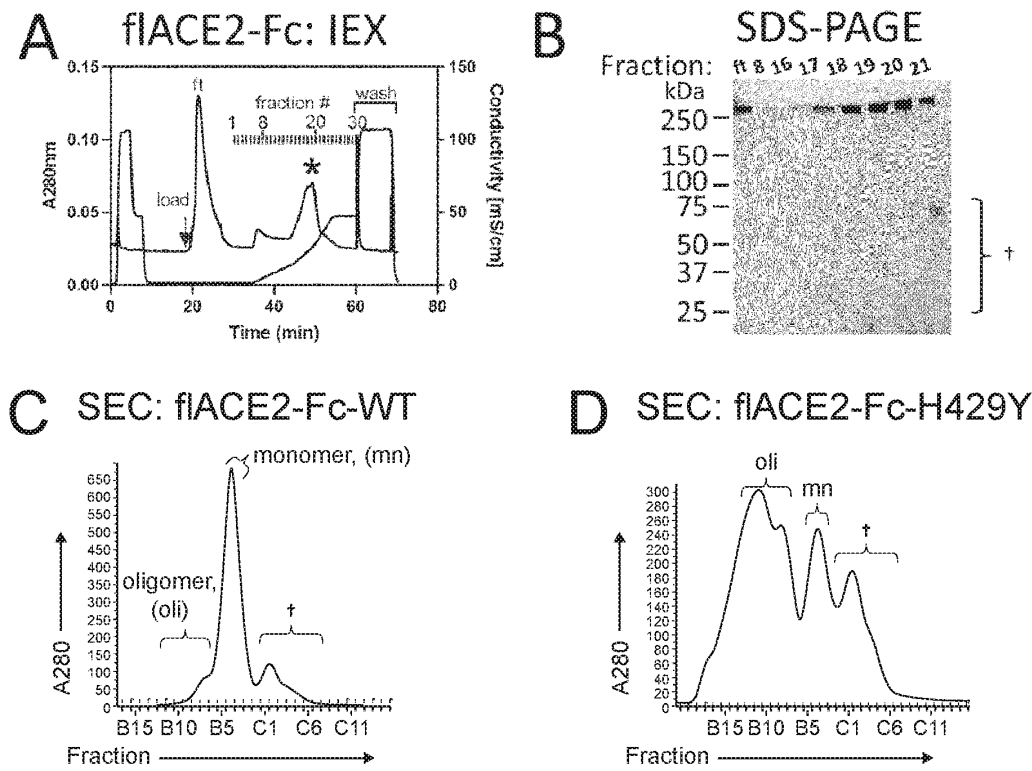


Fig. 5

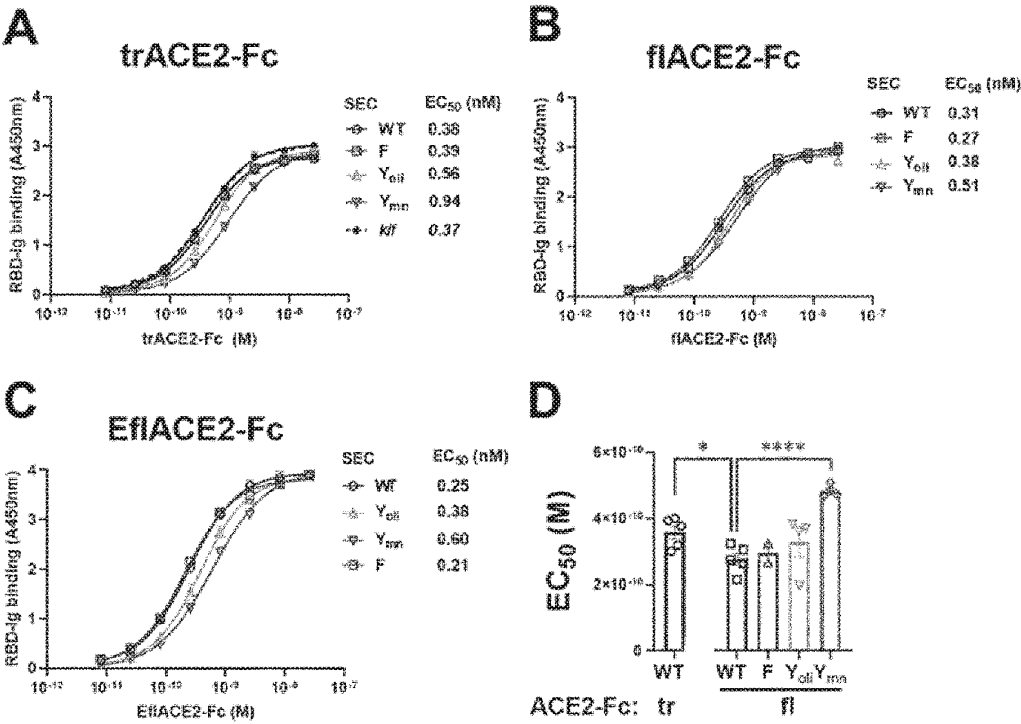


Fig. 6

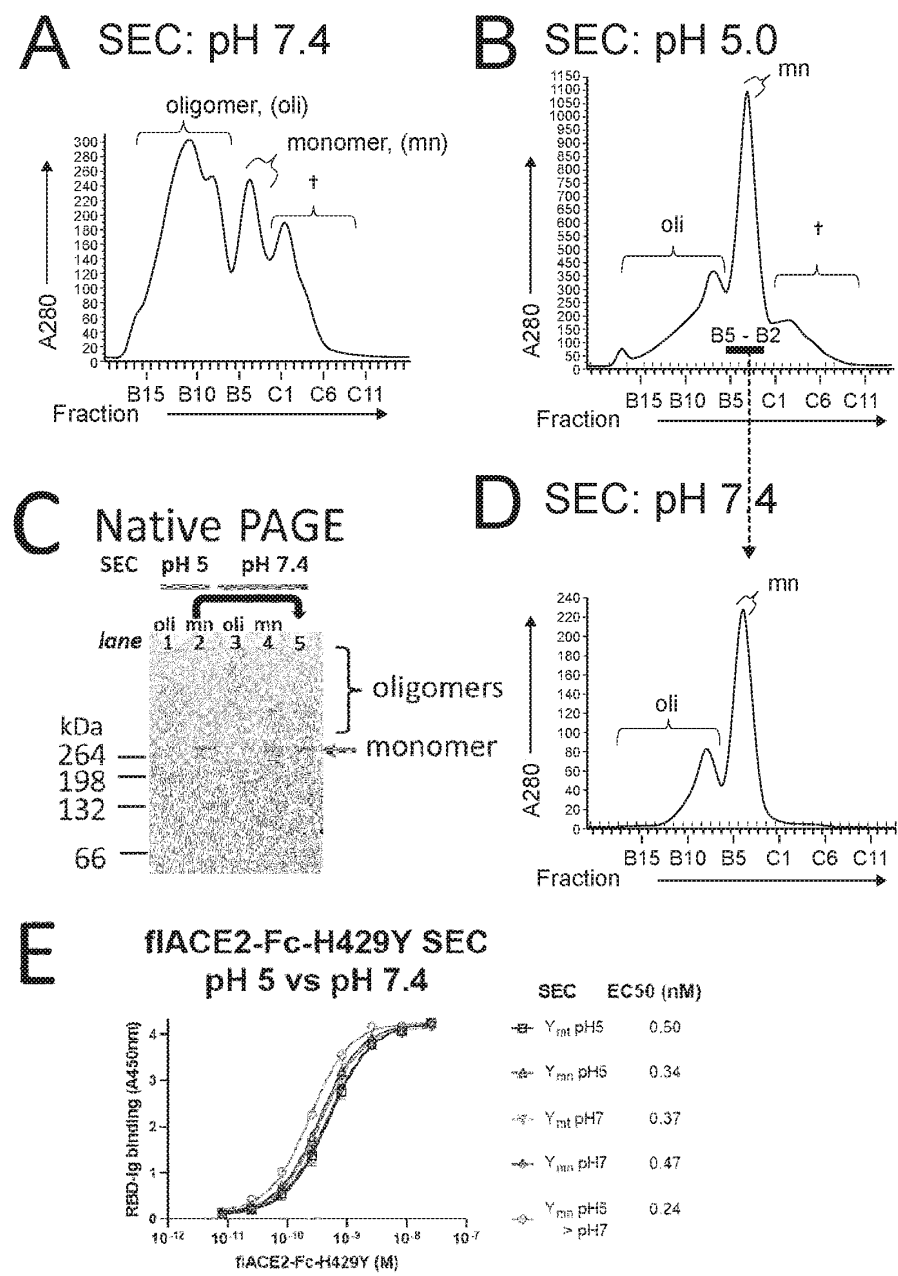


Fig. 7

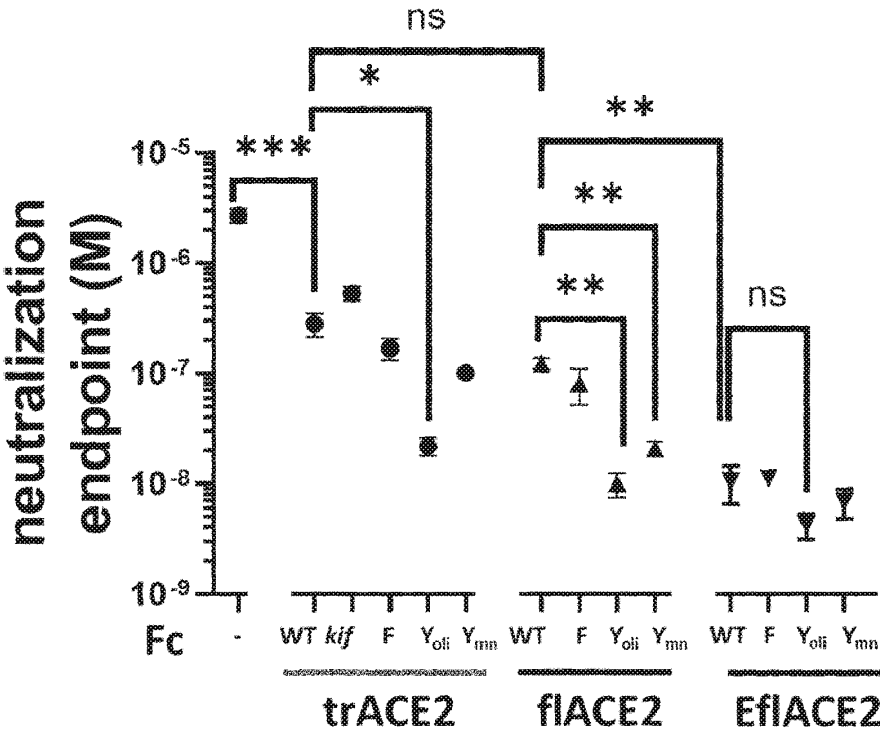


Fig. 8

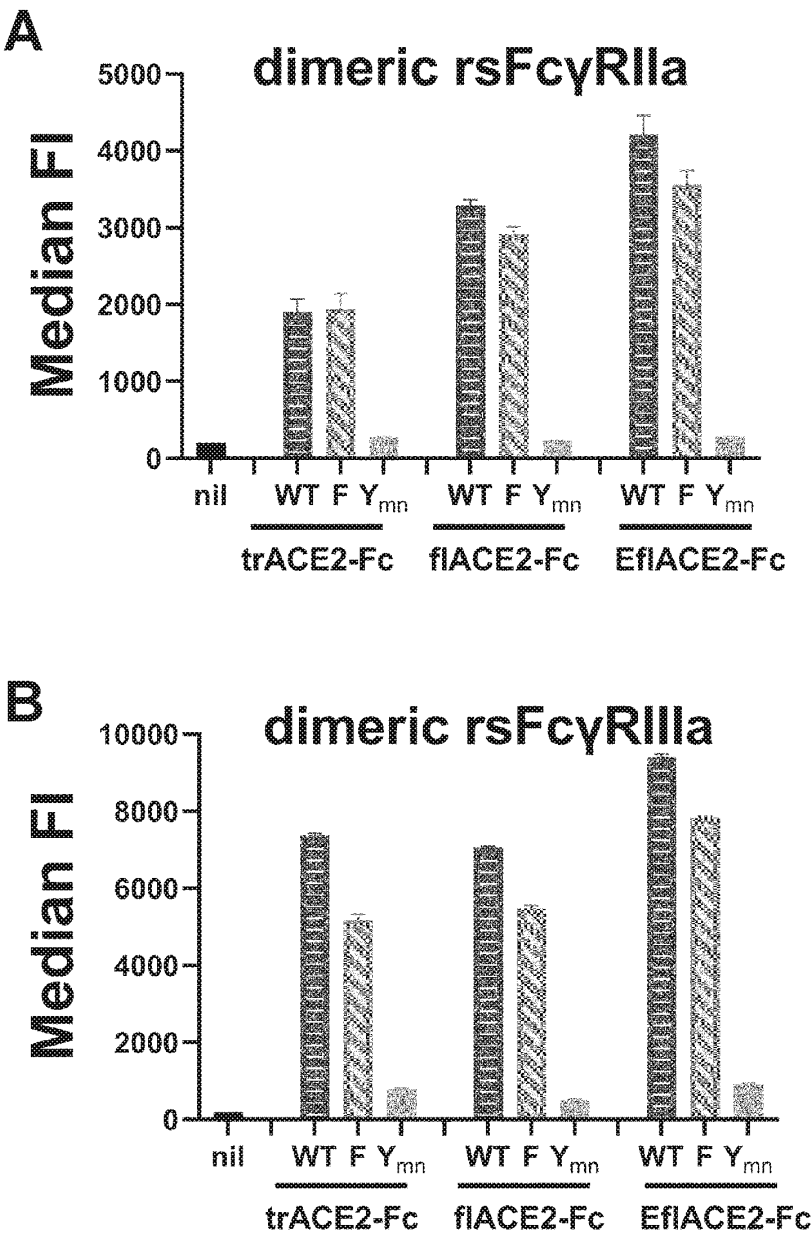


