

FIG. 1A – (SEQ ID NO: 1)

MLRLLLALNLFPSIQVTGNKILVKQSPMLVAYDNAVNLSCKYSYNLFSREFRASLH

KGLDSAVEVCVVYGNYSQQLQVYSKTGFNCDGKLGNESVTFYLNLYVNQTDIYFC

KIEVMYPPPYLDNEKSNGTIIHVKGKHLCPSPLPFGPSKPFWVLVVVGGVLACYSL

*Hinge Domain**Transmembrane*

LVTVAFIIFWVRSKRSRLHSDYMNMTPRRPGPTRKHYPYAPPRDFAAYRS

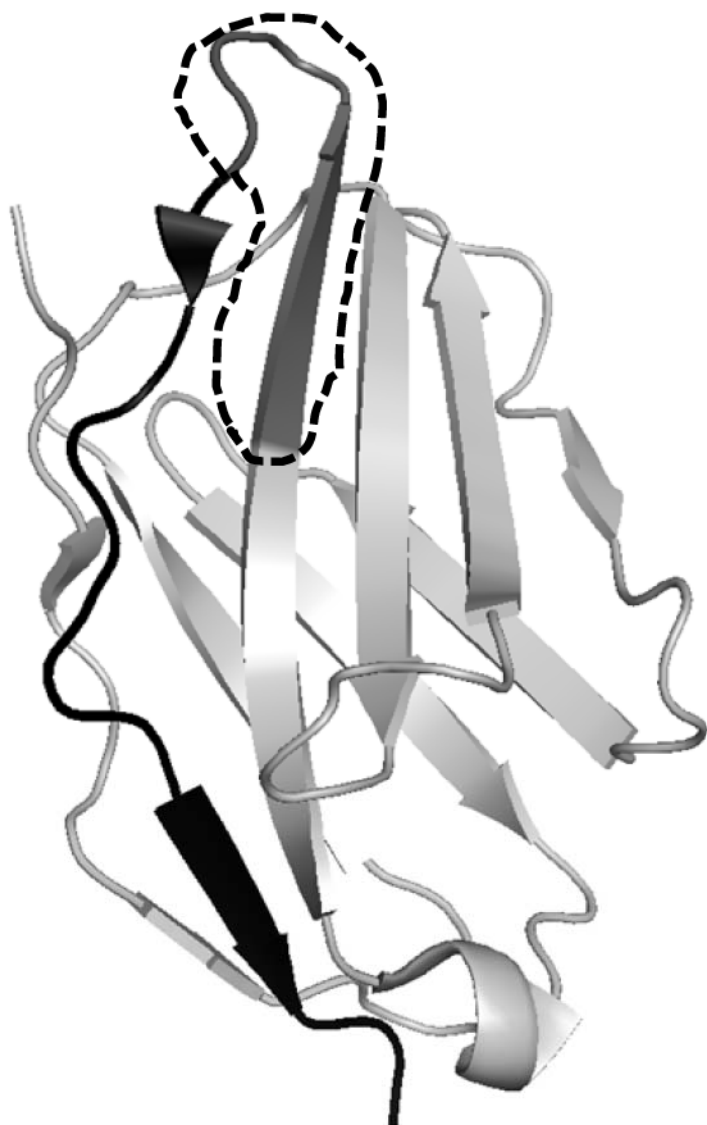
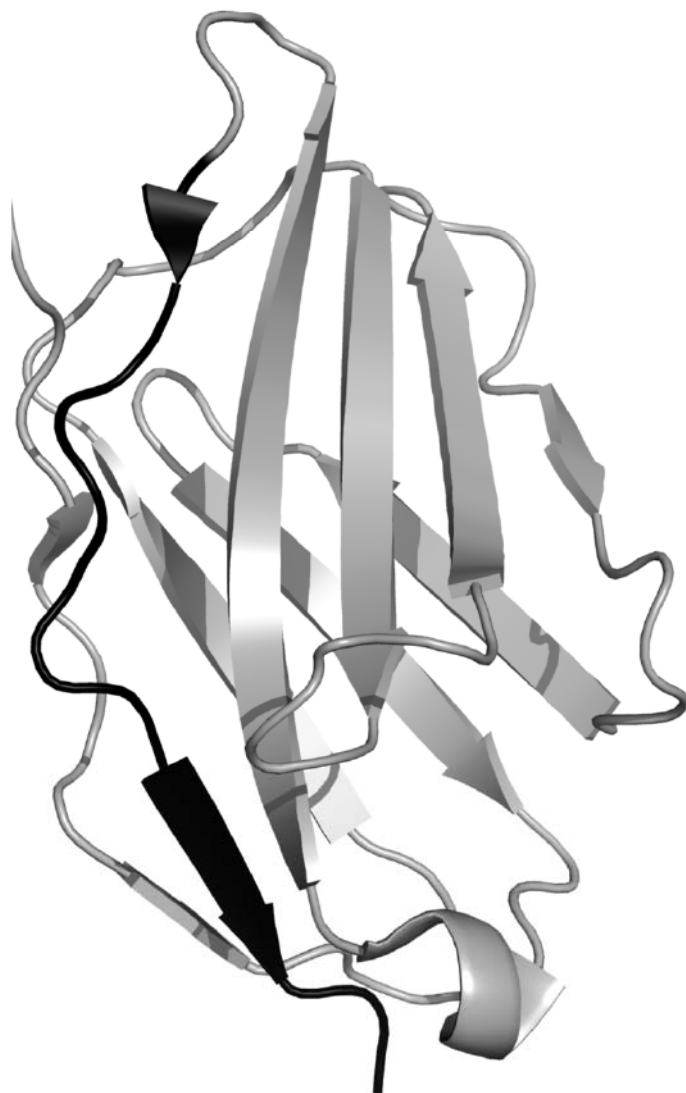
*Domain**Signaling Domain***FIG. 1B****FIG. 1C**

FIG. 2A – Anti-CLL-1 Binding Molecules

	FR1	CDR1	FR2	CDR2
24C1_VH	QVQLQESGPGLVKPSSETLSLTCTVS	GGSISS--YY	WSWIRQPPGKGLEWIGYI	YYSGS-T
24C8_VH	QVQLQESGPGLVKPSQTLSTCTVS	GGSISSGGFY	WSWIRQHPGKGLEWIGYI	HHSGS-T
20C5.1_VH	QVQLVQSGAEVKKPGASVKVSKVS	GYTLT--EL	SMHWVRQAPGKGLEWMGGF	DPEDGET
20C5.2_VH	QVQLVESGGGVVQPGRLRLSCAAS	GFTFSS--Y	GMHWVRQAPGKGLEWVAVIS	YDGSDK
	**** : ** : : * . :: : * . * * ::		* : * * * * * * * : . :	
	FR3		CDR3	FR4
24C1_VH	NYNPSLKSRTISVDTSKNQFSLKLSSVTAADTAVYYCVS	SLVYCGGDCYSGFDY	WGQGTL	
24C8_VH	HYNPSLKSRTISIDTSKNLFSLRLSSVTAADTAVYYCAS	SLVYCGGDCYSGFDY	WGQGTL	
20C5.1_VH	IYAQKFQGRVTVTEDTSTD TAYMELSSLRSED TAVYYCATE	ESRGIG--WPYFDY	WGQGTL	
20C5.2_VH	YYVDSVKGRFTISRDN SKNRLYLQMNSLRAEDTAVYYCAR	ERYSG-----RDY	WGQGTL	
	* * , * : : * , * . : : * : : * * * * * ,		* * * * * * *	
	FR4			
24C1_VH	VTVSS			
24C8_VH	VTVSS			
20C5.1_VH	VTVSS			
20C5.2_VH	VTVSS			

<u>FIG. 2B</u>	SEQ ID NO:			
	VH	CDR1	CDR2	CDR3
24C1 VH	125	93	97	101
24C8 VH	126	94	98	102
20C5.1 VH	127	95	99	103
20C5.2 VH	128	96	100	104

FIG. 2C – Anti-CLL-1 Binding Molecules

	FR1	CDR1	FR2	CDR2	FR3
24C1_VL	DIQLTQSPSSLSASVGDRVSFTQ	QASQDINNFLN	WYQQKPGKAPKLLIY	DASNLET	GVPS
24C8_VL	DIQLTQSPSSLSASVGDRVSFTQ	QASQDINNFLN	WYQQKPGKAPKLLIY	DASNLET	GVPS
20C5.1_VL	DIQMTQSPSSLSASVGDRVTITQ	RASQSISSYLN	WYQQKPGKAPKLLIS	GASSLKSG	VP
20C5.2_VL	EIVMTQSPATLSVSPGERATLSC	RASQSVSSLLT	WYQQKPGQAPRLLI	FGASTRAT	GIPA
	:* :*****:***.* *:*.:::*	:*****:.. *.*****:***:***	.***. :*:::		
	FR3	CDR3	FR4		
24C1_VL	RFSGSGSGTDFTFTISSLQPED	IATYYCQQYGNLP	FTFGGGTKVEIKR		
24C8_VL	RFSGSGSGTDFTFTISSLQPED	IATYYCQQYGNLP	FTFGGGTKVEIKR		
20C5.1_VL	RFSGSGSGTDFTLTISLPPED	FATYYCQQSYSTP	ITFGQGTRLEIKR		
20C5.2_VL	RFSGSGSGTGFTLTISLQSE	DFAVYYCQQYDTWP	FTFGPGTKVDFKR		
	*****.**:***** .**:*.******	.*:***	**:::***		

<u>FIG. 2D</u>	SEQ ID NO:			
	VL	CDR1	CDR2	CDR3
24C1 VL	129	105	109	113
24C8 VL	130	106	110	114
20C5.1 VL	131	107	111	115
20C5.2 VL	132	108	112	116