Fig. 9

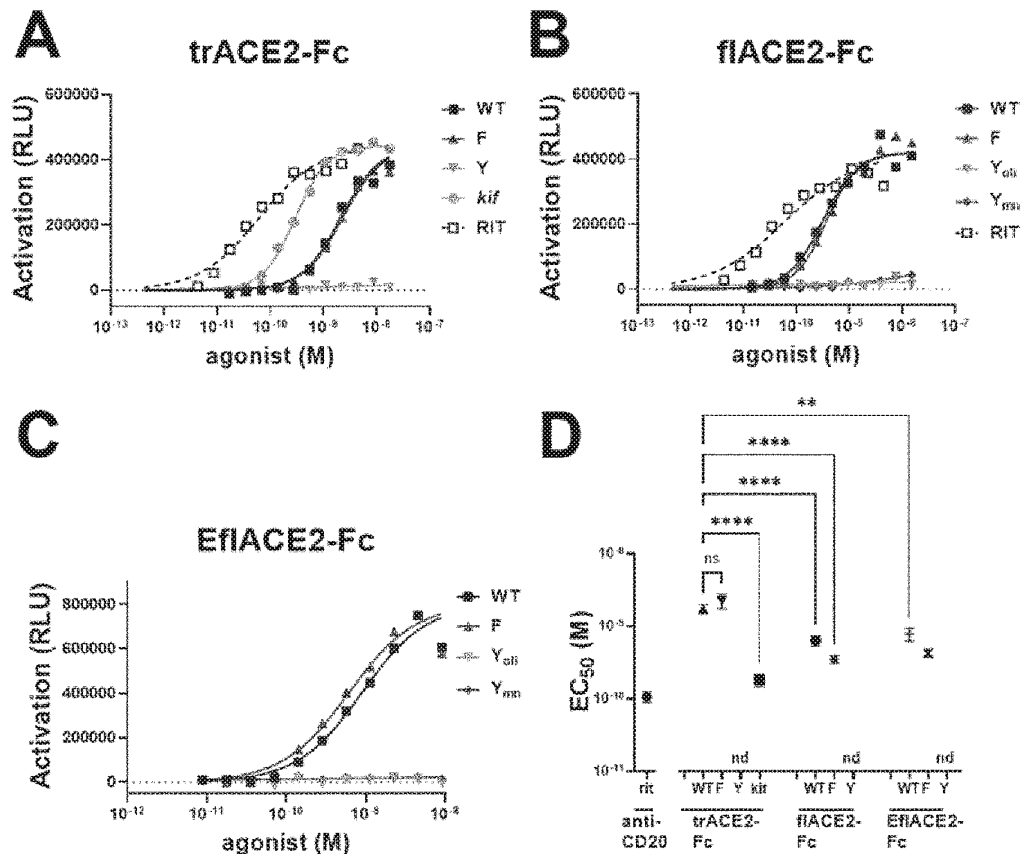


Fig. 10

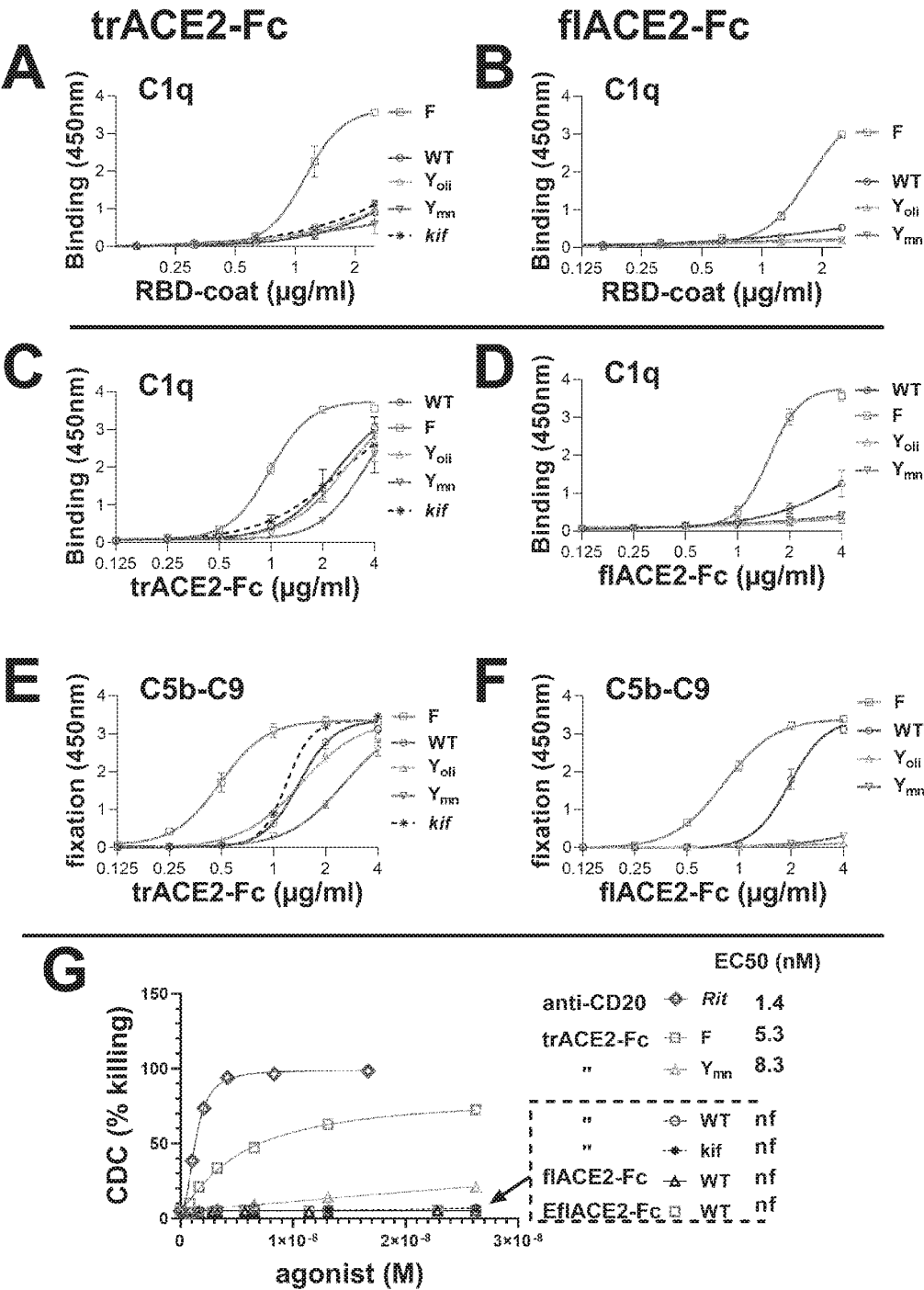


Fig. 11

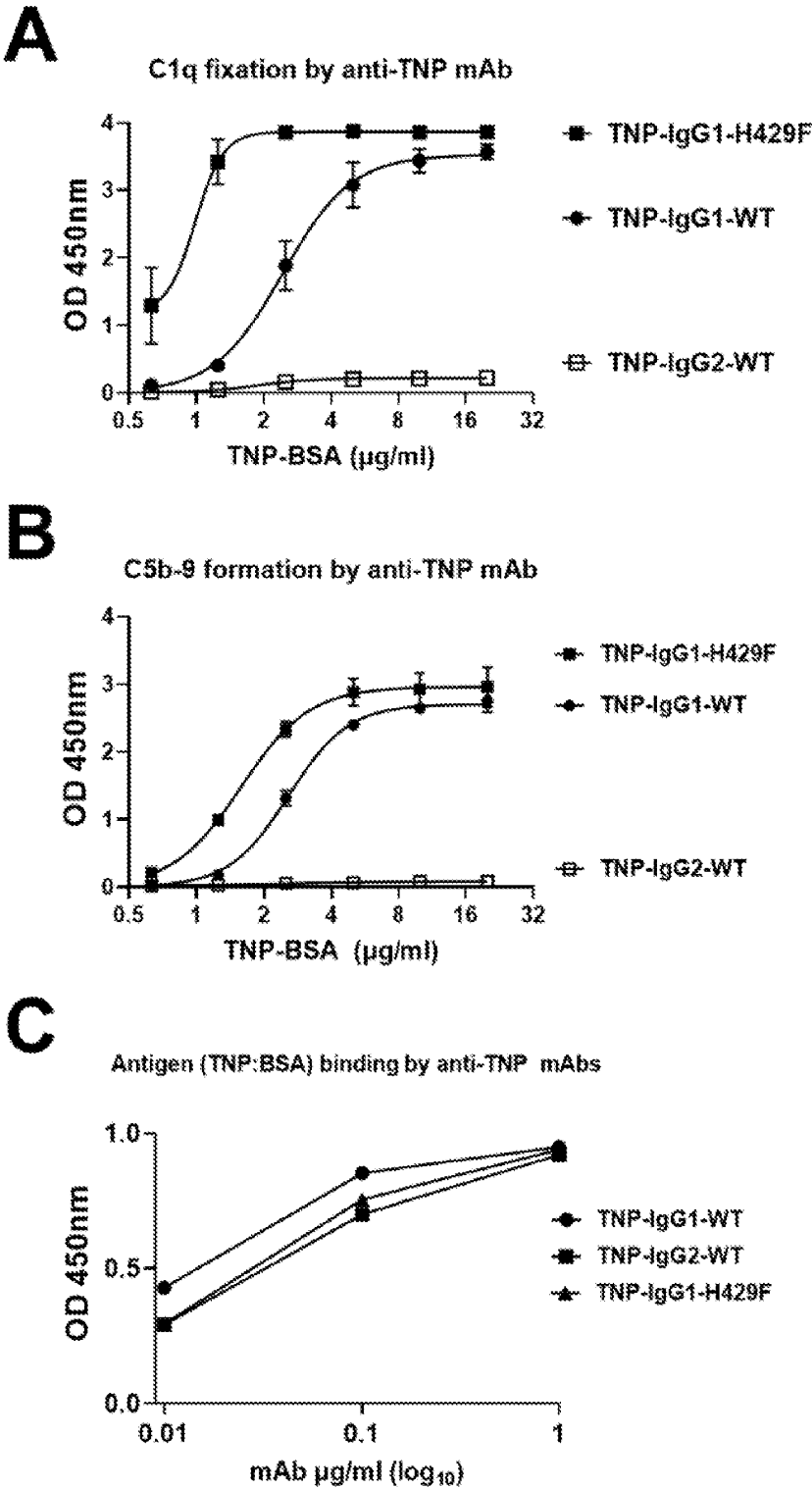


Fig. 12

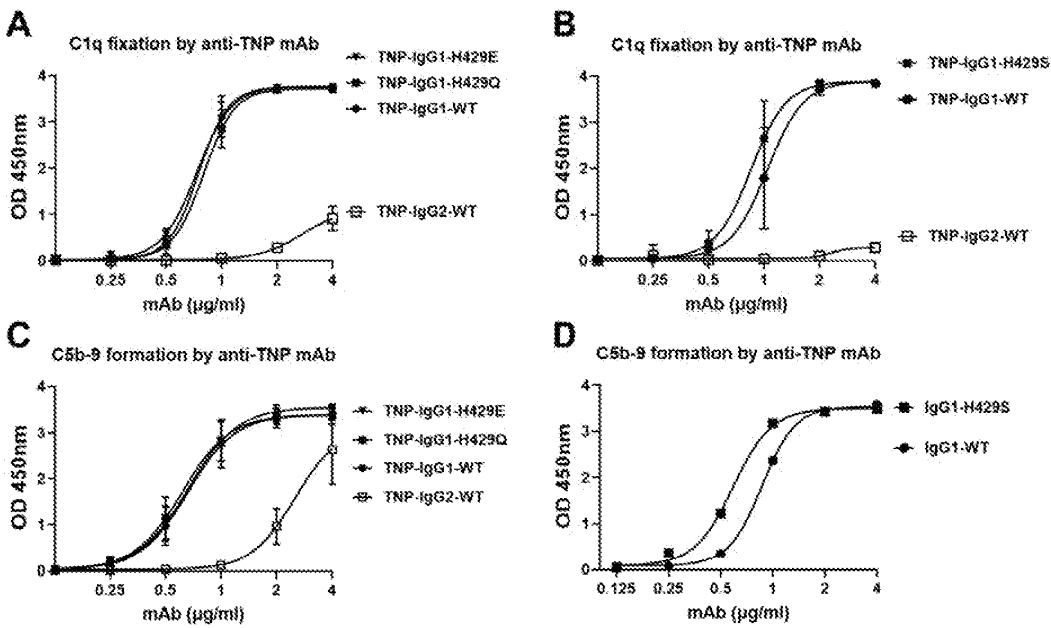
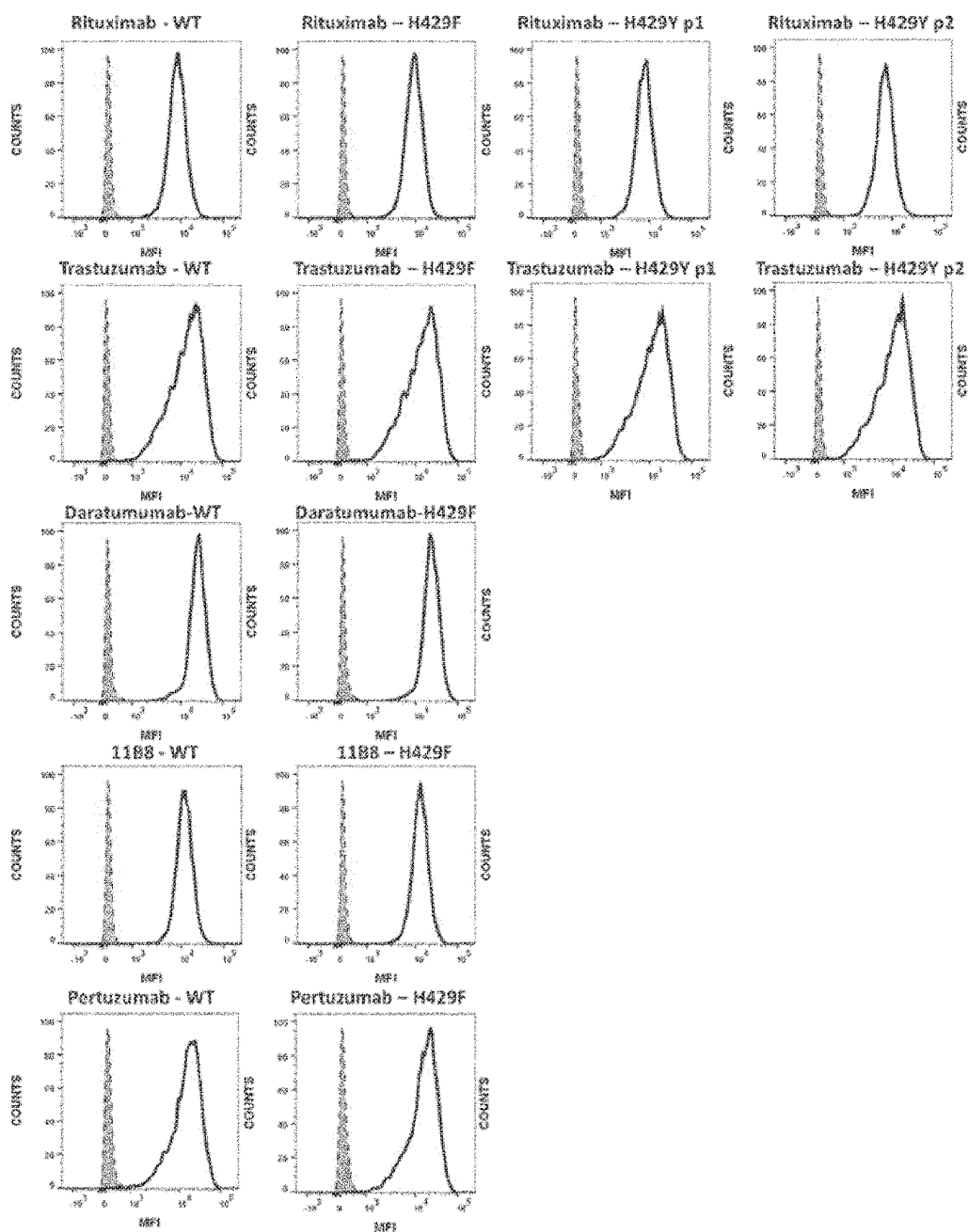


Fig. 13

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**Fig. 14**

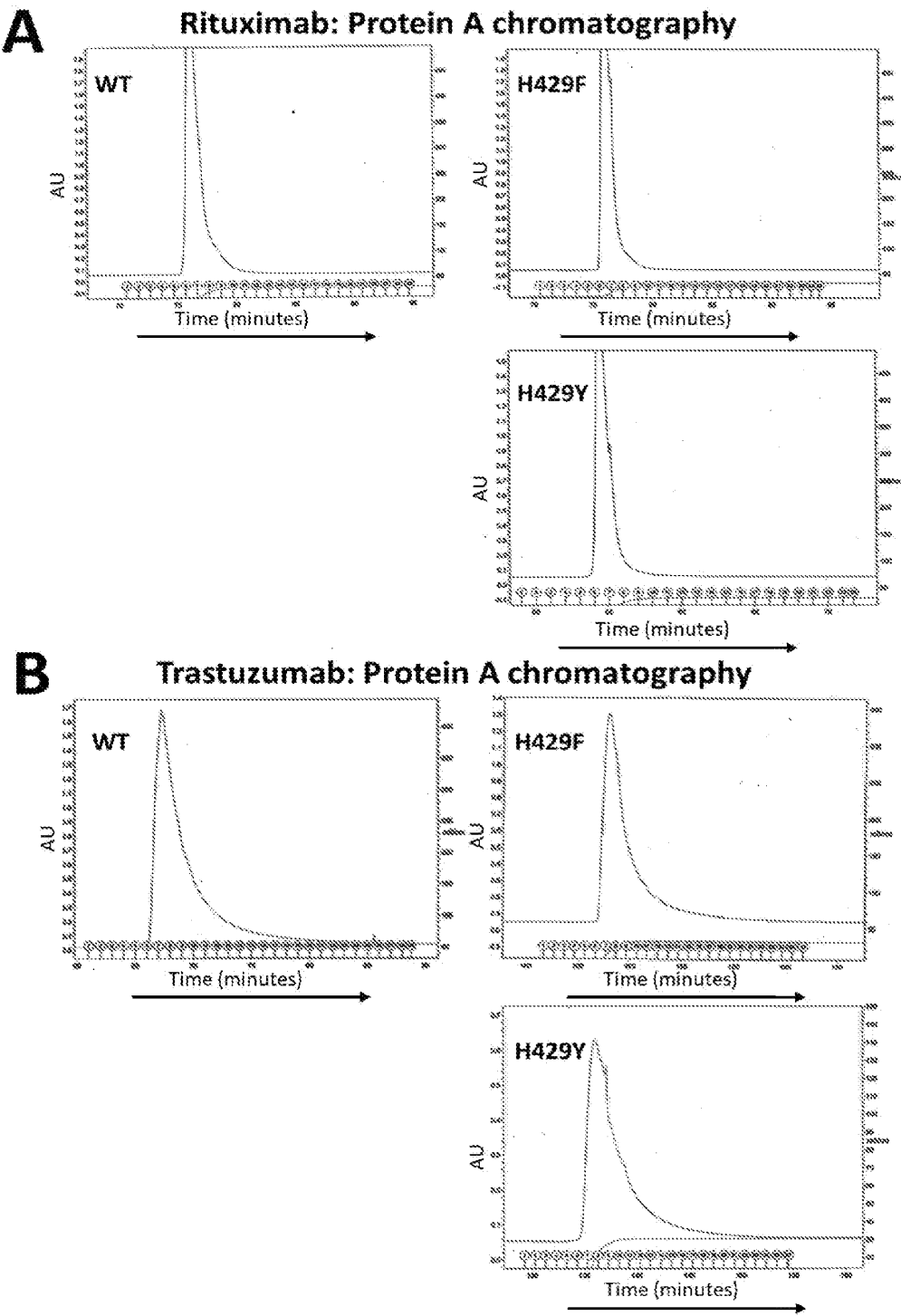


Fig. 15

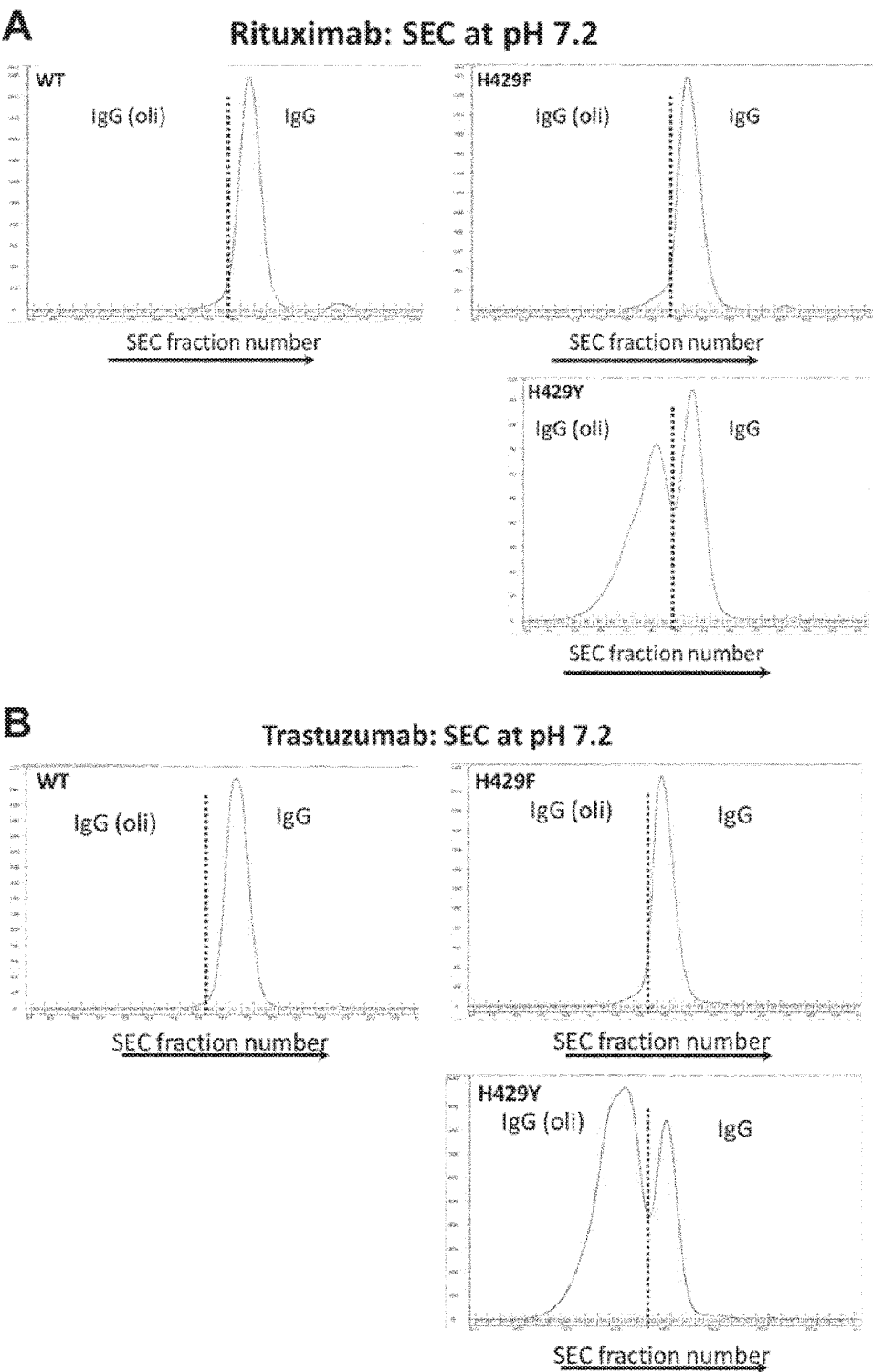
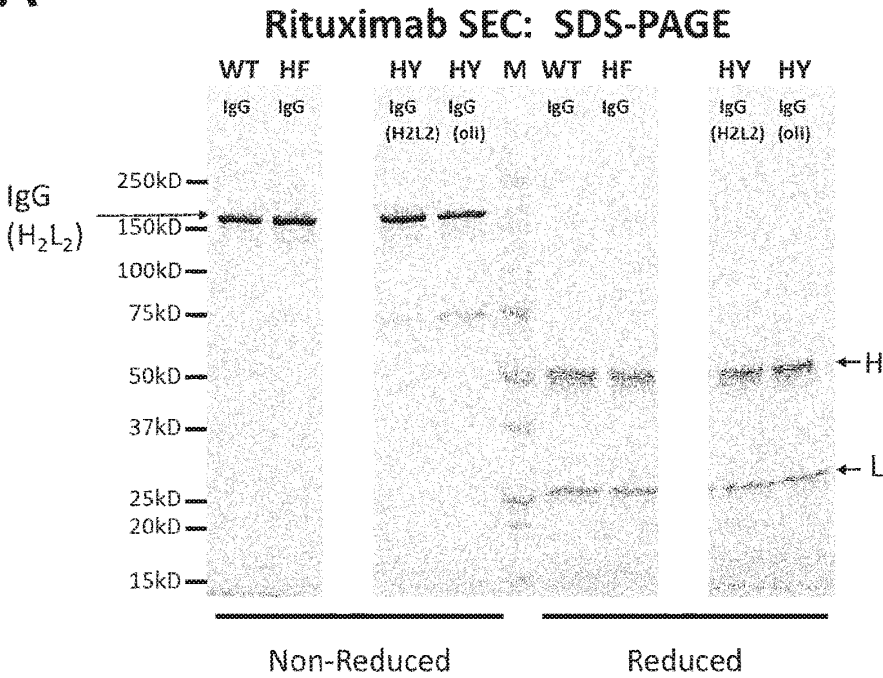


Fig. 16

A



B

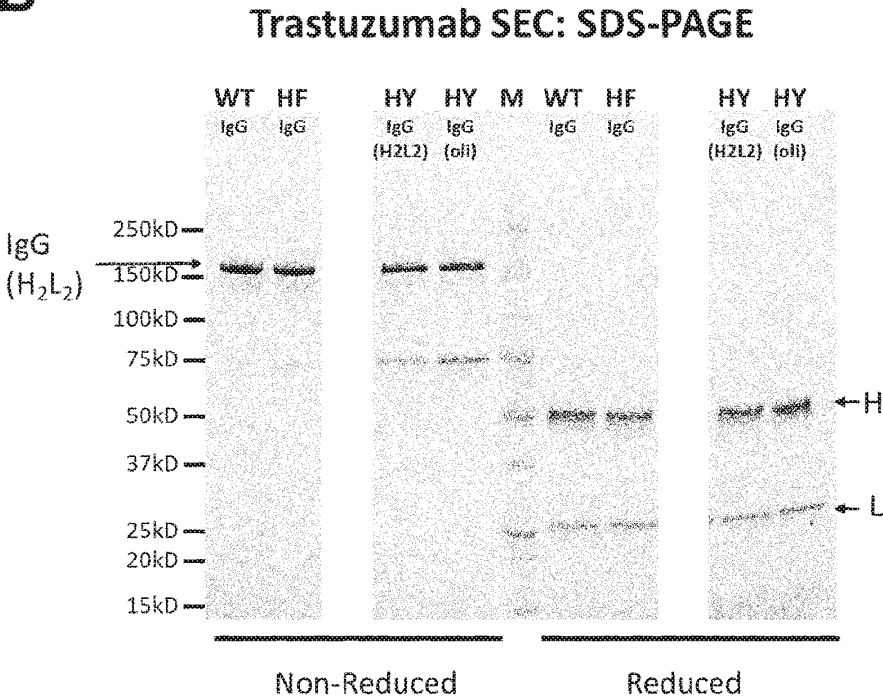
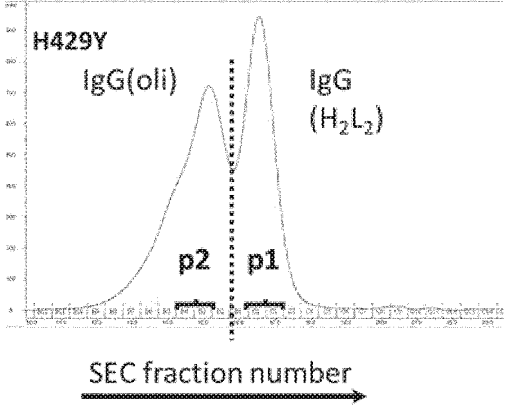


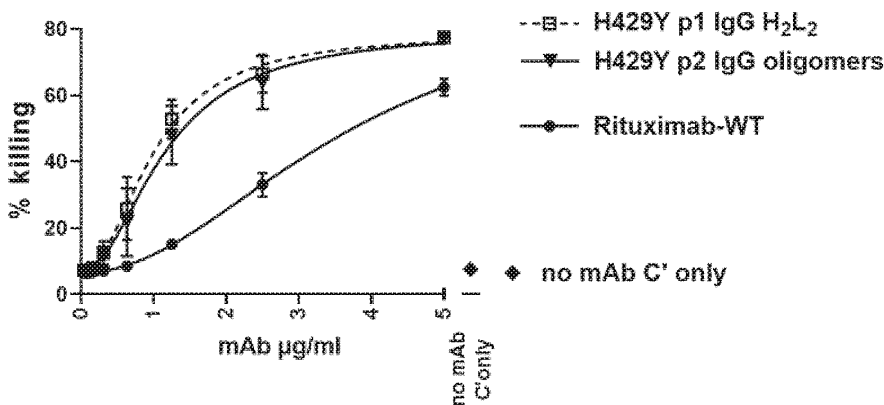
Fig. 17

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A Rituximab-H429Y: SEC at pH 7.2