FIG. 2E – Anti-BCMA Binding Molecules

	FR1	CDR1	FR2	CDR2
FS-21495 VH	EVQLLESGGGLVQPGGSLRLSCAASG	--FTFSSY	AMSWVRQAPGKGLEWVS	AIISGSGGST
PC-21497 VH	QVQLVESGGGVVQPGRSLRLSCAASG	--FTFSSY	GMHWVRQAPGKGLEWVA	VISYDGSNK
AJ-21508 VH	QVQLVQSGAEVKKPGASVKVSCKASG	--YTFTSY	YMHWRQAPGQGLEWMGI	INPGGGST
NM-21517 VH	QLQLQESGPGGLVKPSETLSLTCTVSG	SSSSSY	YWGWIROP	PGKLEWIGSISYSG-ST
TS-21522 VH	EVQLVESGGGLVQPGGSLRLSCAASG	--FTFSSY	SMNWVRQAPGKGLEWVS	TISSSSSTI
RY-21527 VH	QVQLVESGGGVVQPGRSLRLSCAASG	--FTFSSY	GMHWVRQAPGKGLEWVA	VISYDGSNK
PP-21528 VH	QVQLVQSGAEVKKPGSSVKVSCKASG	--GTFSSY	AIWVRQAPGQGLEWMGI	PIPIFGTA
RD-21530 VH	QVQLVESGGGVVQPGRSLRLSCAASG	--FTFSSY	GMHWVRQAPGKGLEWVA	VISYDGSNK
	::** : ** : : * . : : : * . **	: : **	* : ** . ** : ** : : . *	.
	CDR2	FR3	CDR3	
FS-21495 VH	YYADSVKGRFTISRDNKNTLYLQMNSLRAEDTAVYYC	AR-AEM-----	GAVFDI	WGQ
PC-21497 VH	YYADSVKGRFTISRDNKNTLYLQMNSLRAEDTAVYYC	ARDGTYLGG	---WY-FDL	WGR
AJ-21508 VH	SYAQKFQGRVTMTTRDTSTSTVYMEISSLRSEDTAVYYC	AR-----	ESWPMDV	WGQ
NM-21517 VH	YYNPSLKSRVTISVDTSKNQFSLKLSSVTAADTAVYYC	ARGRGYATS-----	LAFDI	WGQ
TS-21522 VH	YYADSVKGRFTISRDNKNTLYLQMNSLRAEDTAVYYC	ARGSQE-----	HLIFDY	WGQ
RY-21527 VH	YYADSVKGRFTISRDNKNTLYLQMNSLRAEDTAVYYC	ARTDFWSGSP---	PG-LDY	WGQ
PP-21528 VH	NYAQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYC	ARTPEYSSSIWHY	YYYGMDV	WGQ
RD-21530 VH	YYADSVKGRFTISRDNKNTLYLQMNSLRAEDTAVYYC	VKGPLQEP	PY---	DYGMDV WGQ
	* * . ** : : * . . . : : : * : : * : : * : : * : : *			: * ** :
	FR4			
FS-21495 VH	GTMVTVSS			
PC-21497 VH	GTLVTVSS			
AJ-21508 VH	GTTVTVSS			
NM-21517 VH	GTMVTVSS			
TS-21522 VH	GTLVTVSS			
RY-21527 VH	GTLVTVSS			
PP-21528 VH	GTTVTVSS			
RD-21530 VH	GTTVTVSS			
	** *****			

<u>FIG. 2F</u>	SEQ ID NO:			
	VH	CDR1	CDR2	CDR3
FS-21495 VH	77	13	21	29
PC-21497 VH	78	14	22	30
AJ-21508 VH	79	15	23	31
NM-21517 VH	80	16	24	32
TS-21522 VH	81	17	25	33
RY-21527 VH	82	18	26	34
PP-21528 VH	83	19	27	35
RD-21530 VH	84	20	28	36

FIG. 2G – Anti-BCMA Binding Molecules

	FR1	CDR1	FR2	CDR2
FS-21495_VL	EIVLTQSPATLSLSPGERATLSC	RASQSVSR-----YLA	WYQQKPGQAPRLLIY	DASNR
PC-21497_VL	DIVMTQSPISLPVTPGEPASIS	CRSSQSLLHSNG-YN	YLDWYLQKPGQSPQLLIY	LGSNR
AJ-21508_VL	EIVMTQSPATLSVSPGERATLSC	RASQSVSS-----NLA	WYQQKPGQAPRLLIY	GASTR
NM-21517_VL	EIVLTQSPATLSLSPGERATLSC	RASQSVSS-----YLA	WYQQKPGQAPRLLIY	DASNR
TS-21522_VL	EIVLTQSPATLSLSPGERATLSC	RASQSVSR-----YLA	WYQQKPGQAPRLLIY	DASNR
RY-21527_VL	DIQLTQSPSSVSASVGDRVTITC	RASQGISS-----WLA	WYQQKPGKAPKLLIY	GASSL
PP-21528_VL	DIVMTQSPDSLAVSLGERATINC	KSSQSVLYSSNNKN	YLAWYQQKPGQPPKLLIY	WASTR
RD-21530_VL	EIVMTQSPATLSVSPGERATLSC	RASQSVSS-----NLA	WYQQKPGQAPRLLIY	SASTR
	:* :**** :. : * : . : . : *	:**** :	* ** ***** : . : *****	. *
	CDR2	FR3	CDR3	FR4
FS-21495_VL	ATGIPARESGSGSGTDFTLTISS	LEPEDFAVYYCQQRISWPF	TFGGG	TKVEIK
PC-21497_VL	ASGVPDFRSGSGSGTDFTLKISR	VEAEDVGVIYCMQGLGLPL	TFGGG	TKVEIK
AJ-21508_VL	ATGIPARESGSGSGTDFTLTISS	LQSEDFAVYYCQQYAAYP-	TFGGG	TKVEIK
NM-21517_VL	ATGIPARESGSGSGTDFTLTISS	LEPEDFAVYYCQQRHVWPF	TFGGG	TKVEIK
TS-21522_VL	ATGIPARESGSGSGTDFTLTISS	LEPEDFAVYYCQQRFYYPW	TFGGG	TKVEIK
RY-21527_VL	QSGVPSRFSGSGSGTDFTLTISS	LQPEDFATYYCQQIYTFPF	TFGGG	TKVEIK
PP-21528_VL	ESGVPDFRSGSGSGTDFTLTISS	LQAEDEVAVYYCQQFAHTP	TFGGG	TKVEIK
RD-21530_VL	ATGIPARESGSGSGTDFTLTISS	LQSEDFAVYYCQQHHVWPL	TFGGG	TKVEIK
	:* : * ***** : **** * : . : * . . . * * *		* ** *****	

<u>FIG. 2H</u>	SEQ ID NO:			
	VL	CDR1	CDR2	CDR3
FS-21495 VL	85	37	45	53
PC-21497 VL	86	38	46	54
AJ-21508 VL	87	39	47	55
NM-21517 VL	88	40	48	56
TS-21522 VL	89	41	49	57
RY-21527 VL	90	42	50	58
PP-21528 VL	91	43	51	59
RD-21530 VL	92	44	52	60

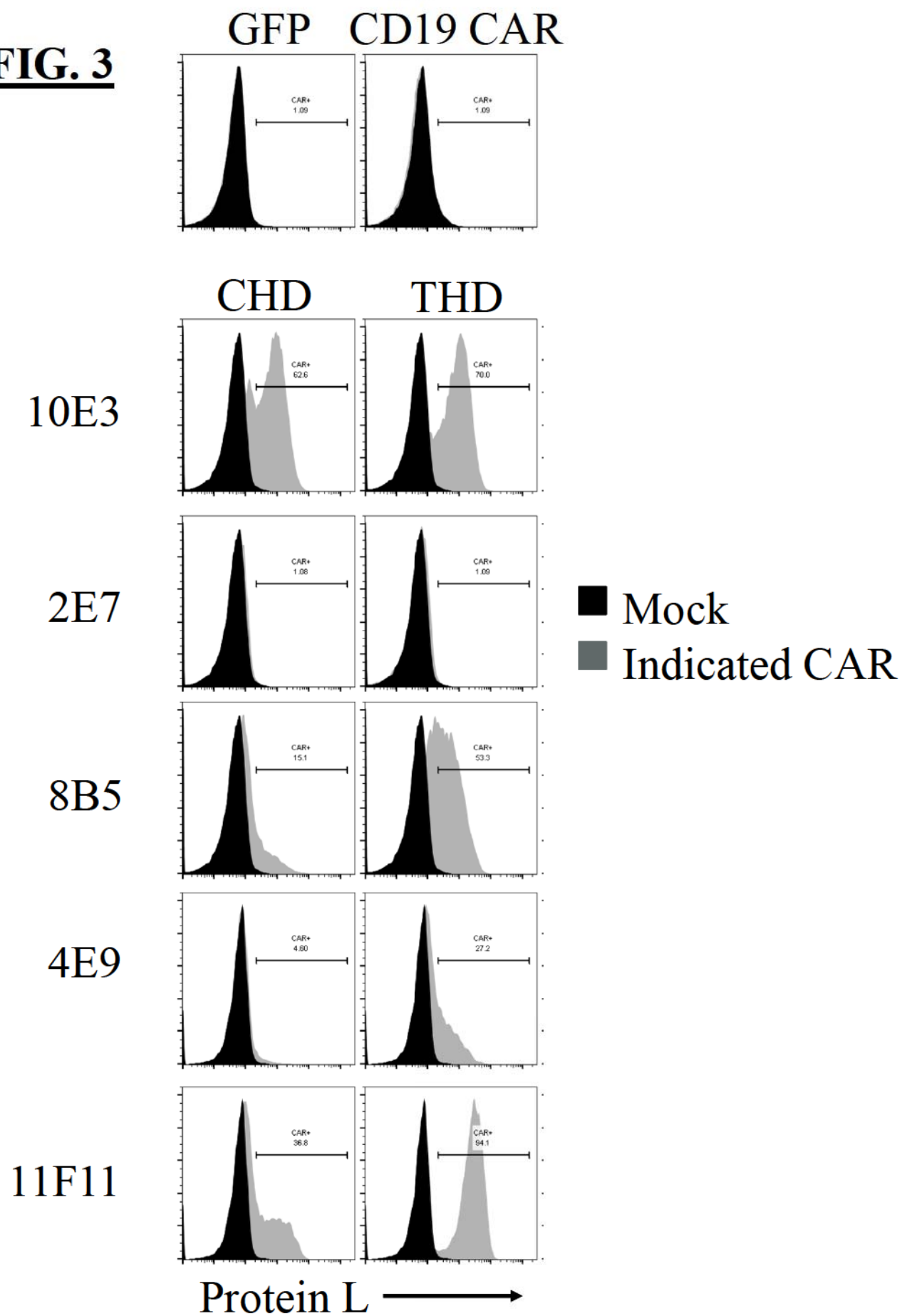
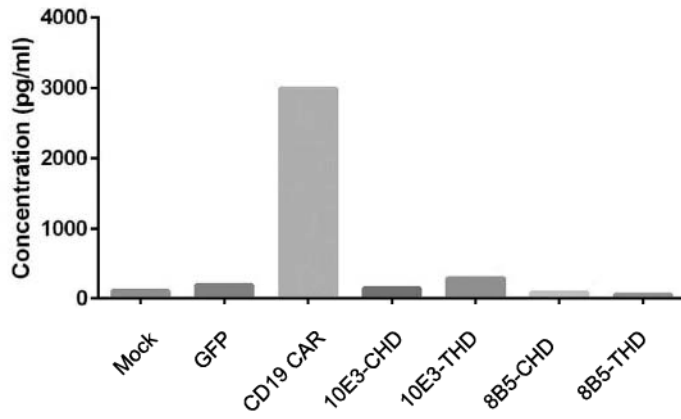
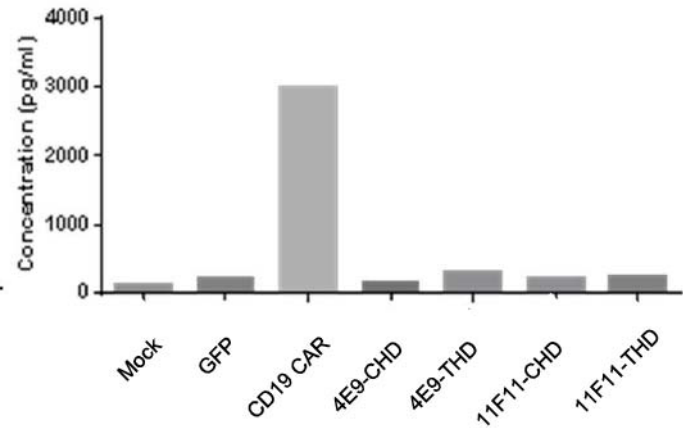
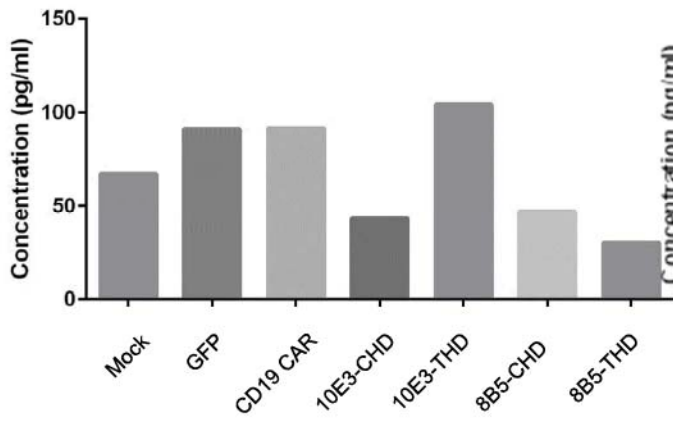
FIG. 3

FIG. 4ANamalwa IFN γ **FIG. 4B**Namalwa IFN γ **FIG. 4C**

Namalwa IL-2

**FIG. 4D**

Namalwa IL-2

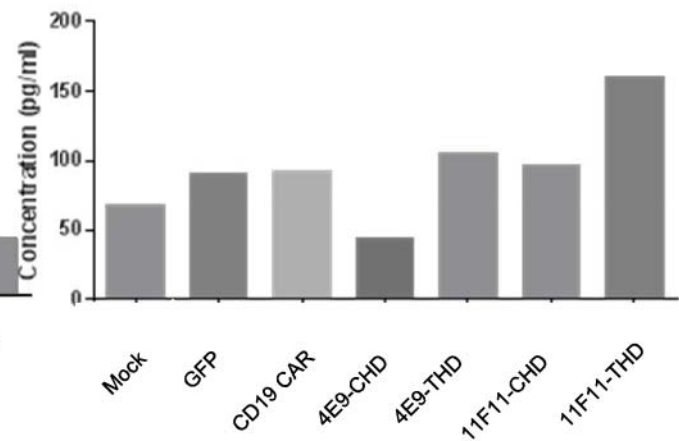
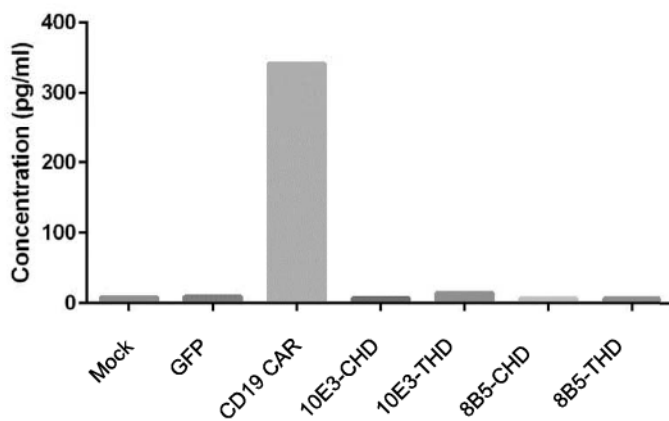
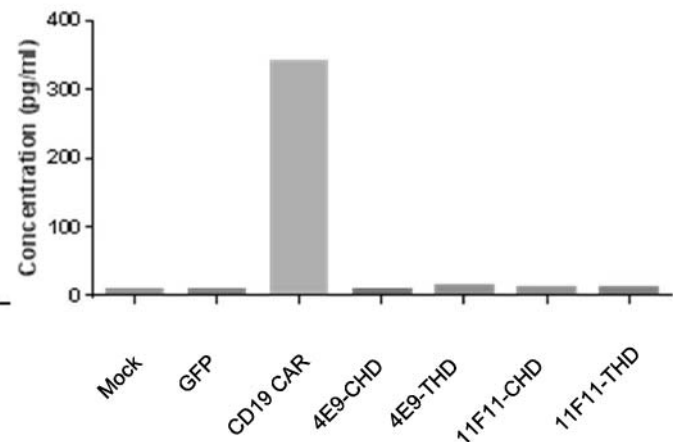
**FIG. 4E**Namalwa TNF α **FIG. 4F**Namalwa TNF α 

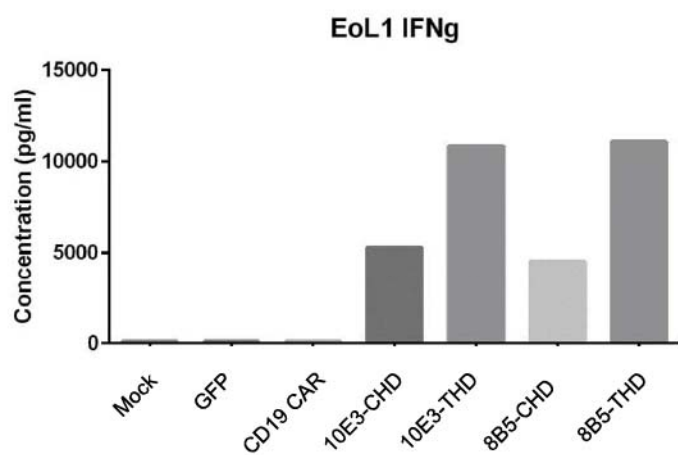
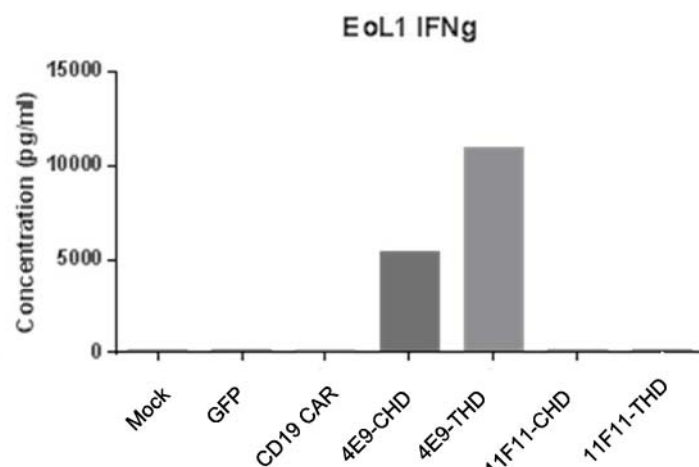
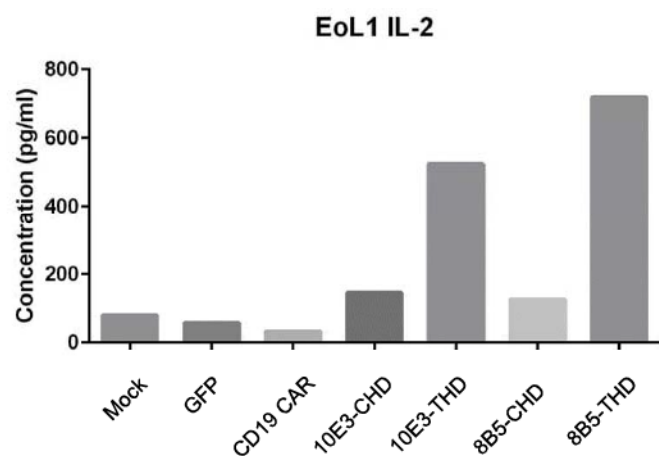
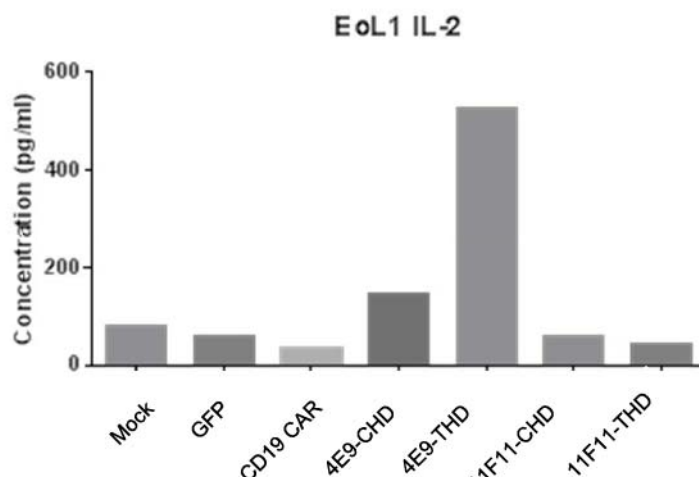
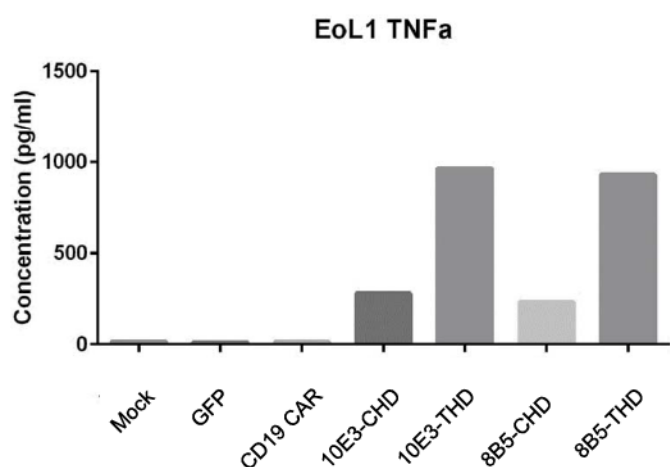
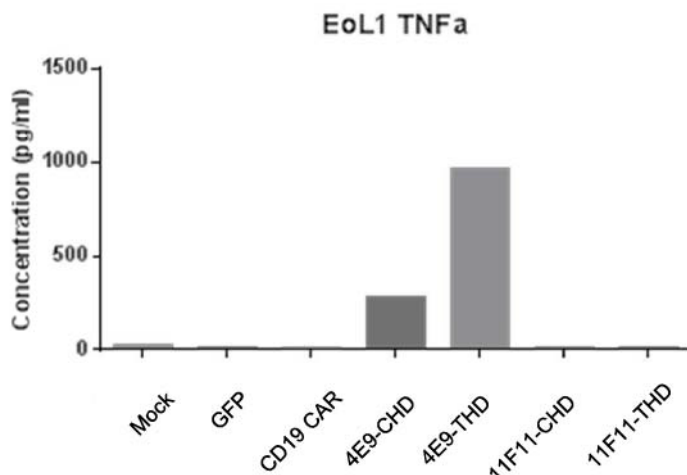
FIG. 4G**FIG. 4H****FIG. 4I****FIG. 4J****FIG. 4K****FIG. 4L**