B CDC potency of H429Y fractions



C Trastuzumab H429Y : SEC at pH7.2 or pH5.0

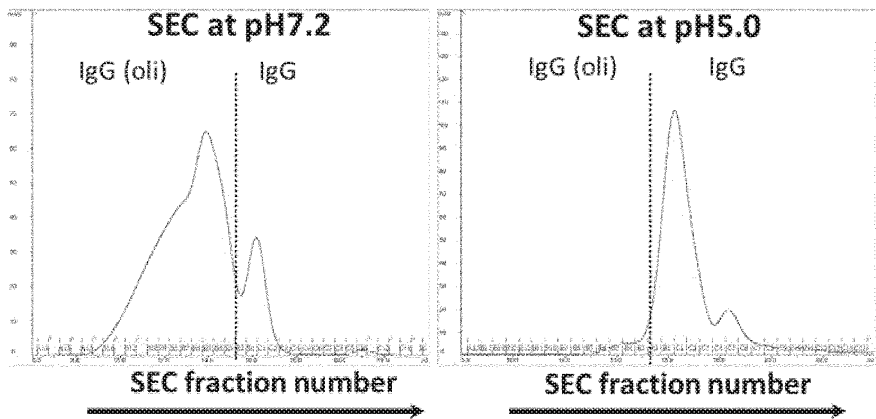


Fig. 18

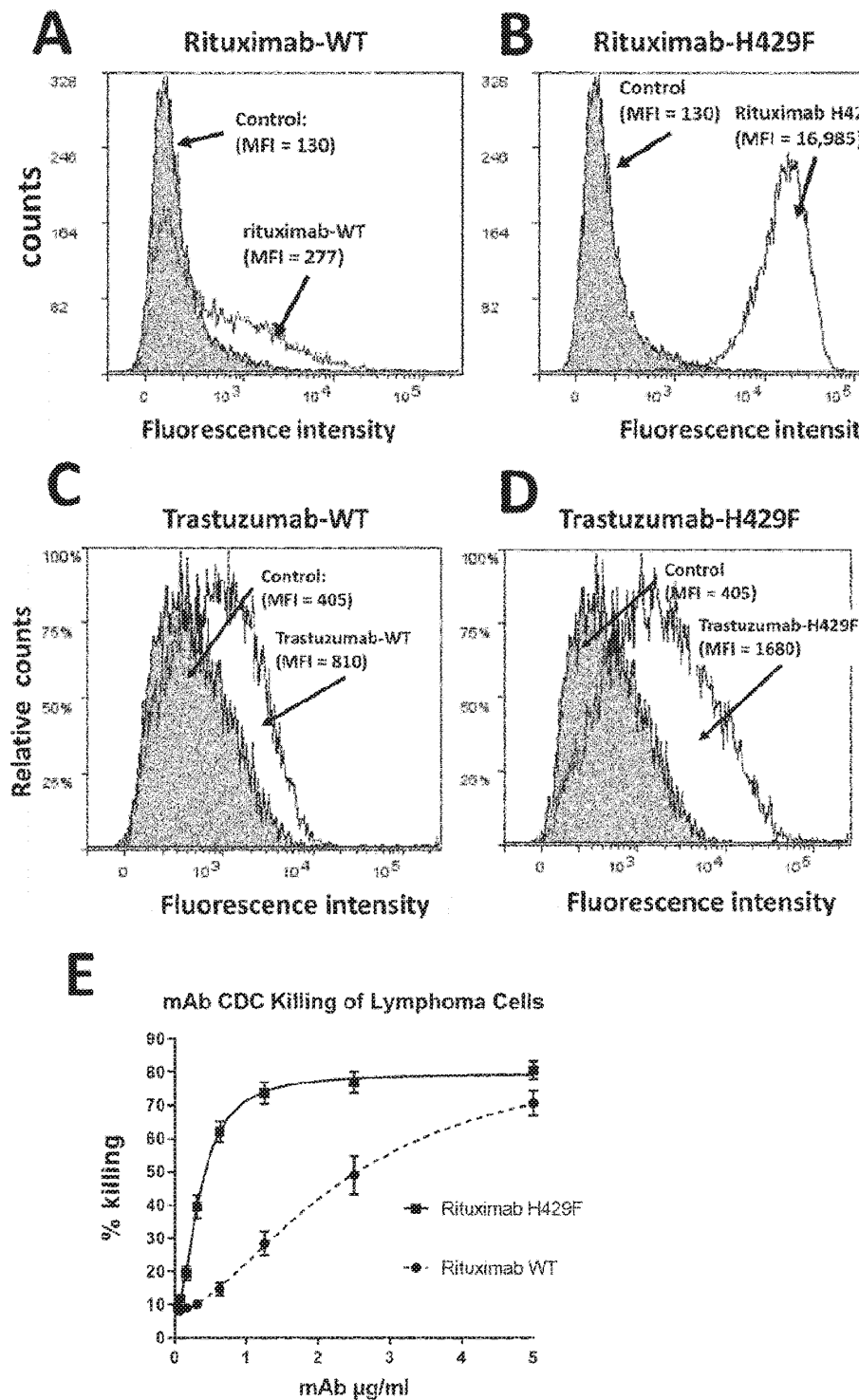


Fig. 19

11B8: Protein A chromatography

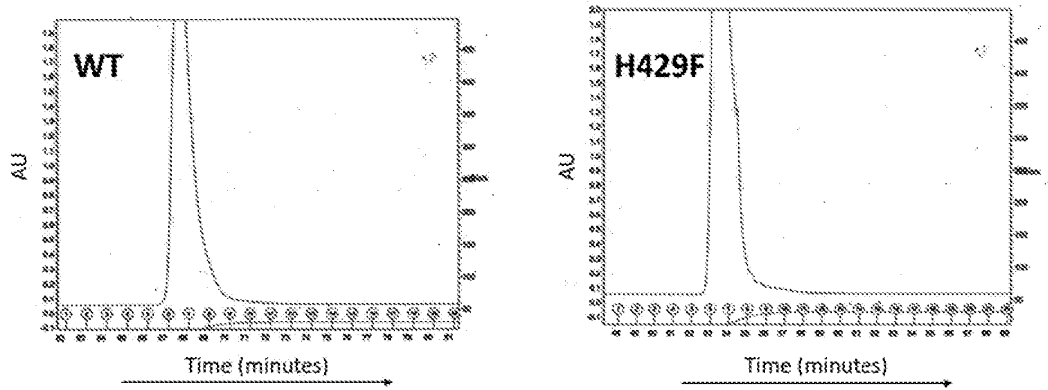


Fig. 20

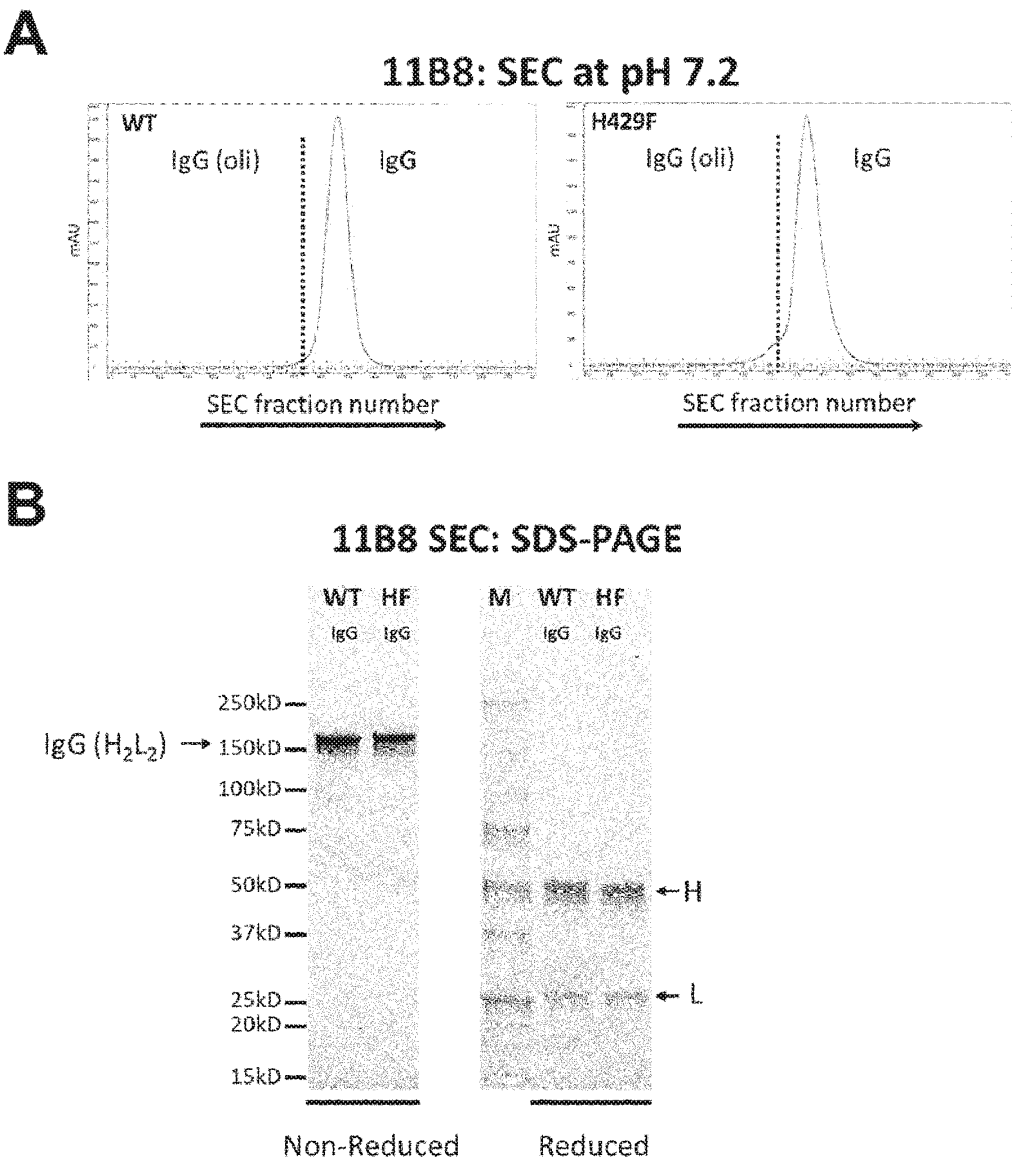


Fig. 21

Enhanced anti-CD20 type II CDC killing of lymphoma cells

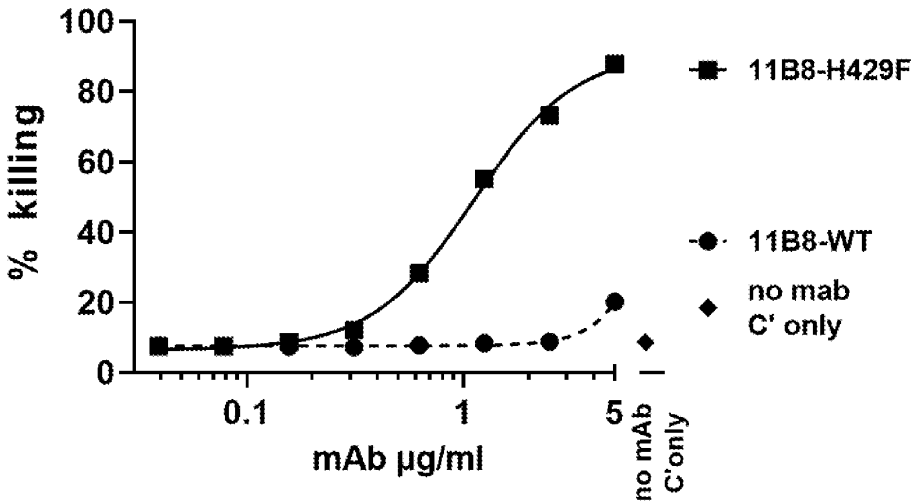


Fig. 22

Daratumumab: Protein A chromatography

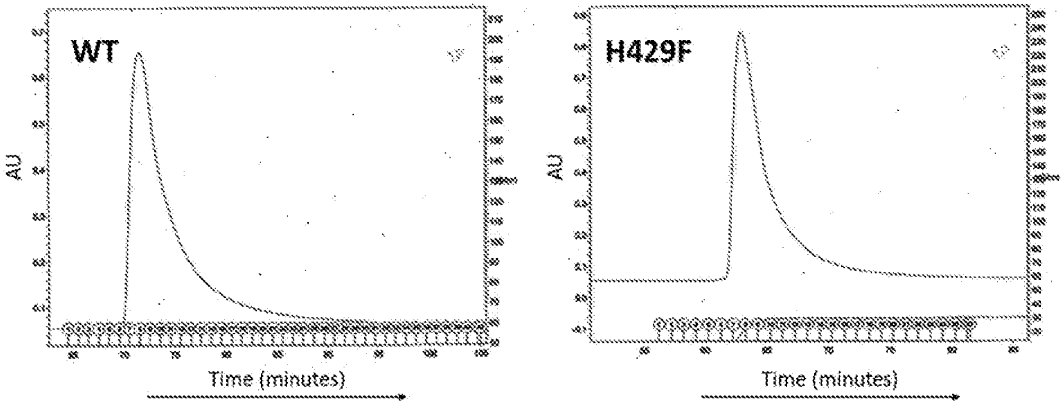