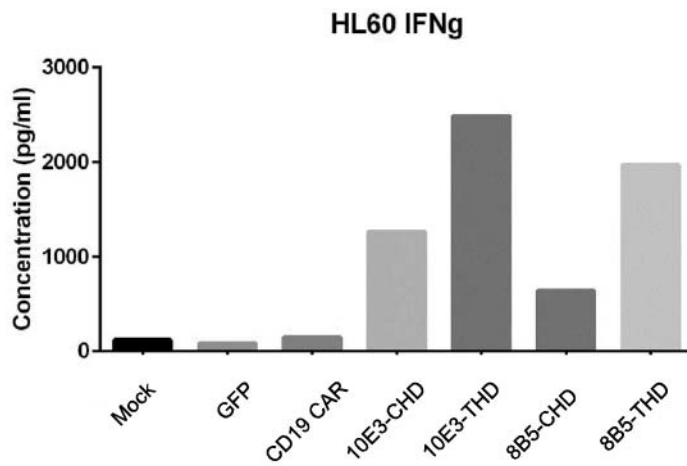
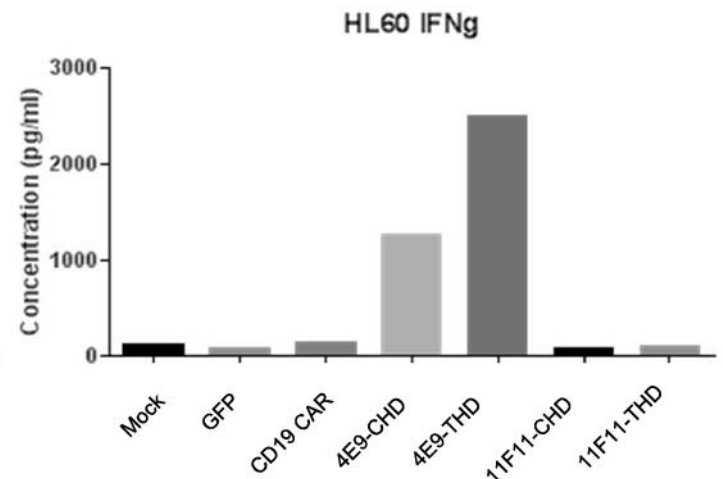
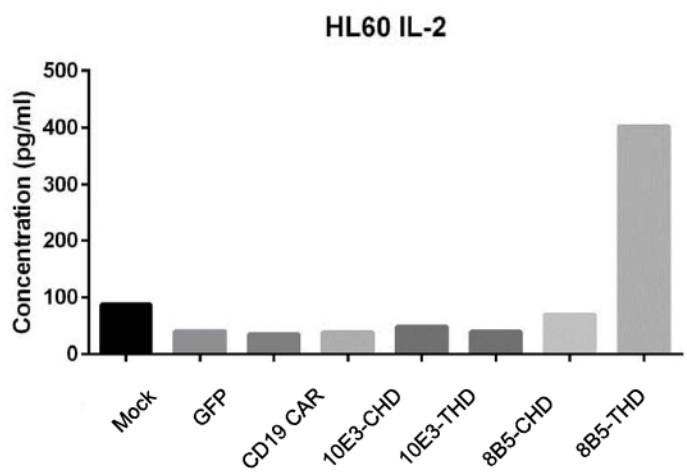
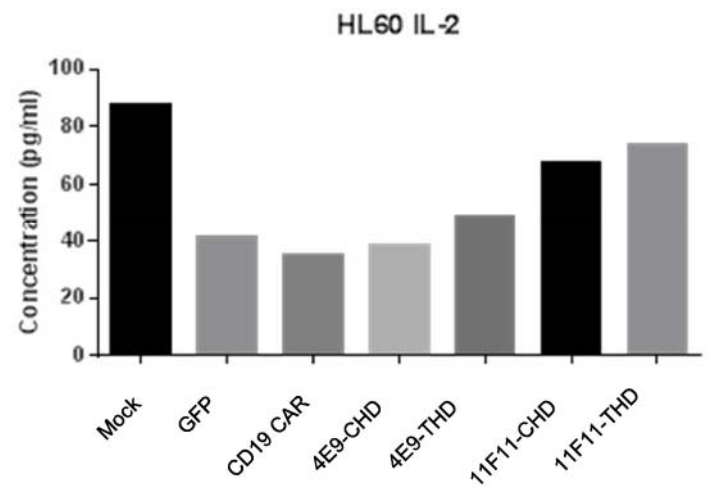
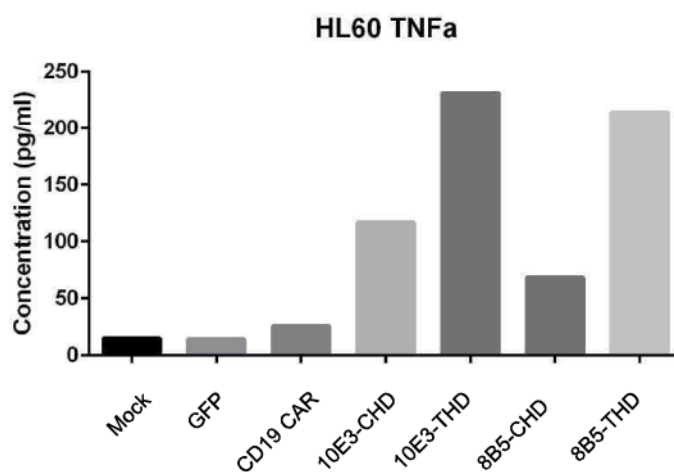
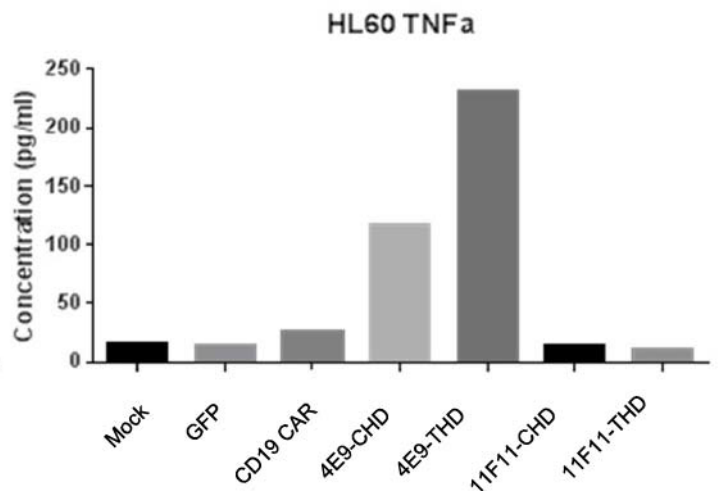
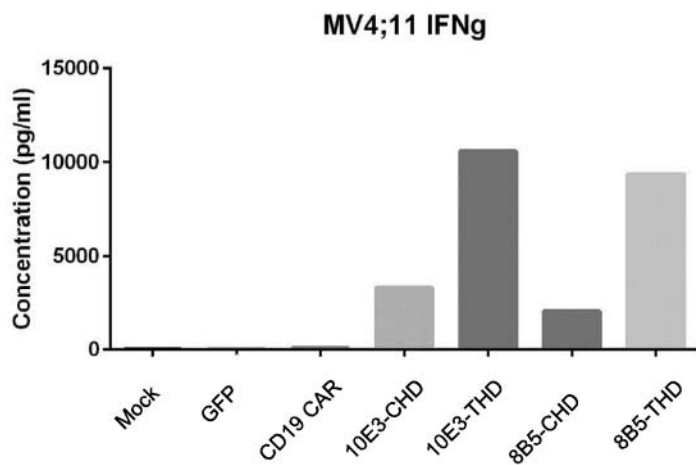
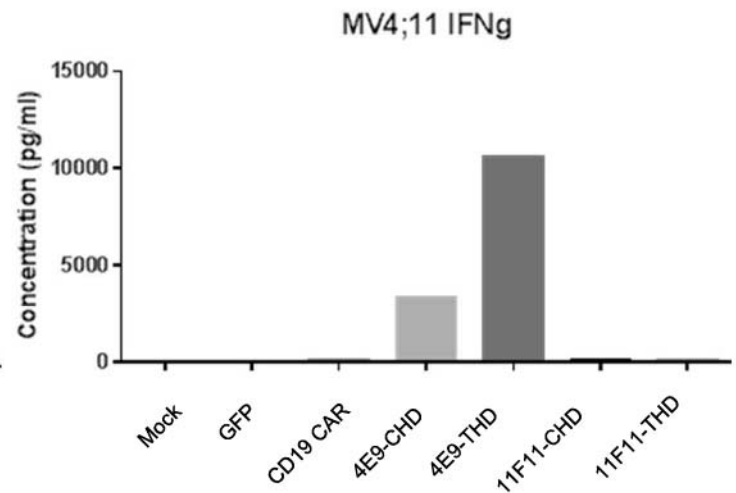
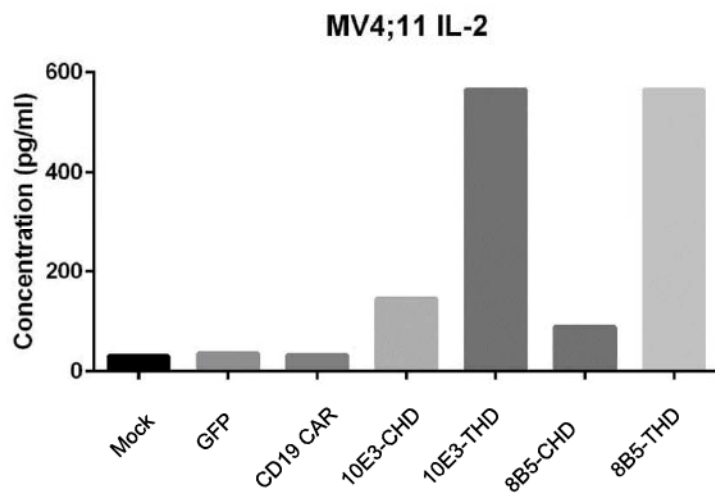
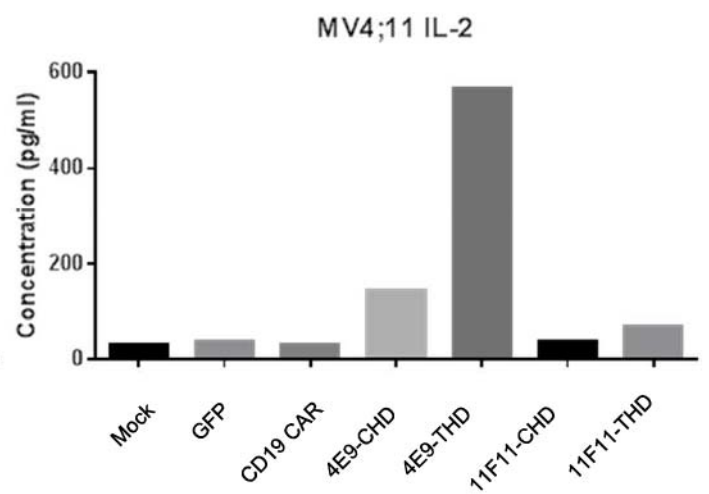
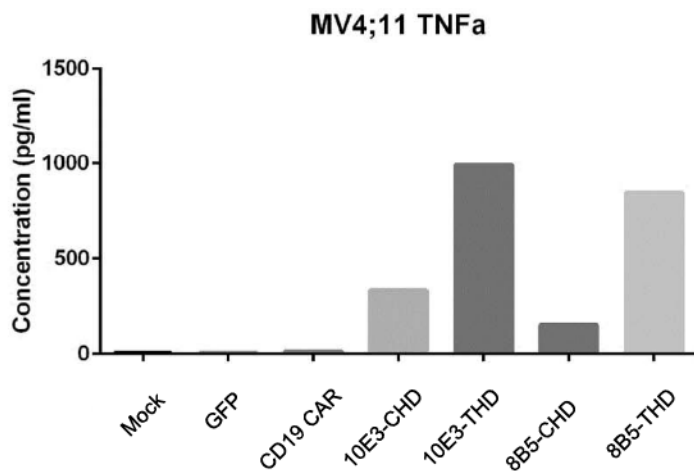
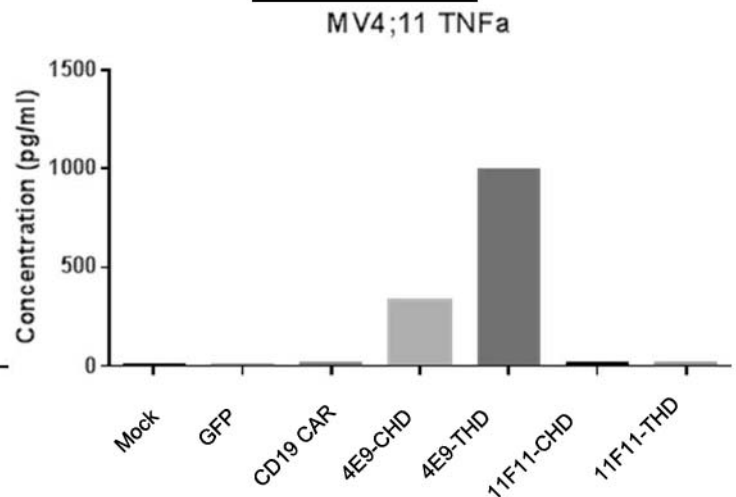
FIG. 4M**FIG. 4N****FIG. 4O****FIG. 4P****FIG. 4Q****FIG. 4R**