Fig. 23

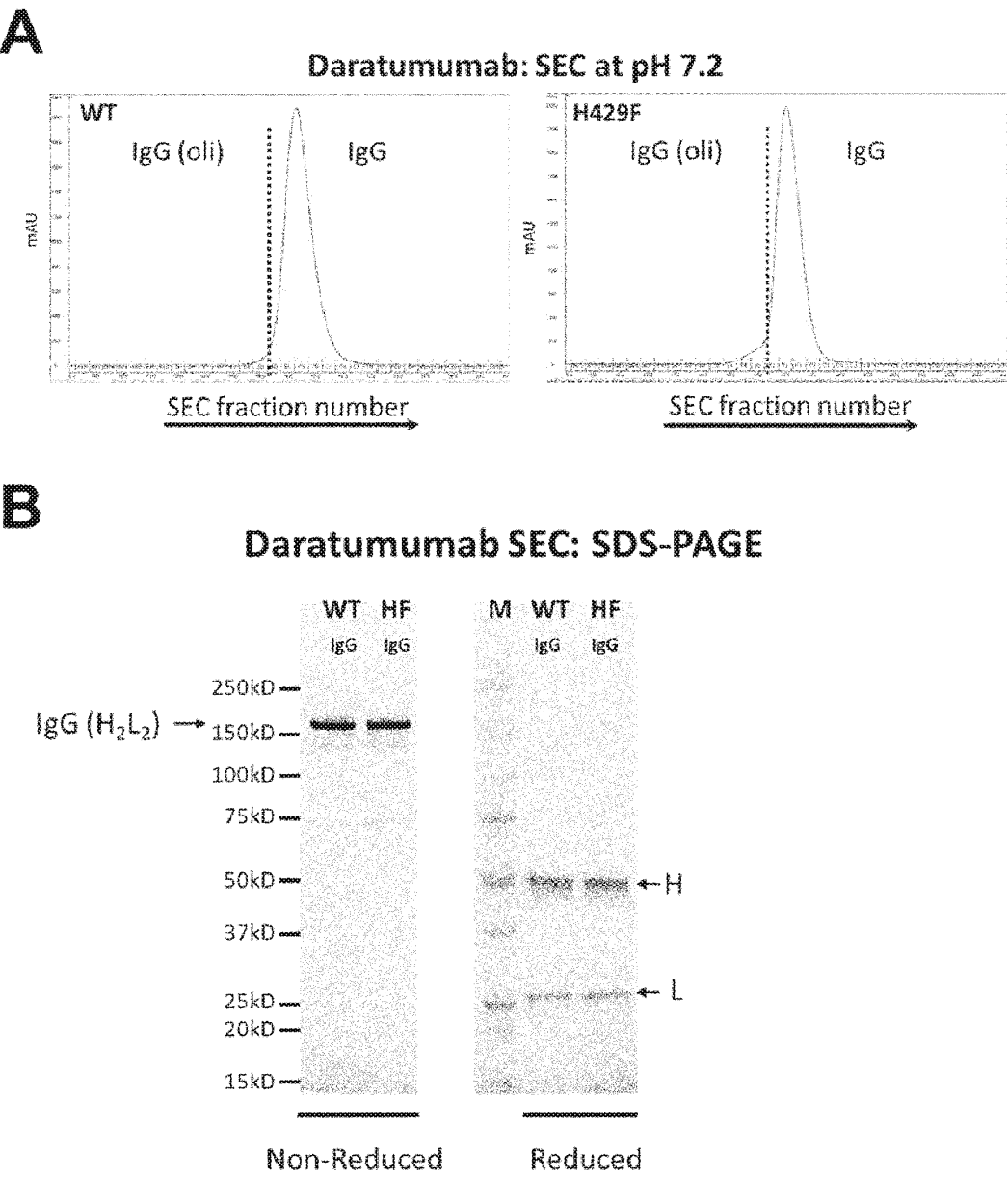


Fig. 24

Enhanced mAb CDC Killing of Lymphoma Cells

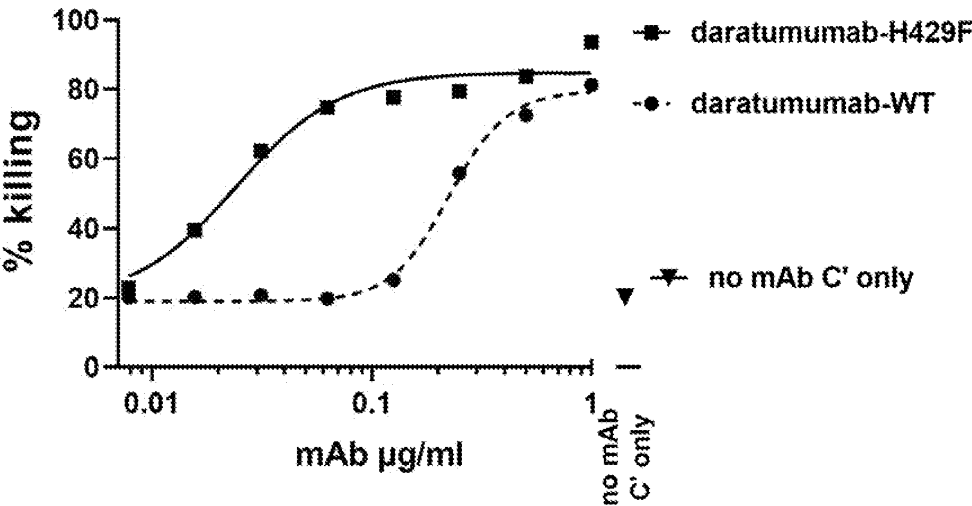


Fig. 25

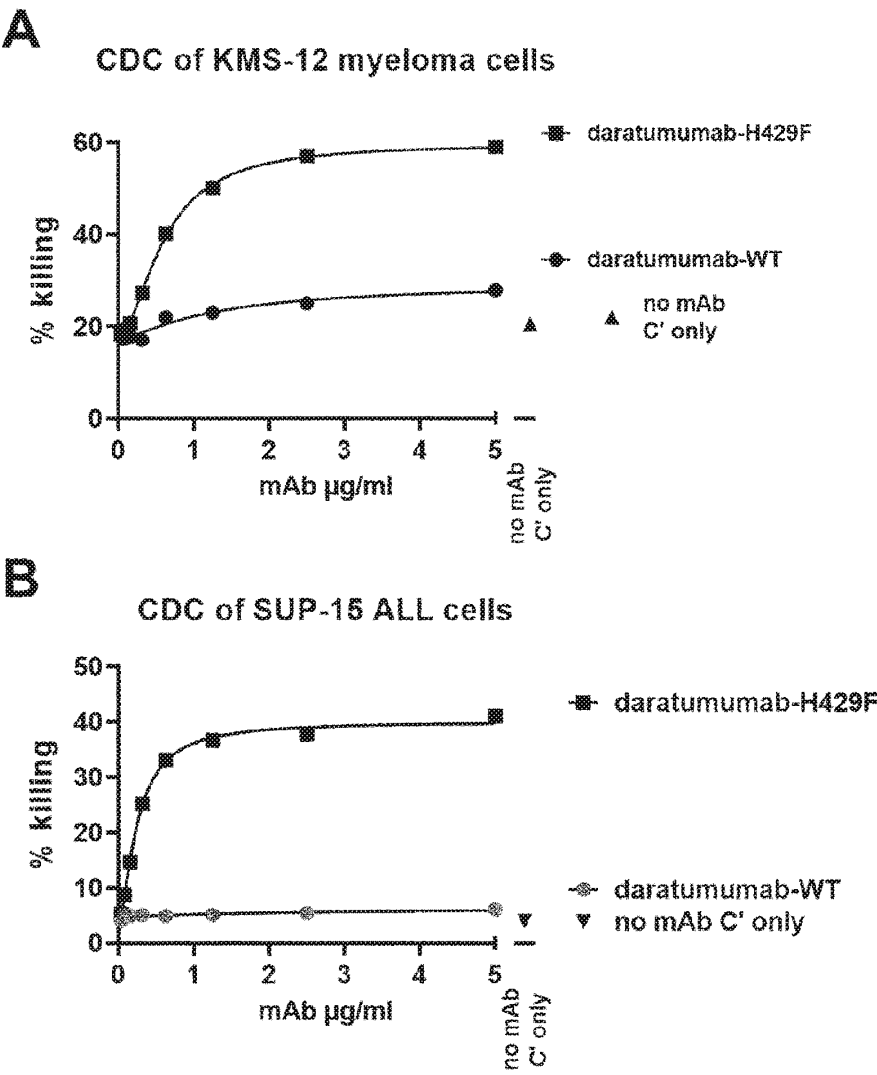


Fig. 26

Pertuzumab: Protein A chromatography

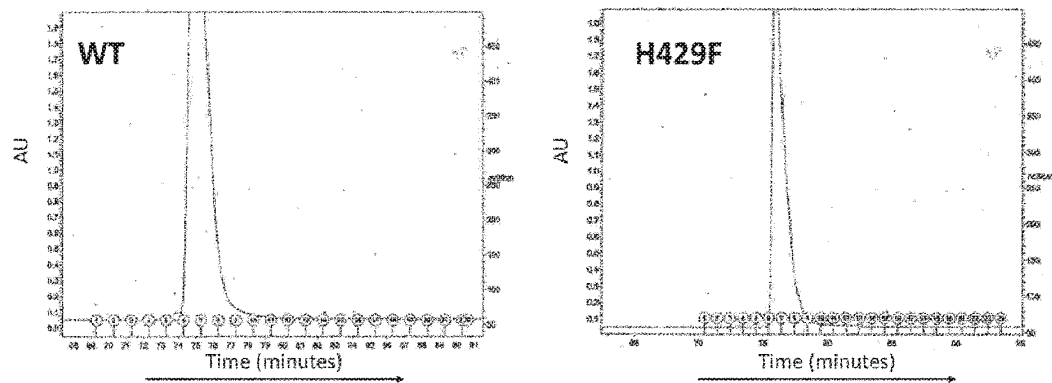


Fig. 27

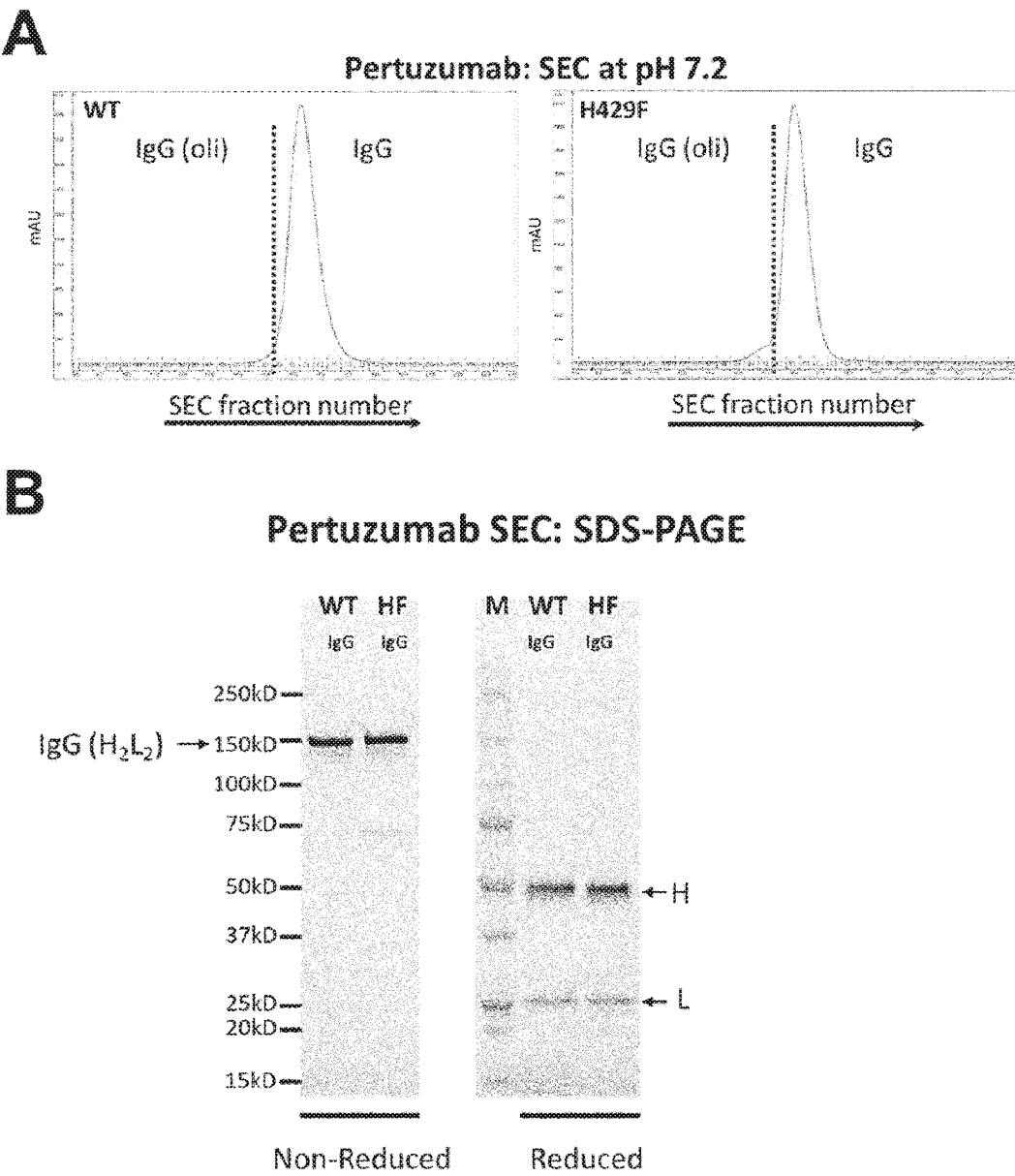


Fig. 28

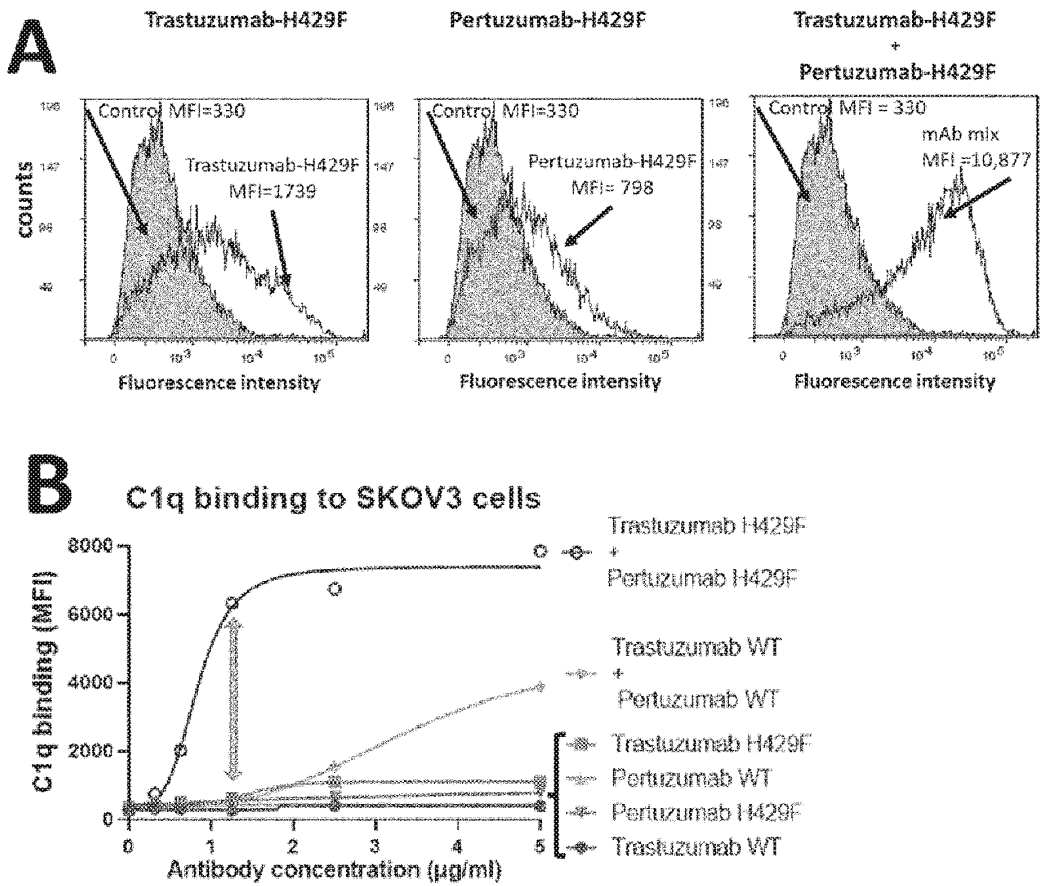


Fig. 29

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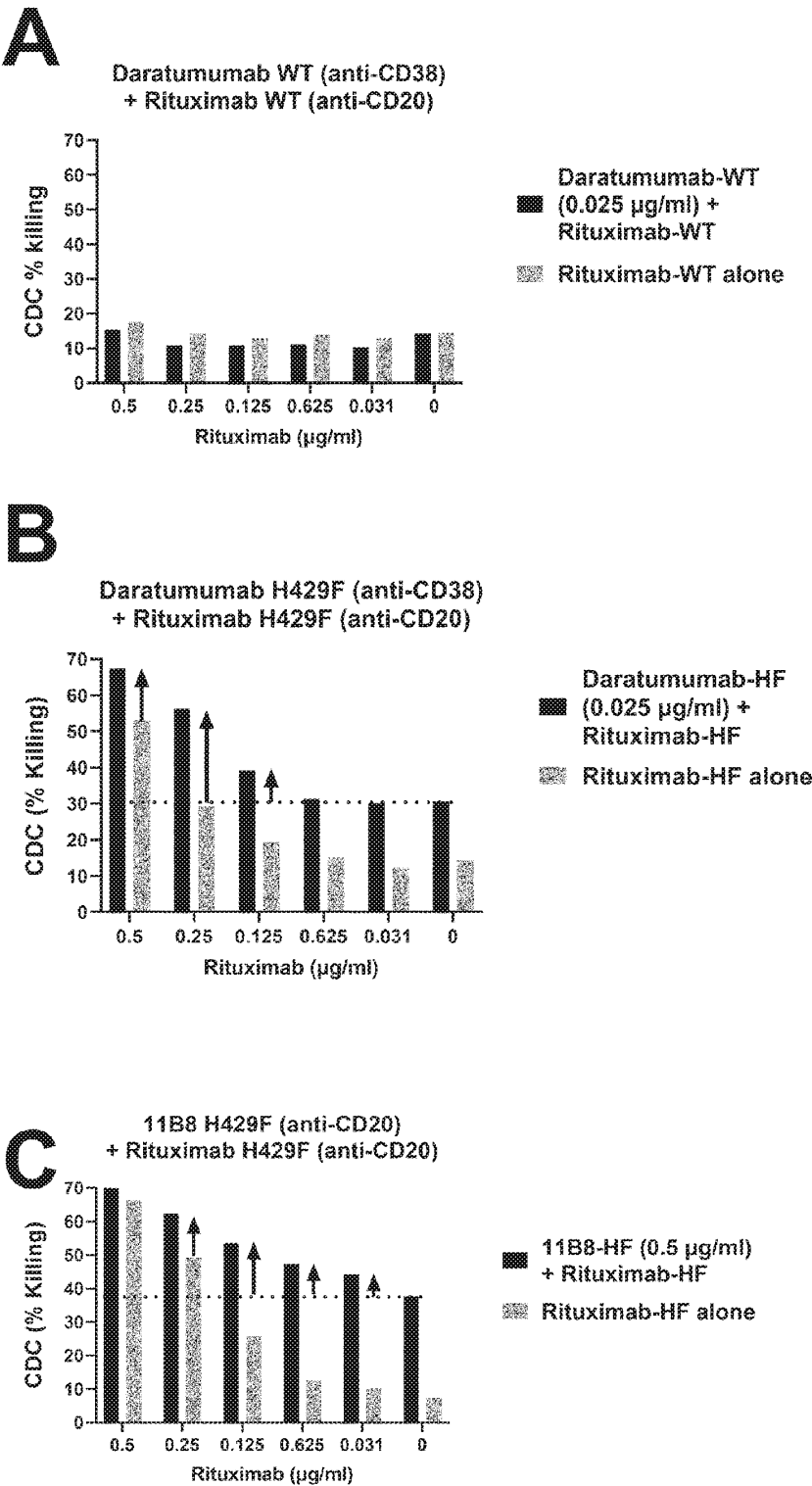