FIG. 4S**FIG. 4T****FIG. 4U****FIG. 4V****FIG. 4W****FIG. 4X**

Namalwa

FIG. 5A

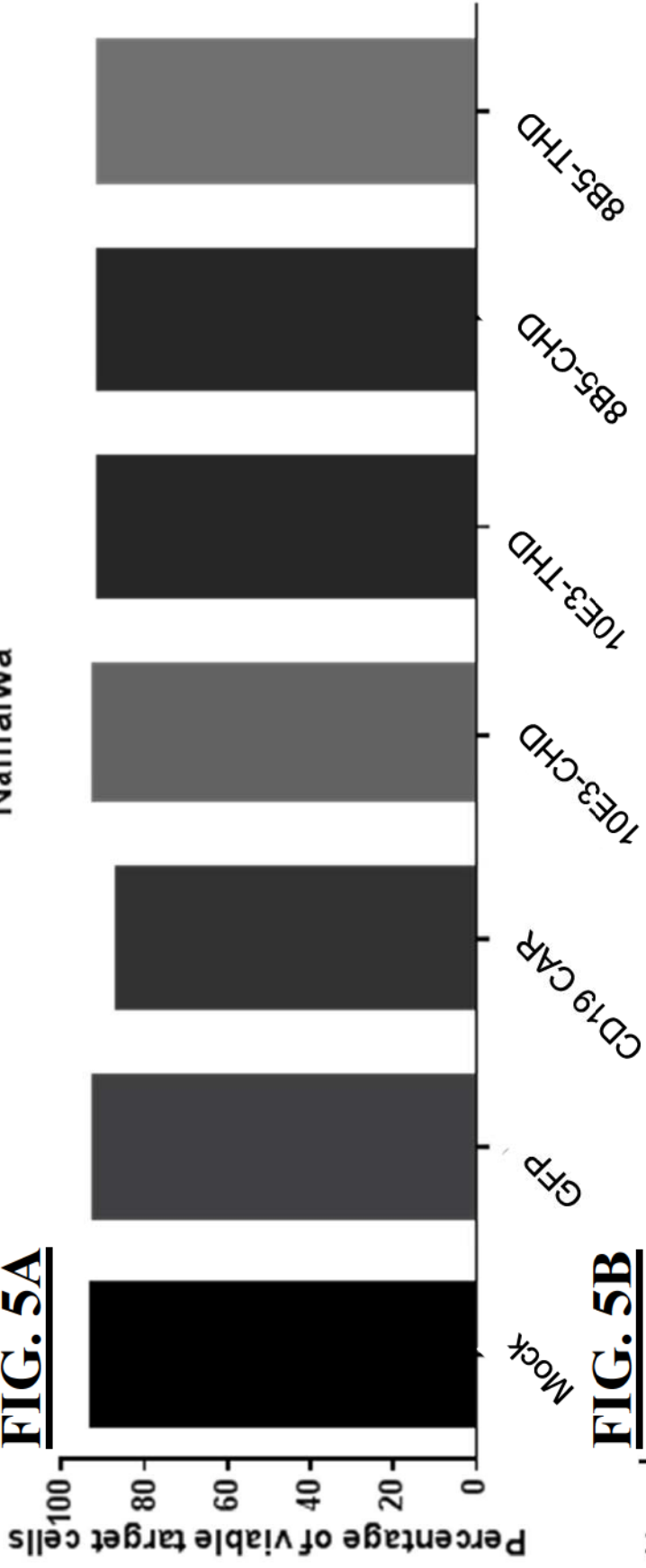


FIG. 5B

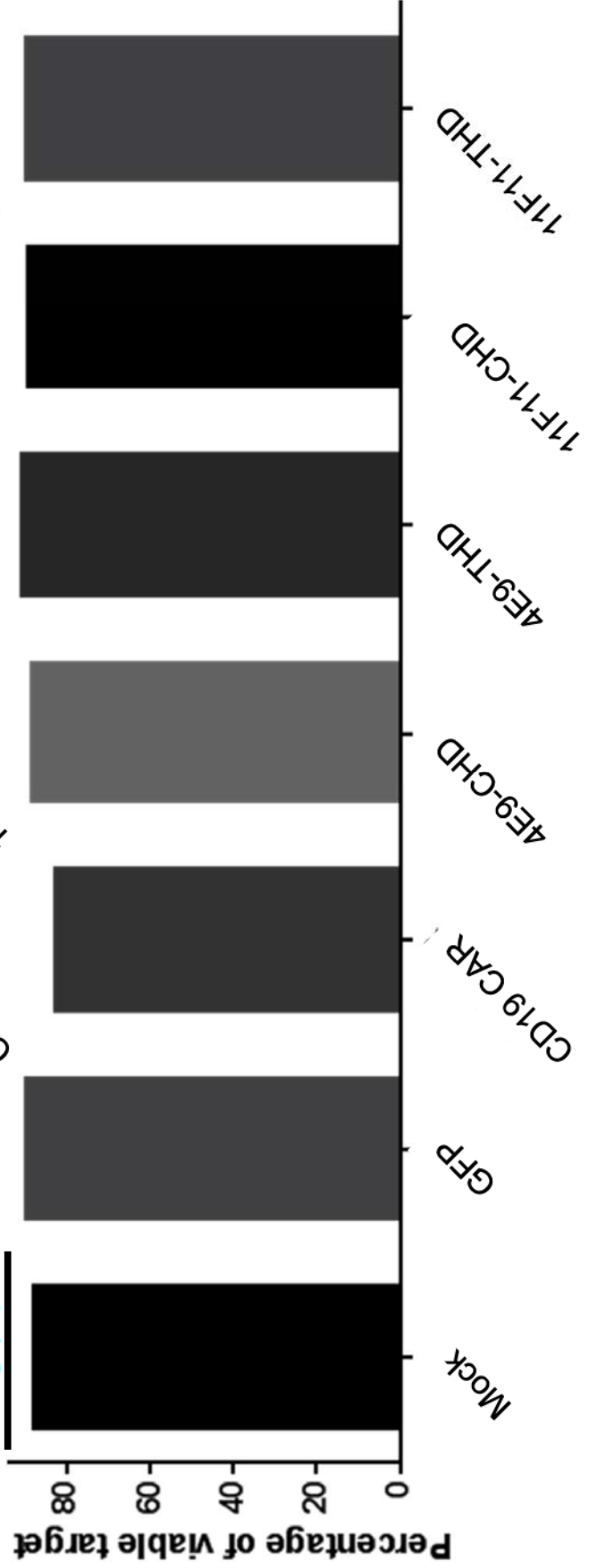


FIG. 5C

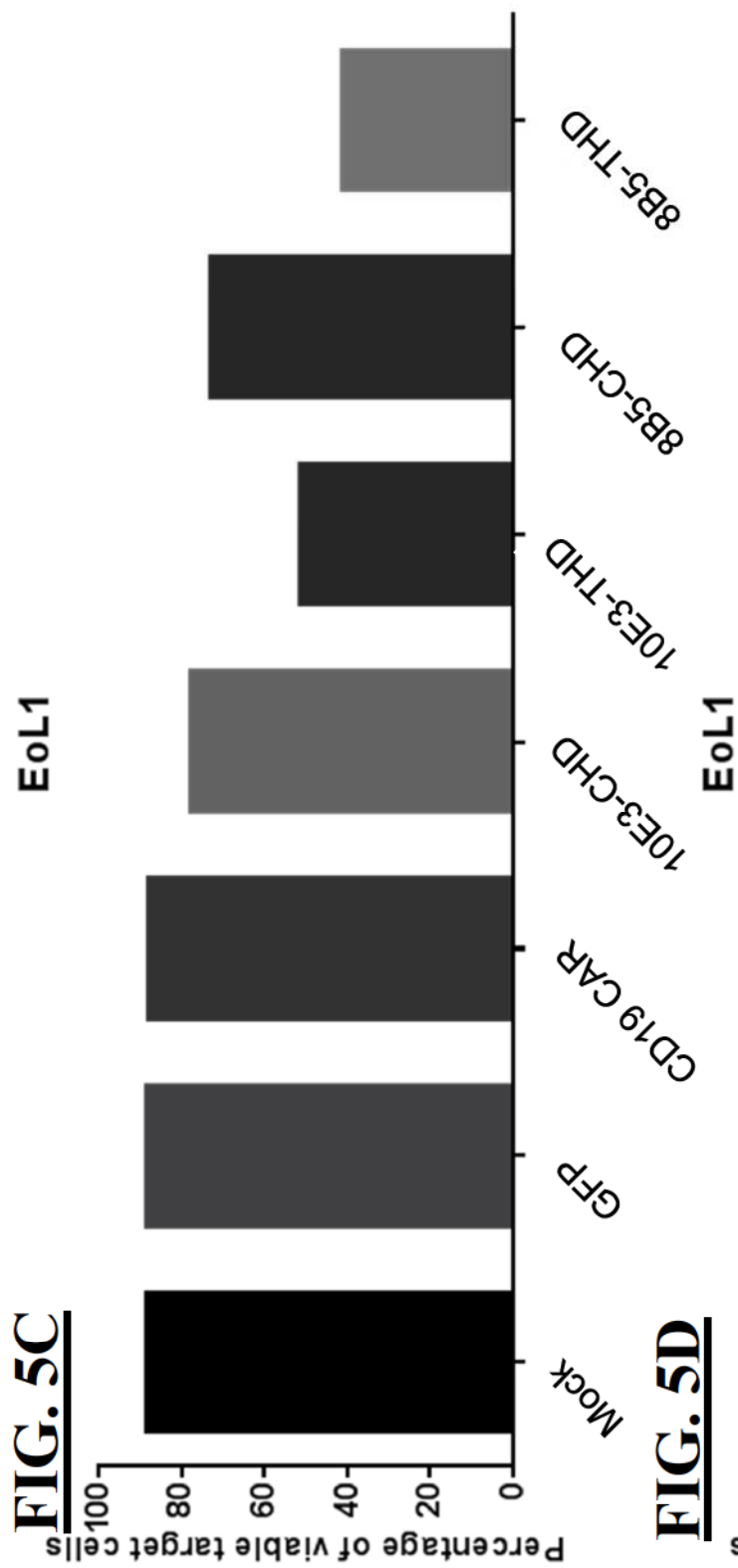


FIG. 5D

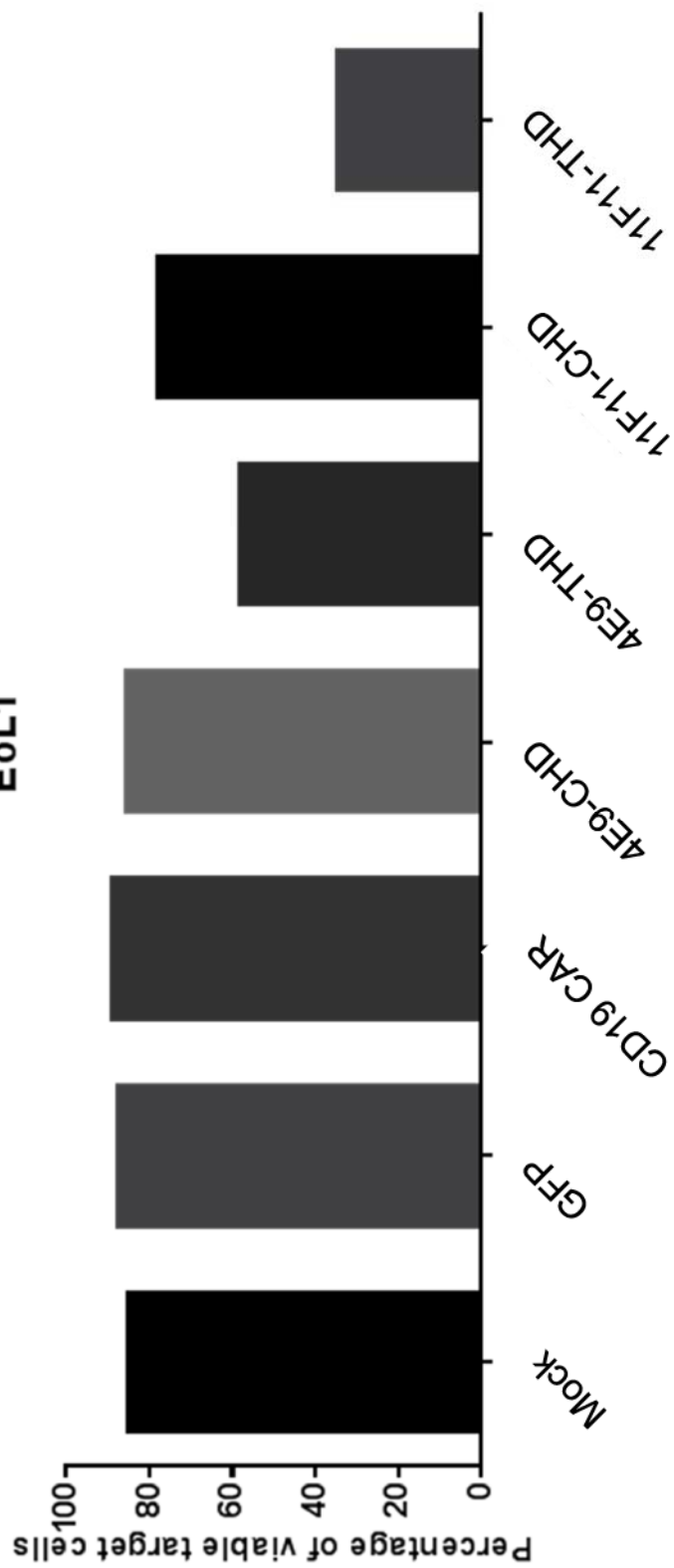


FIG. 5E

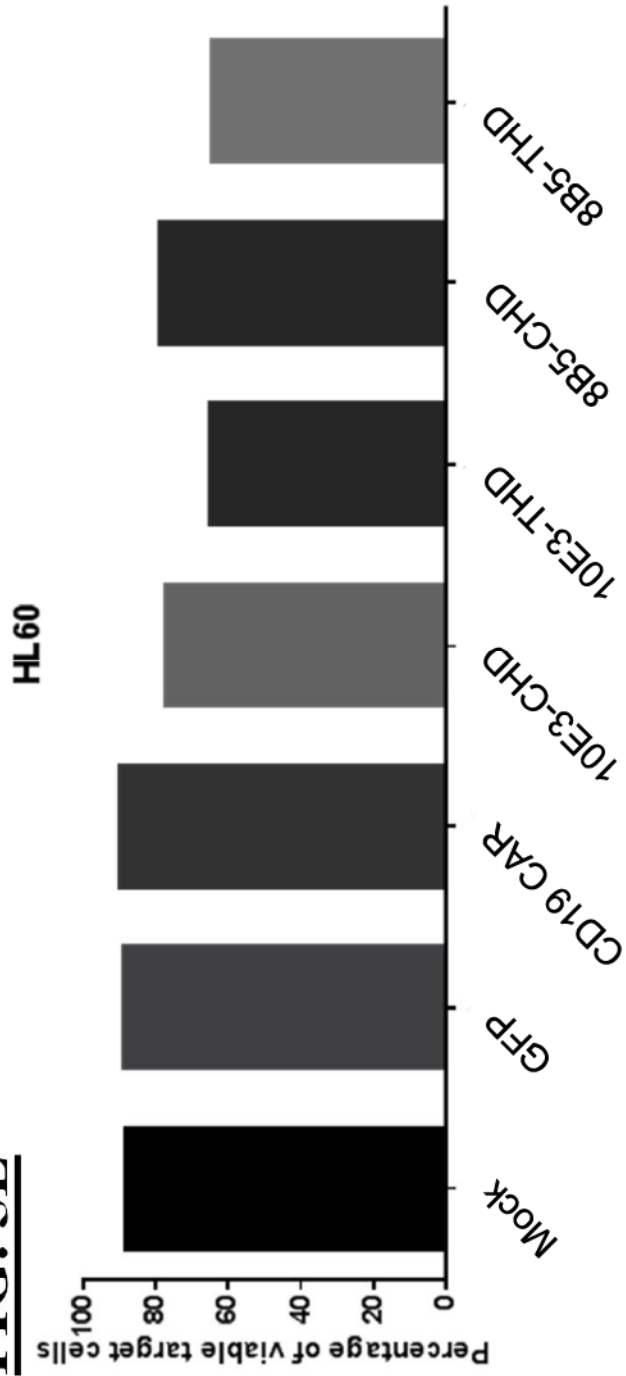


FIG. 5F