Fig. 30

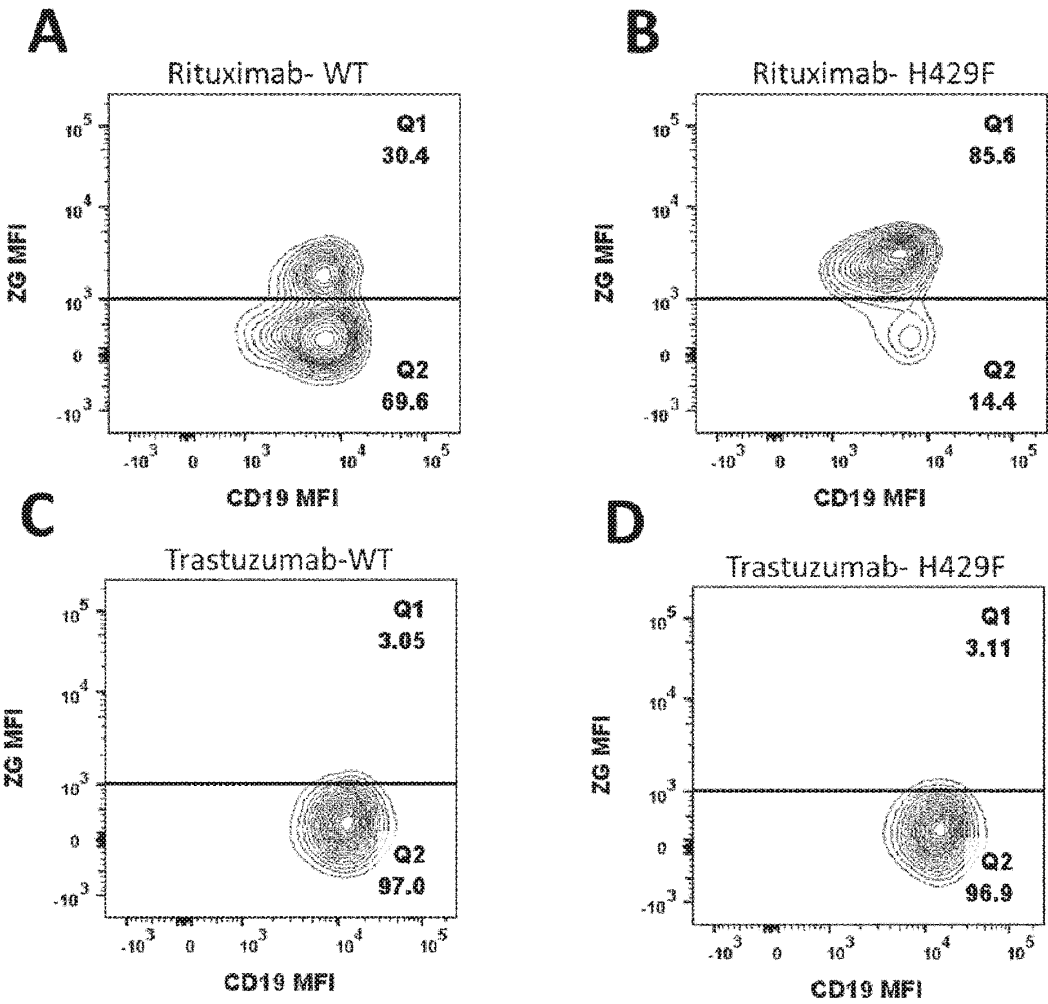


Fig. 31

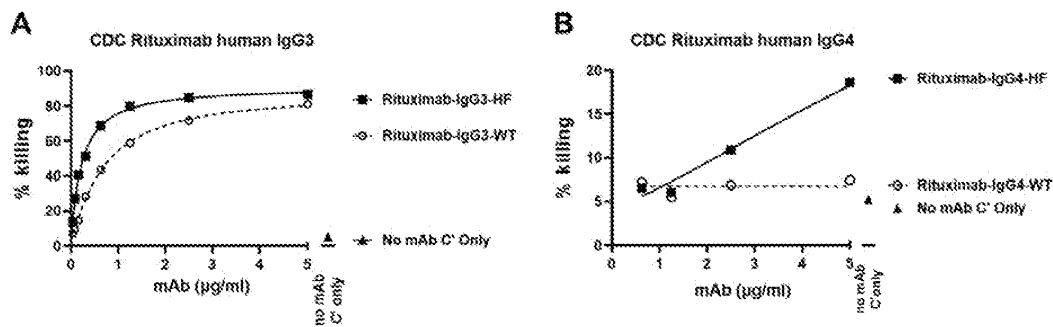


Fig. 32

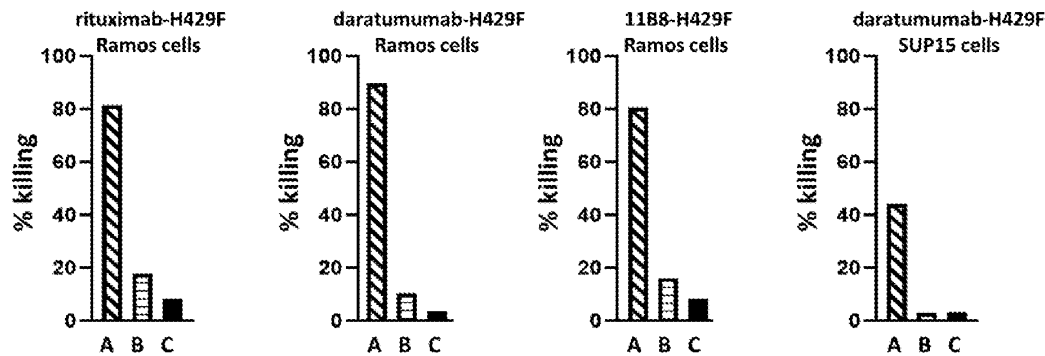


Fig. 33

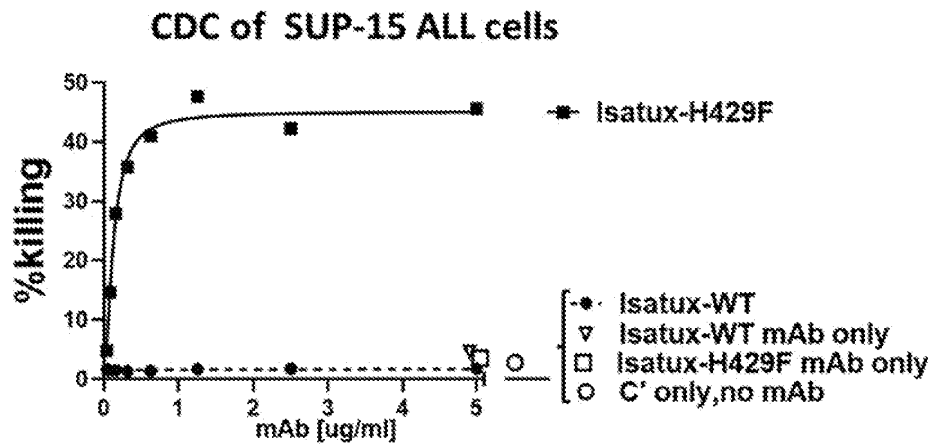


Fig. 34

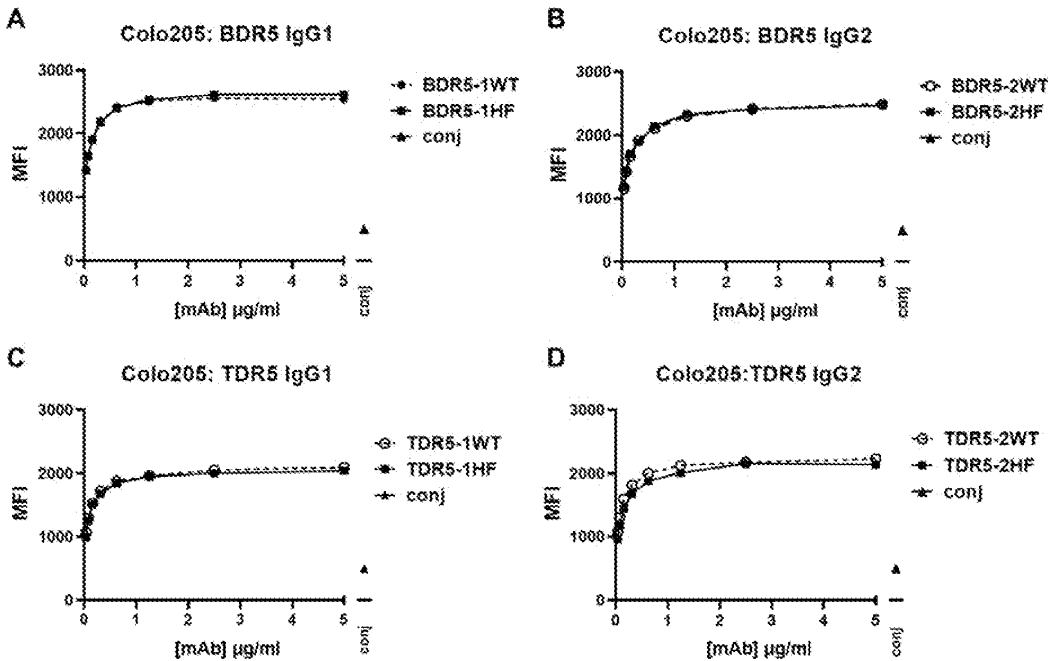


Fig. 35

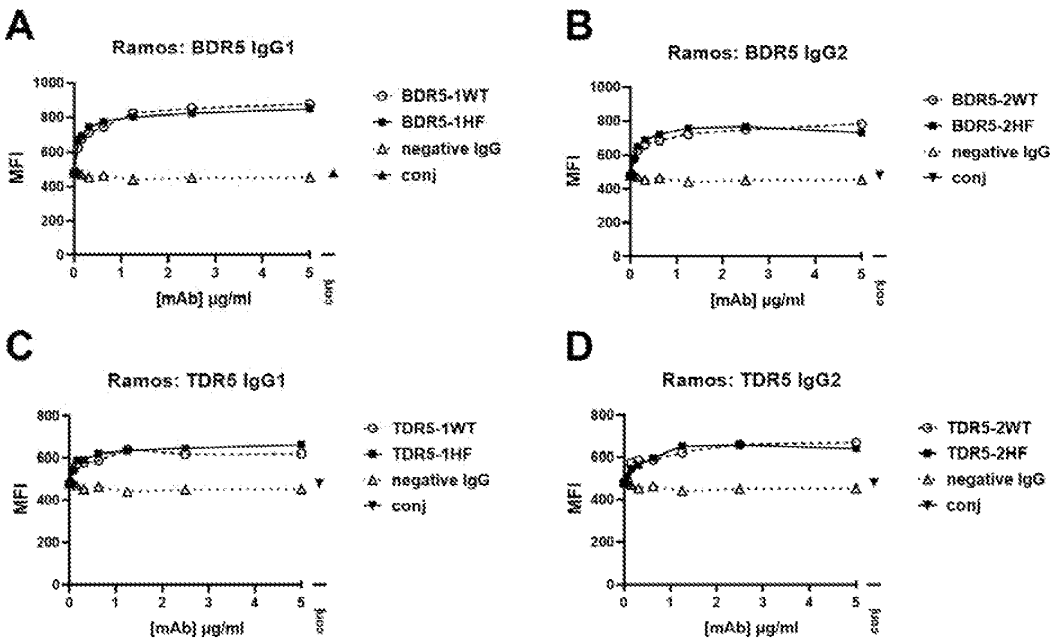


Fig. 36

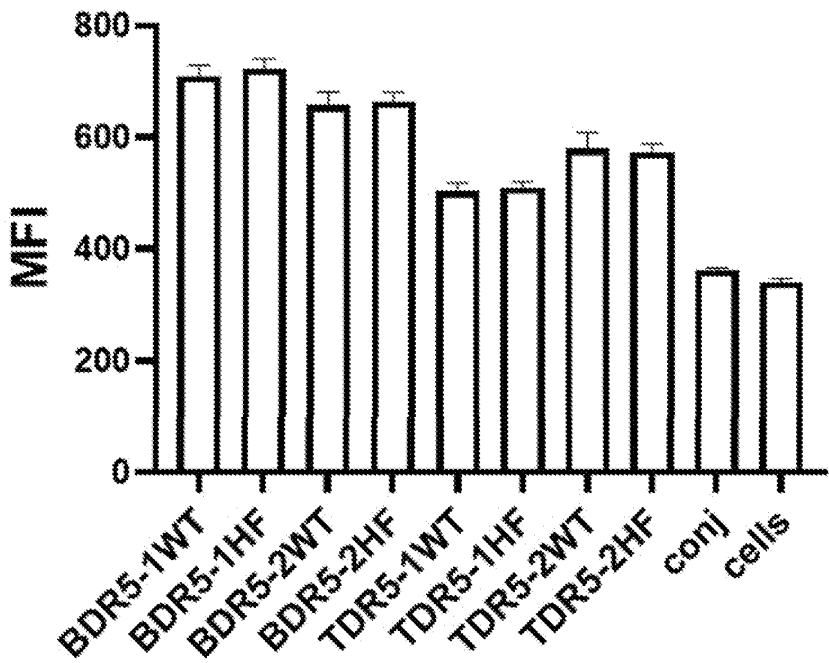


Fig. 37

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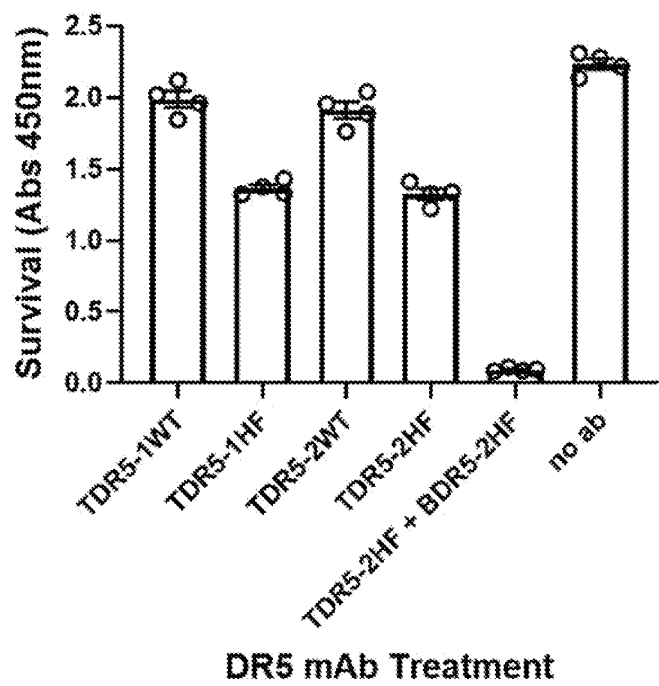