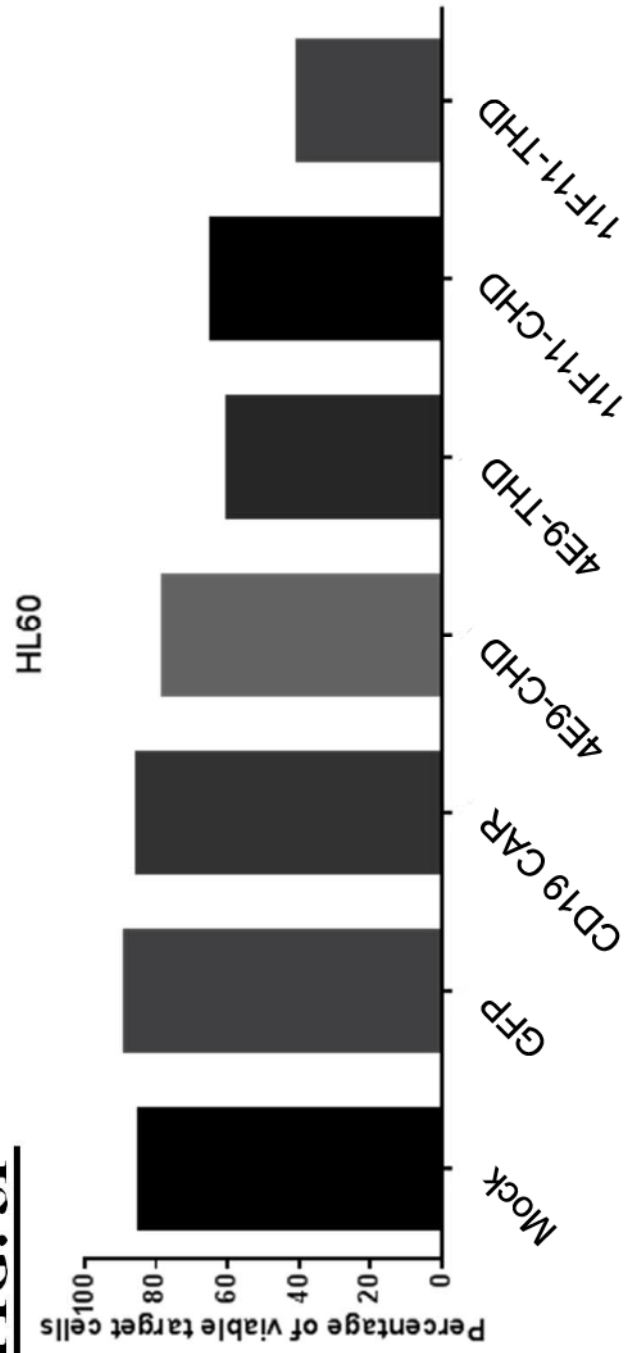


FIG. 5G

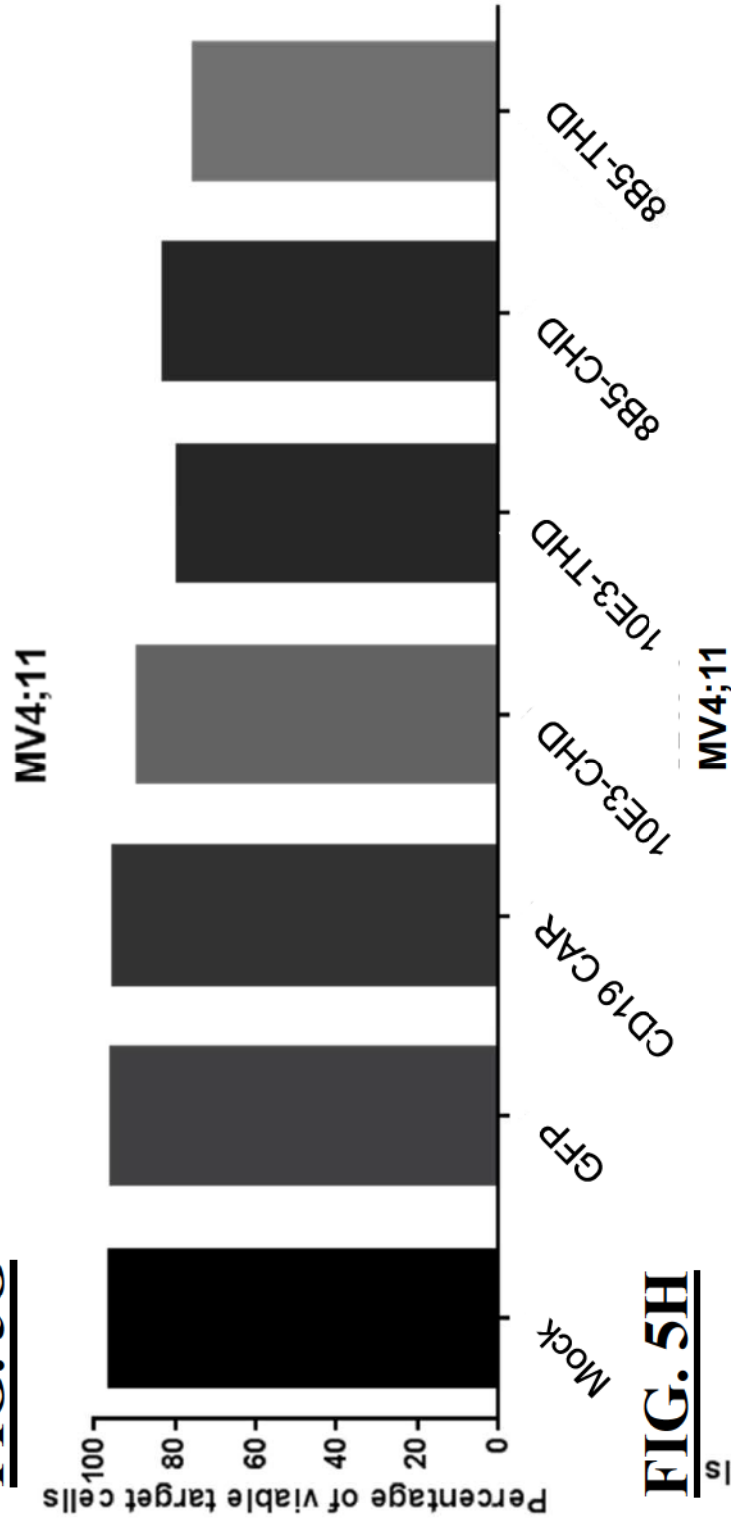
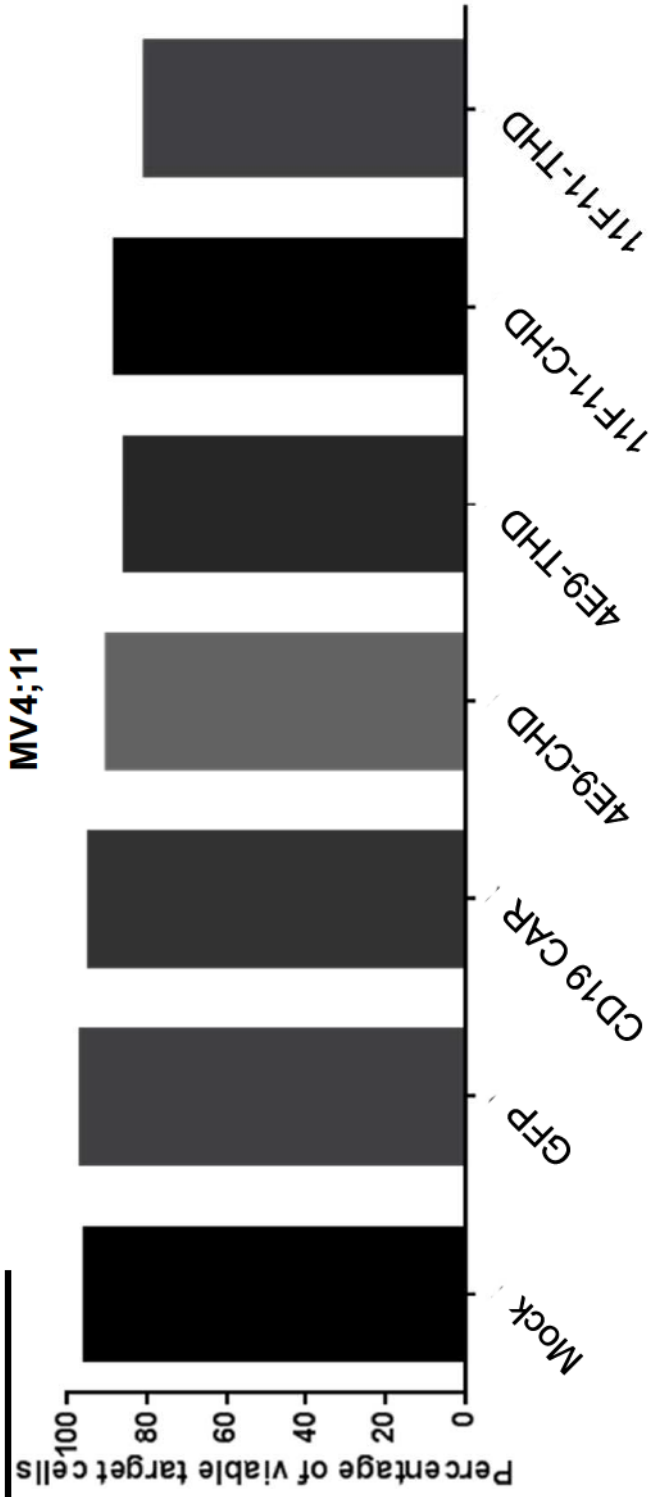
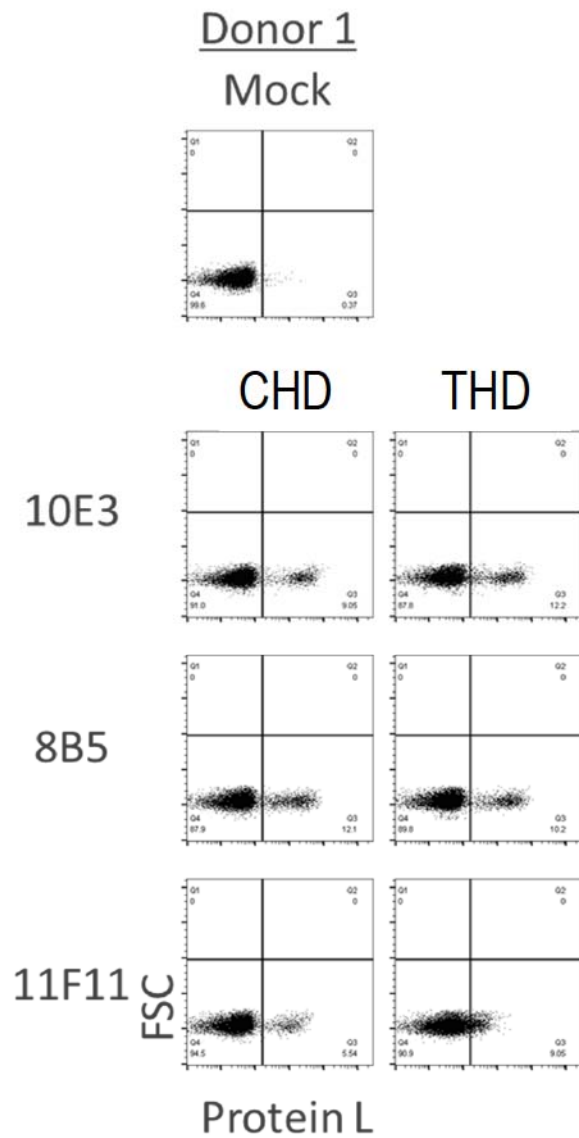