Fig. 38

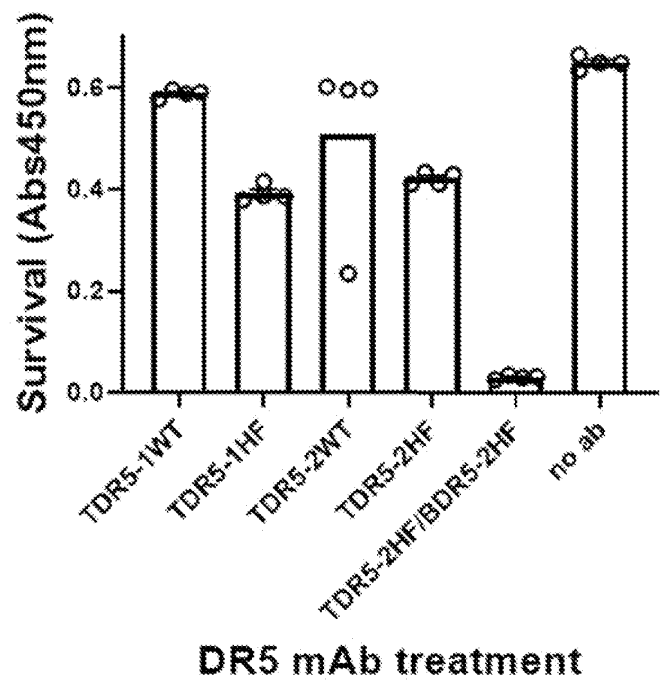


Fig. 39

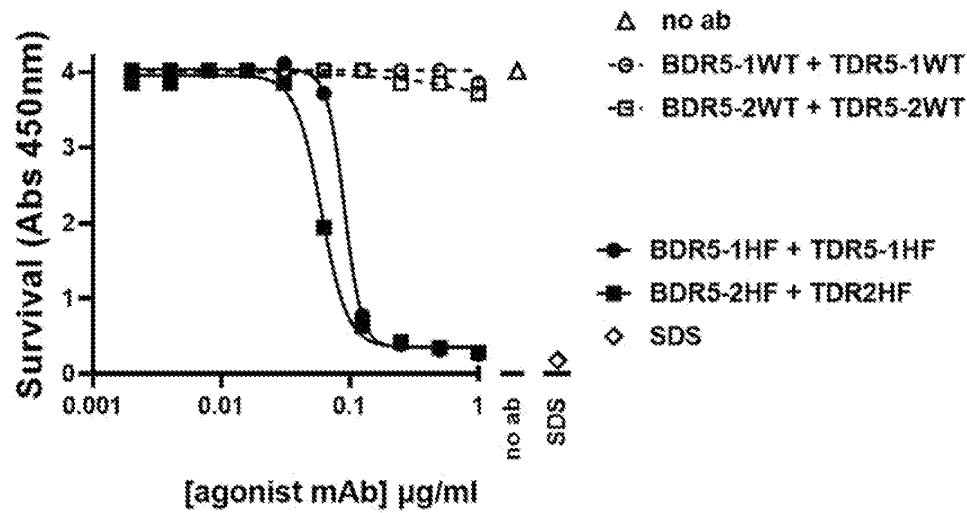


Fig. 40

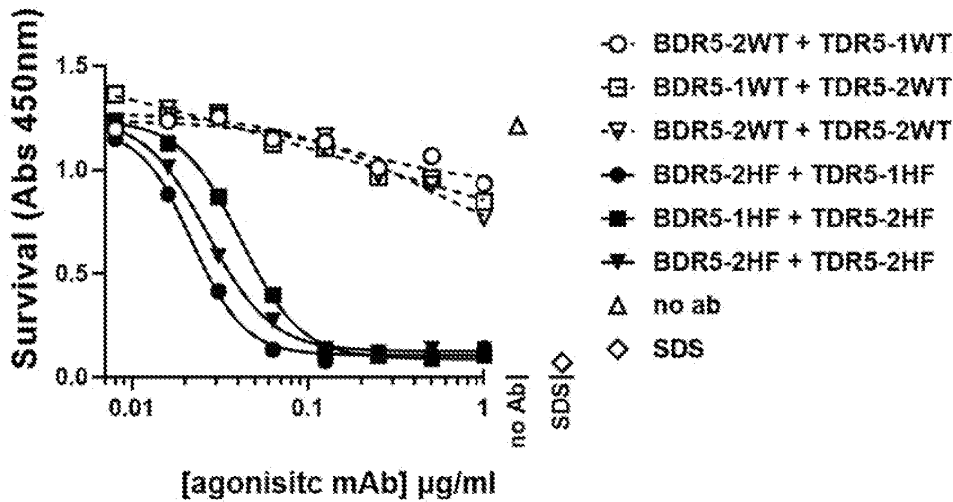


Fig. 41

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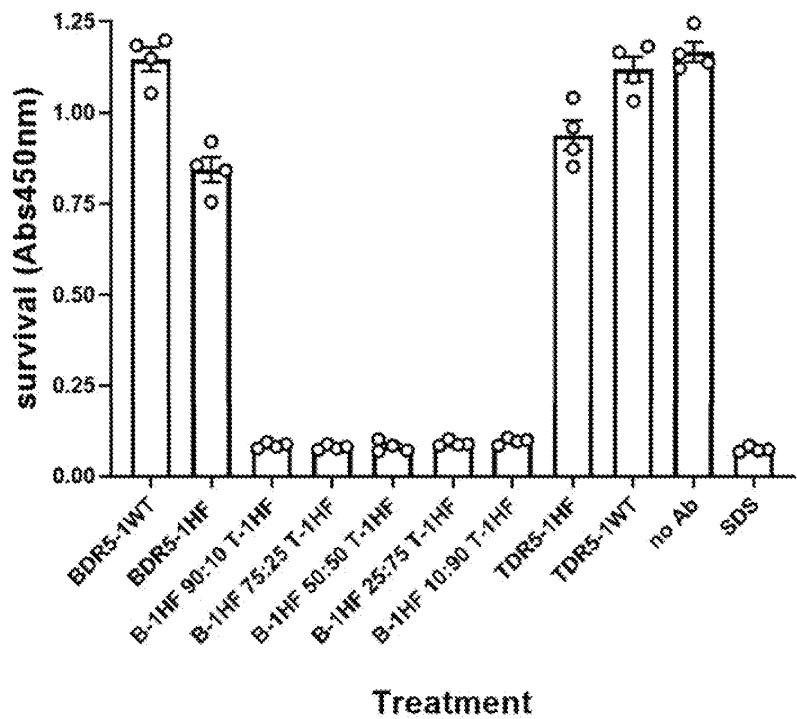


Fig. 42

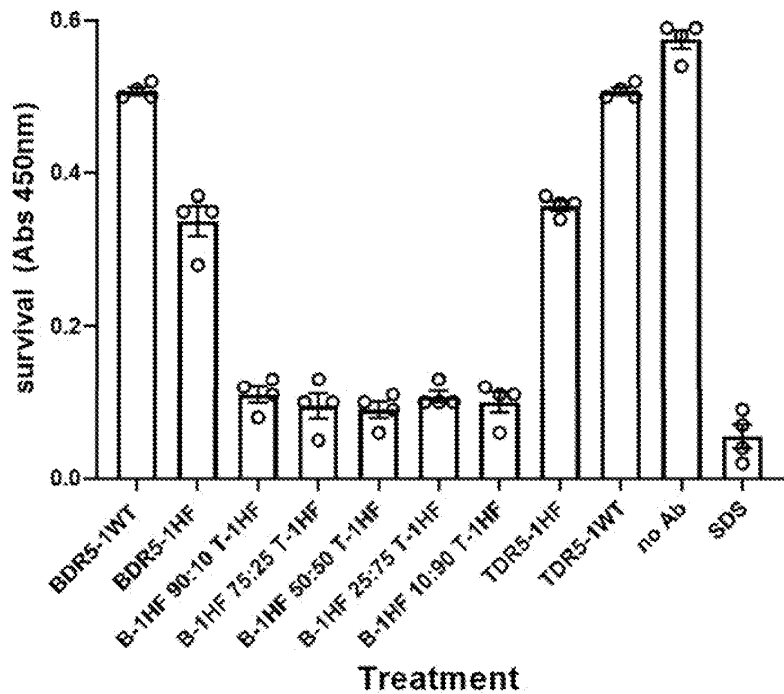


Fig. 43

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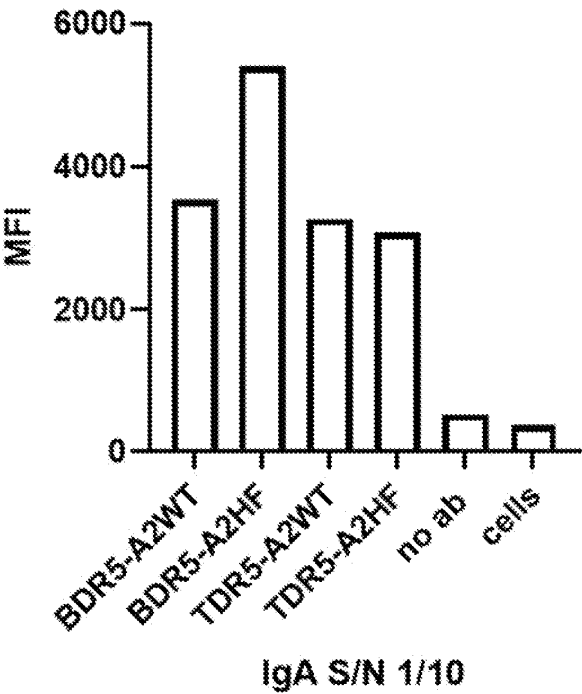


Fig. 44

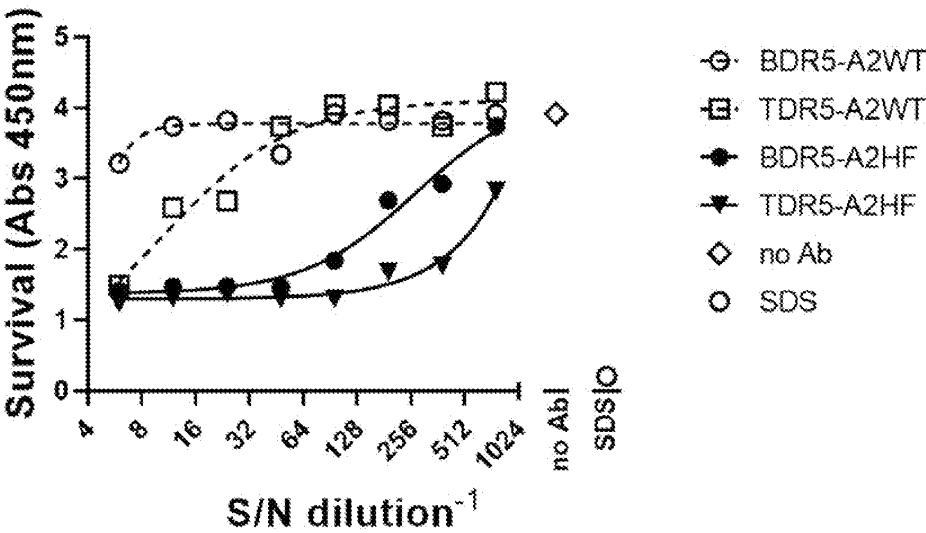


Fig. 45

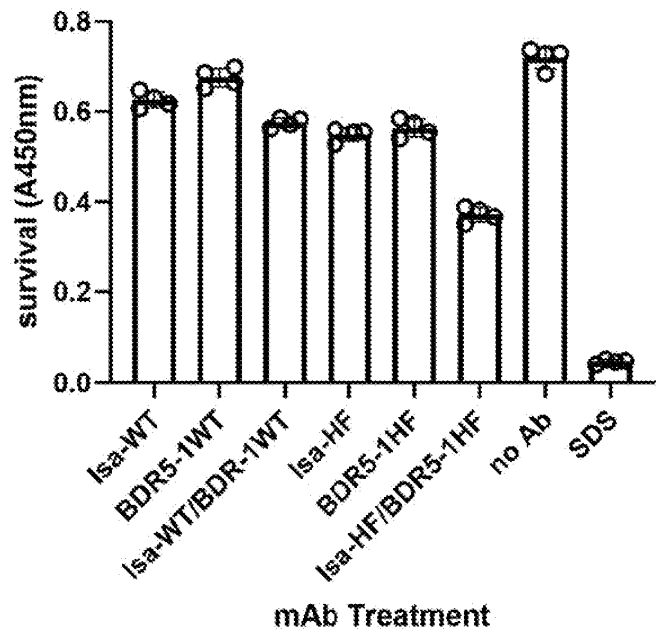


Fig. 46

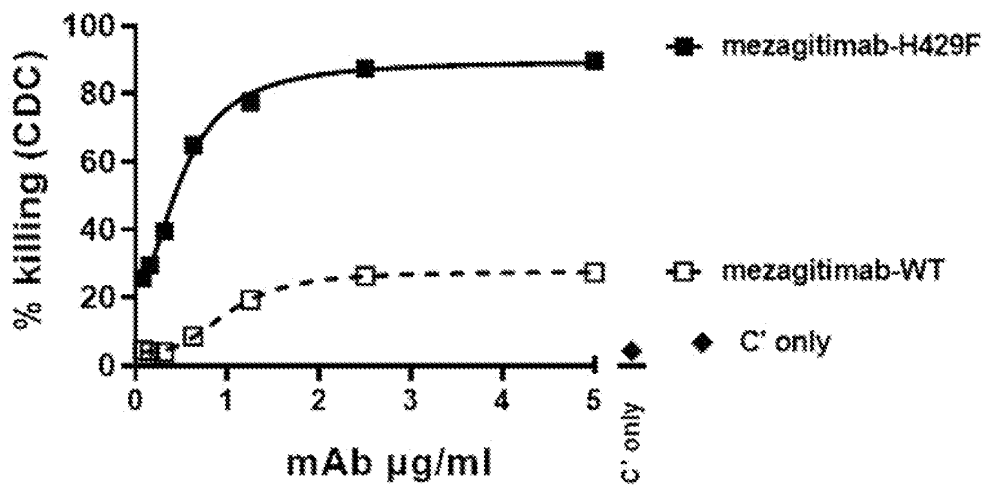


Fig. 47

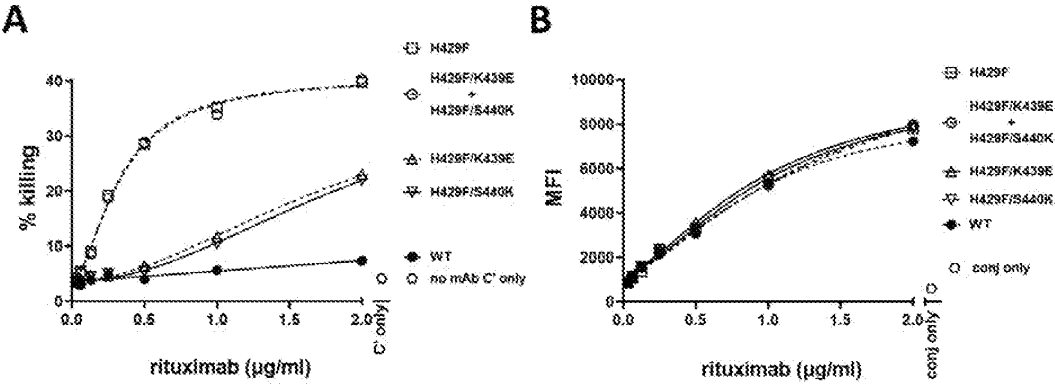


Fig. 48

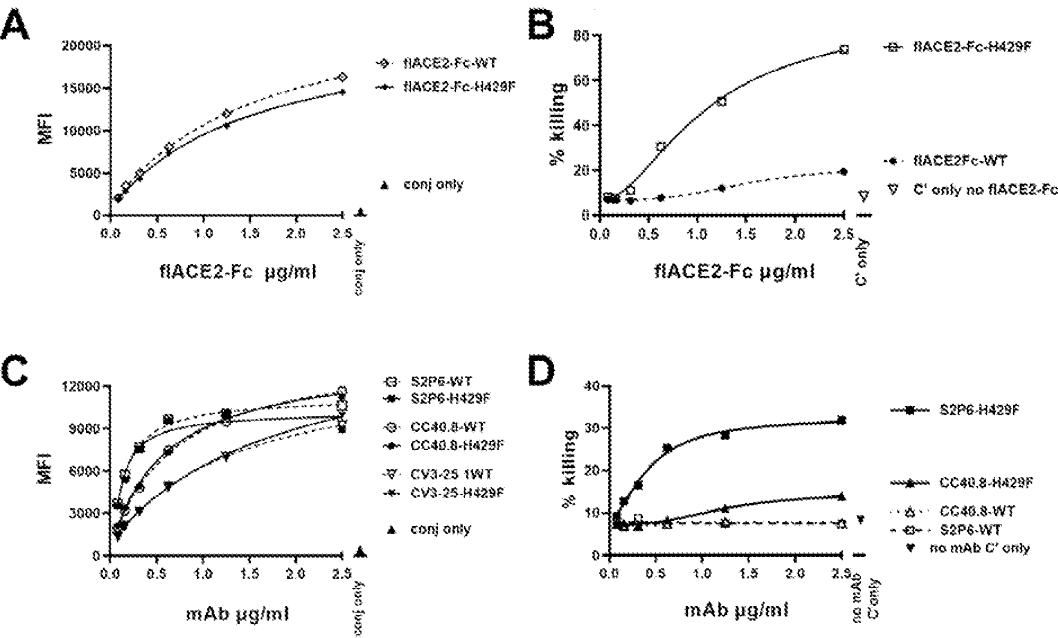


Fig. 49

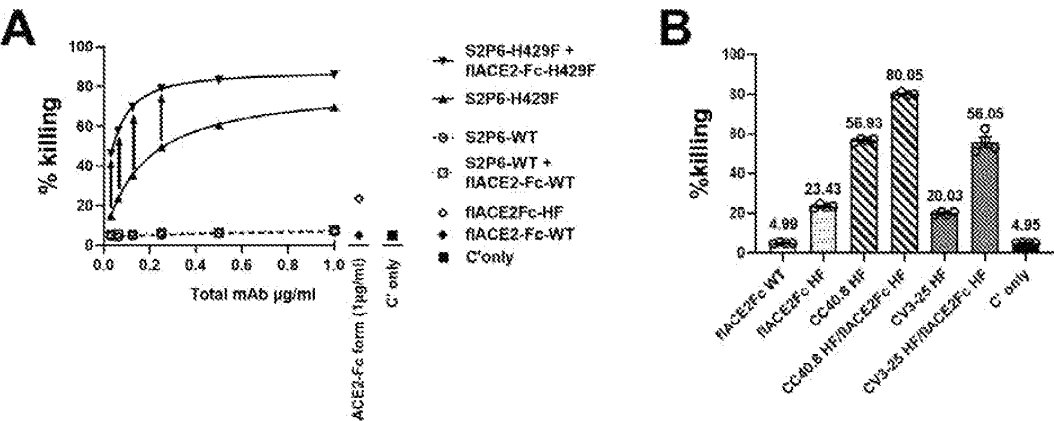


Fig. 50

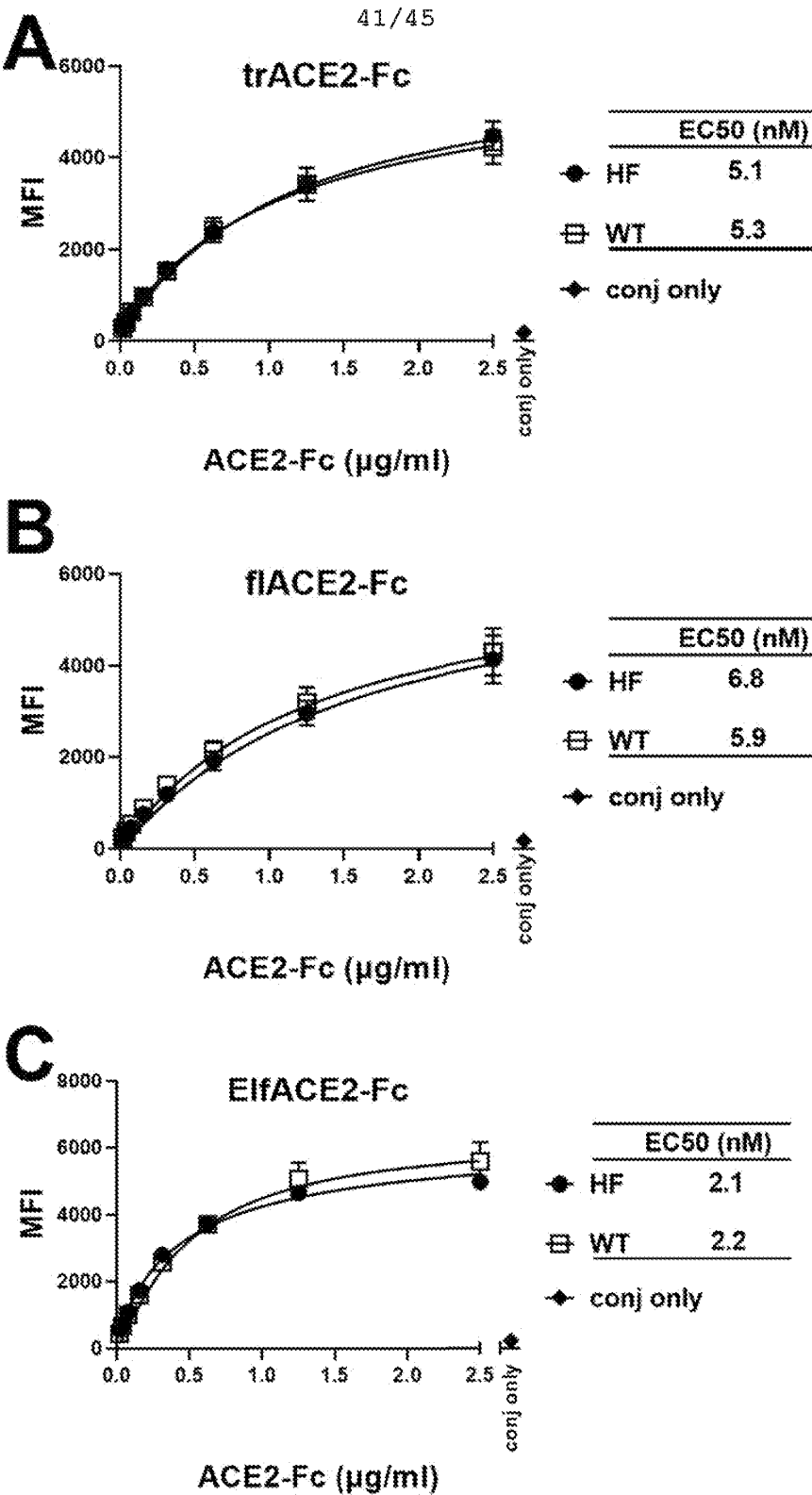


Fig. 51

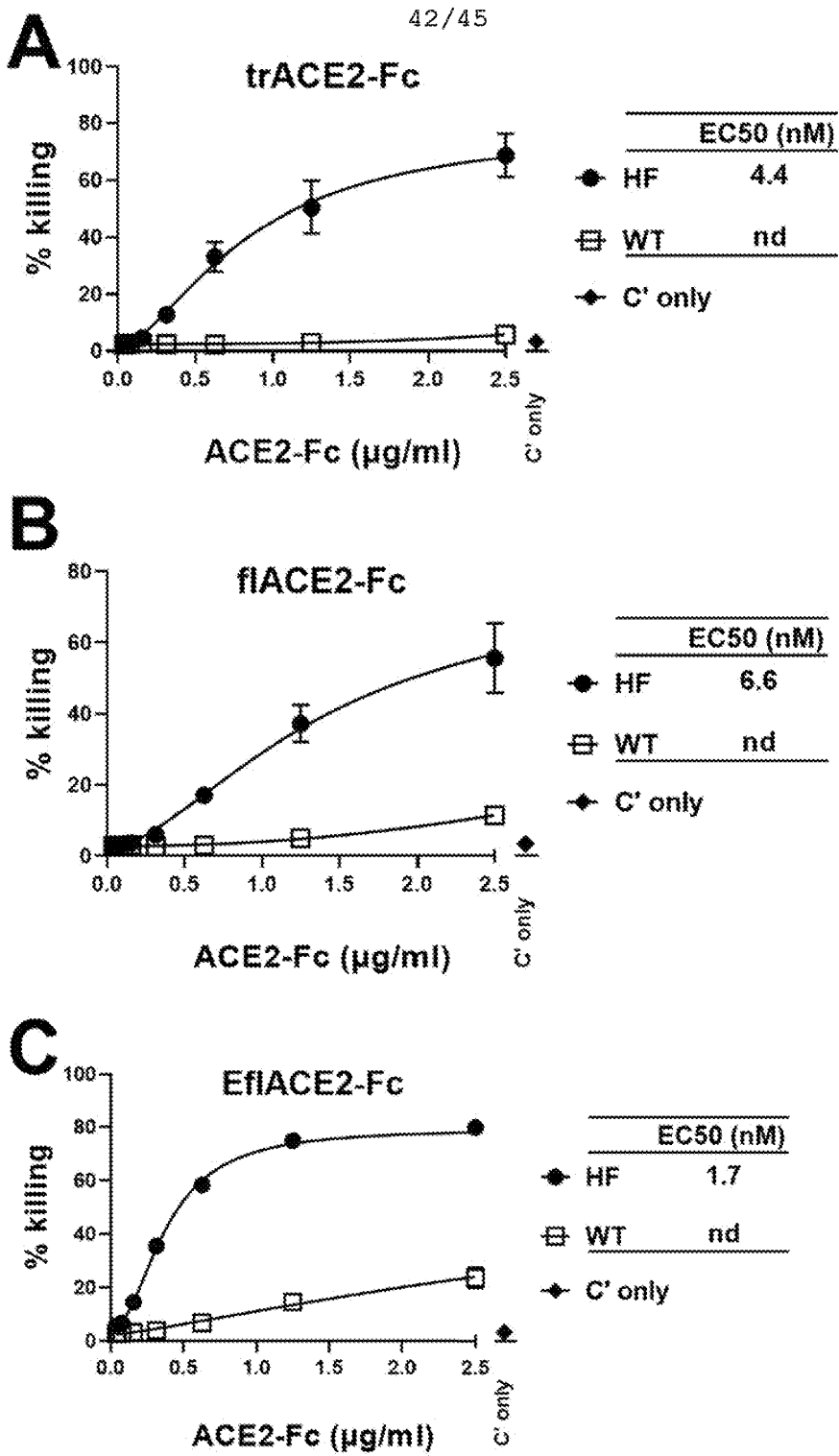
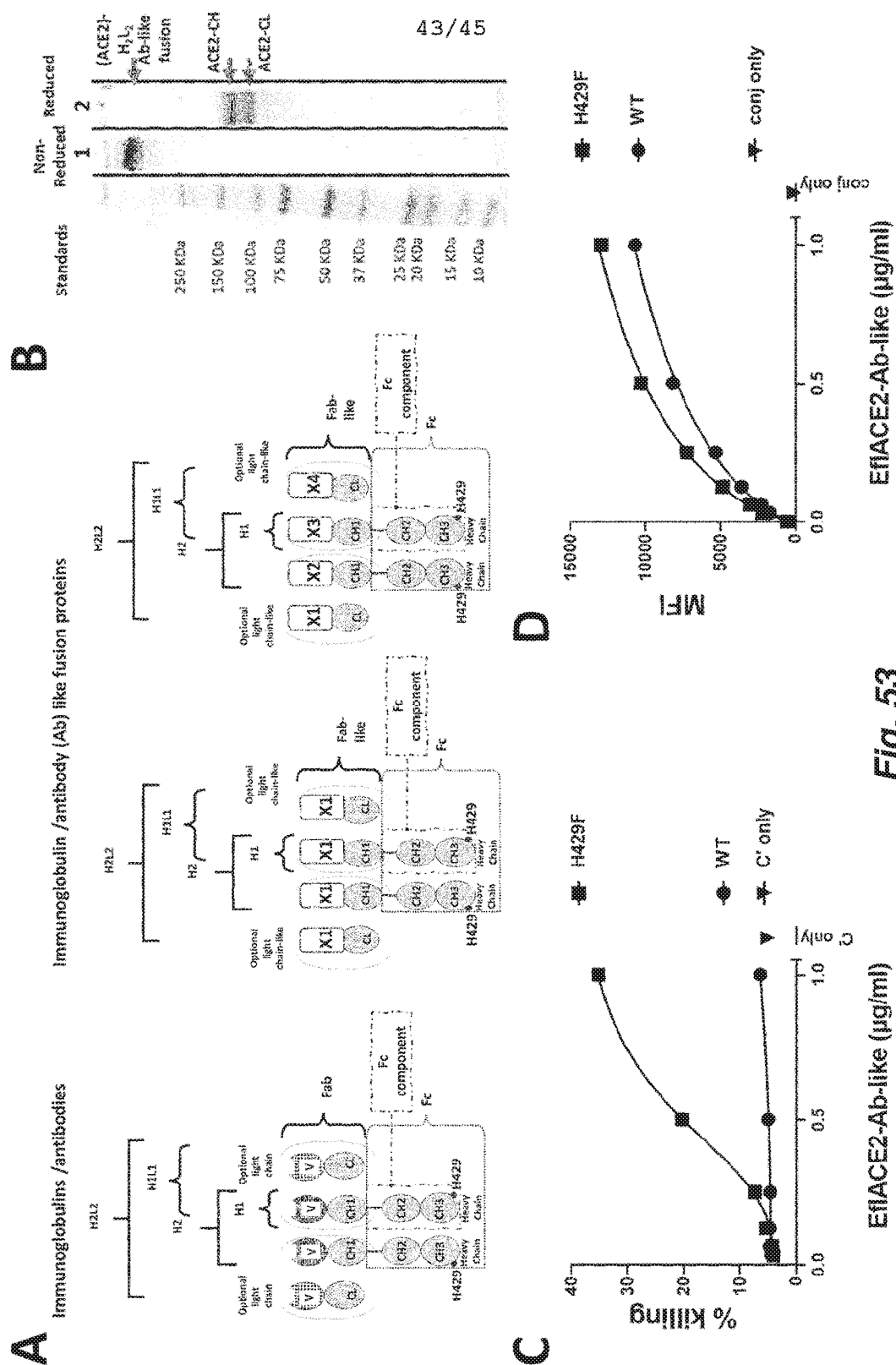
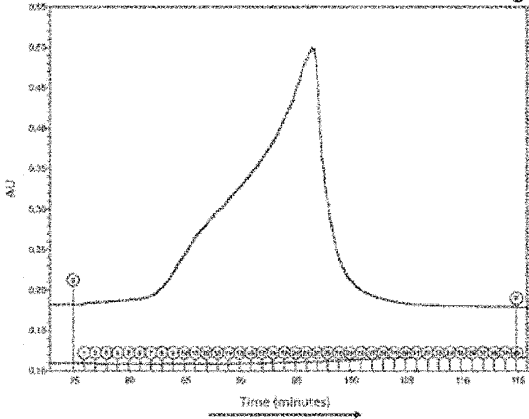


Fig. 52



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A
EfiACE2-Ab-like-H429F: Protein A Chromatography



B
EfiACE2-Ab-like-H429F: SEC

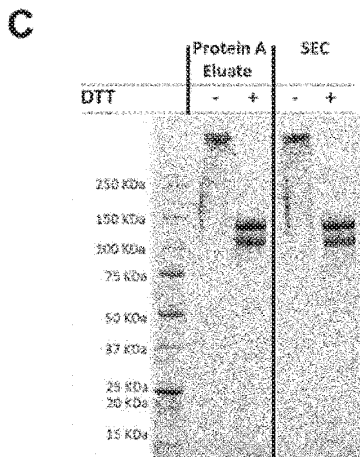
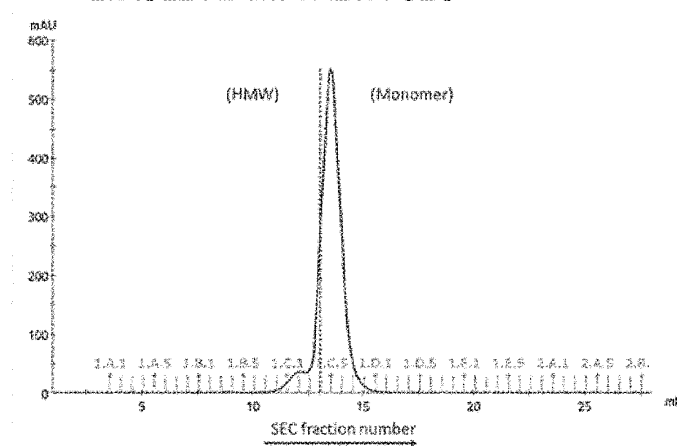


Fig. 54

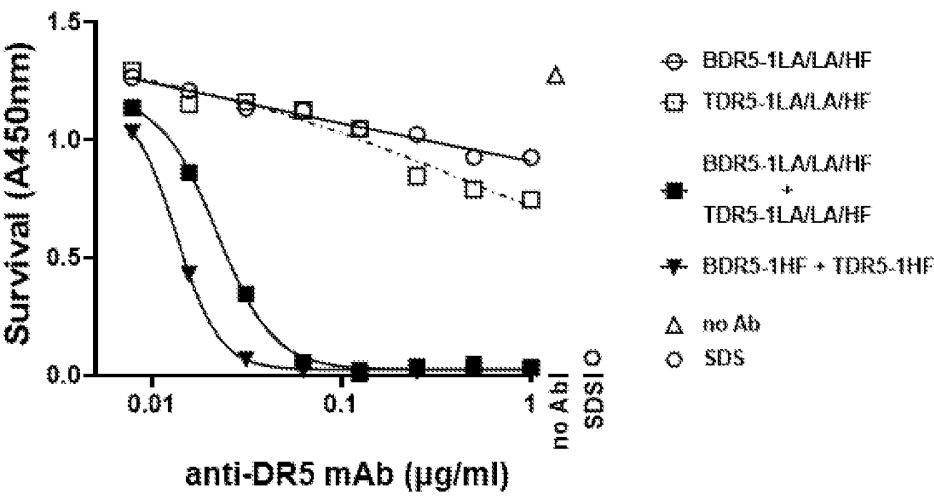


Fig. 55