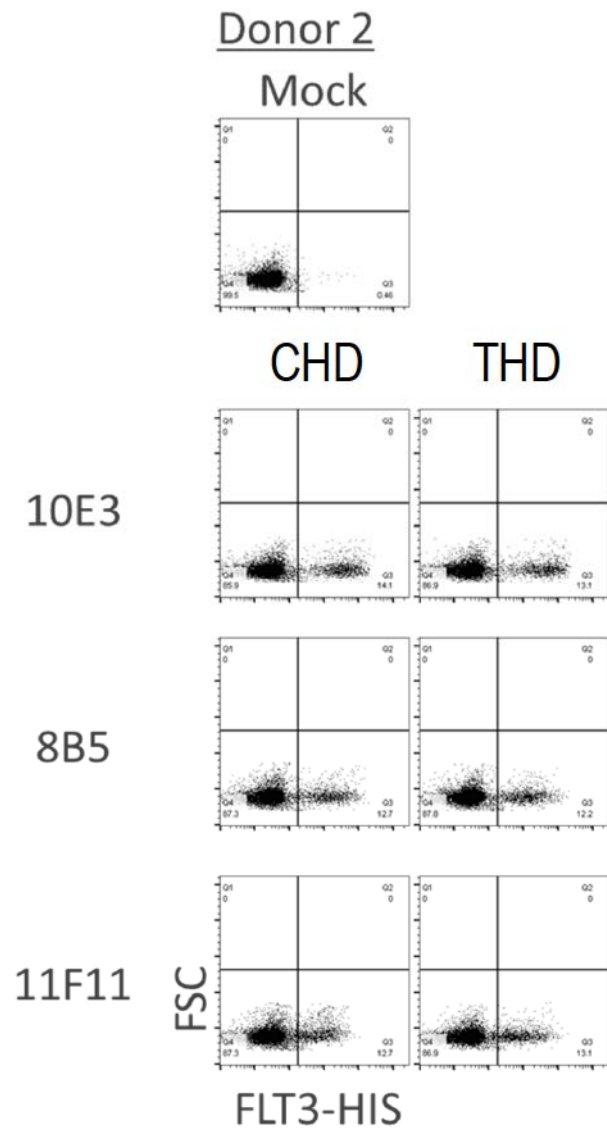
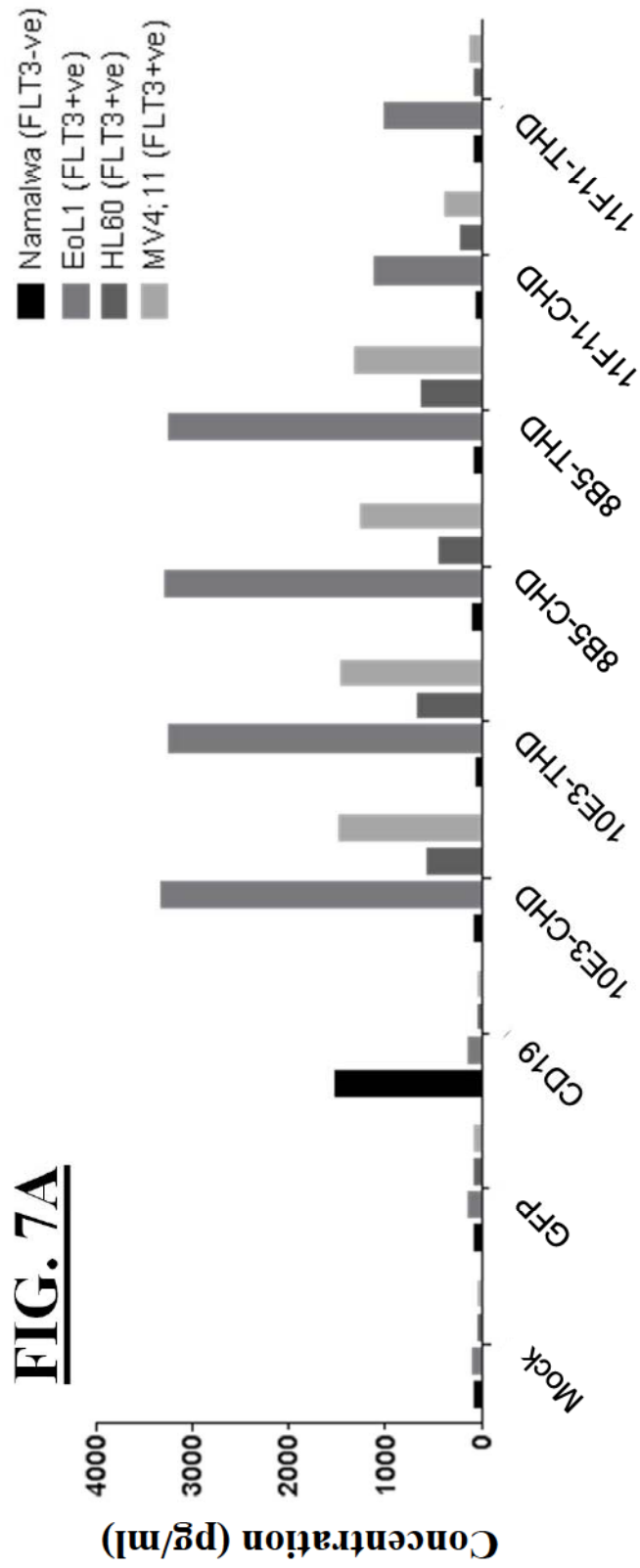
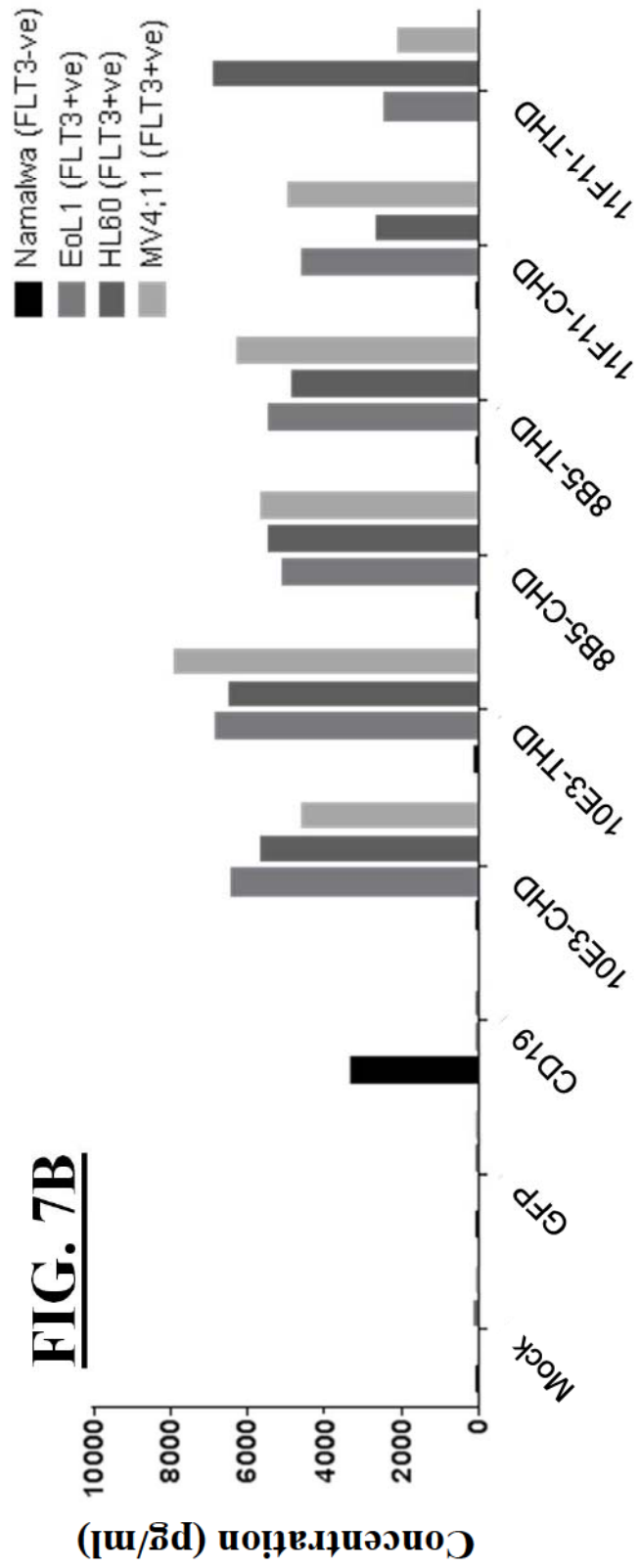
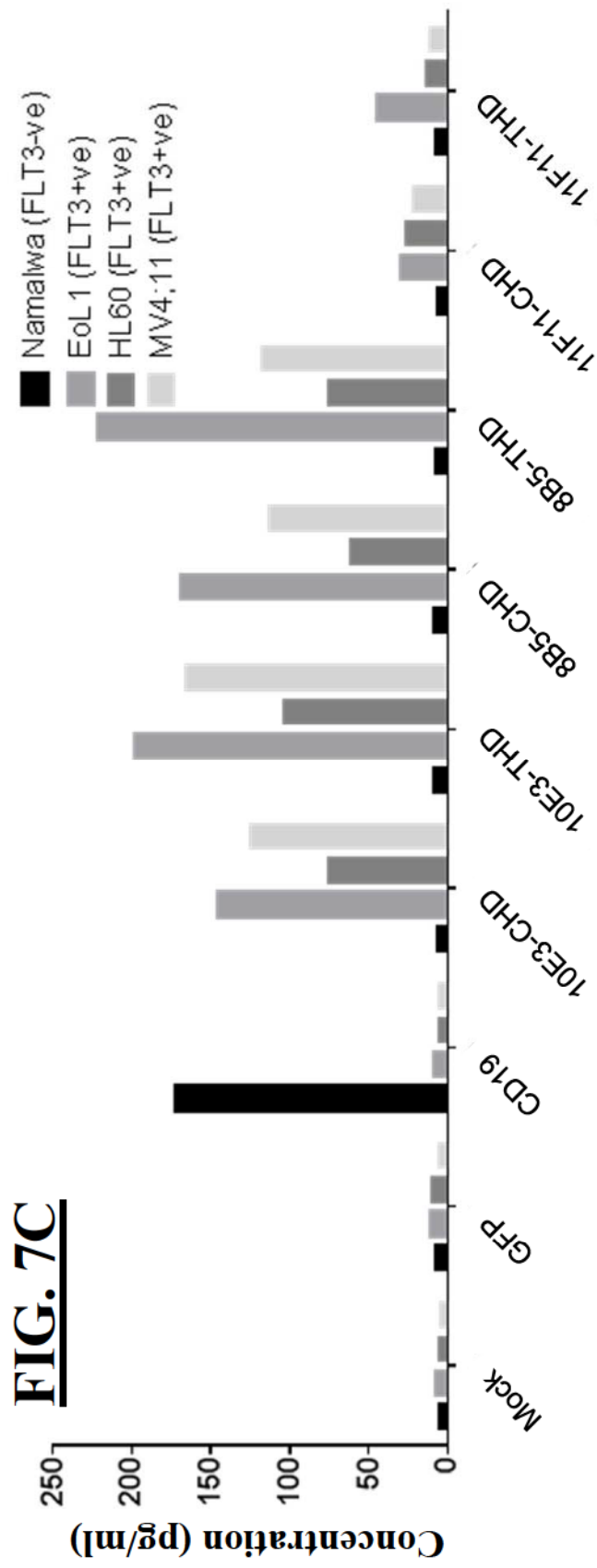
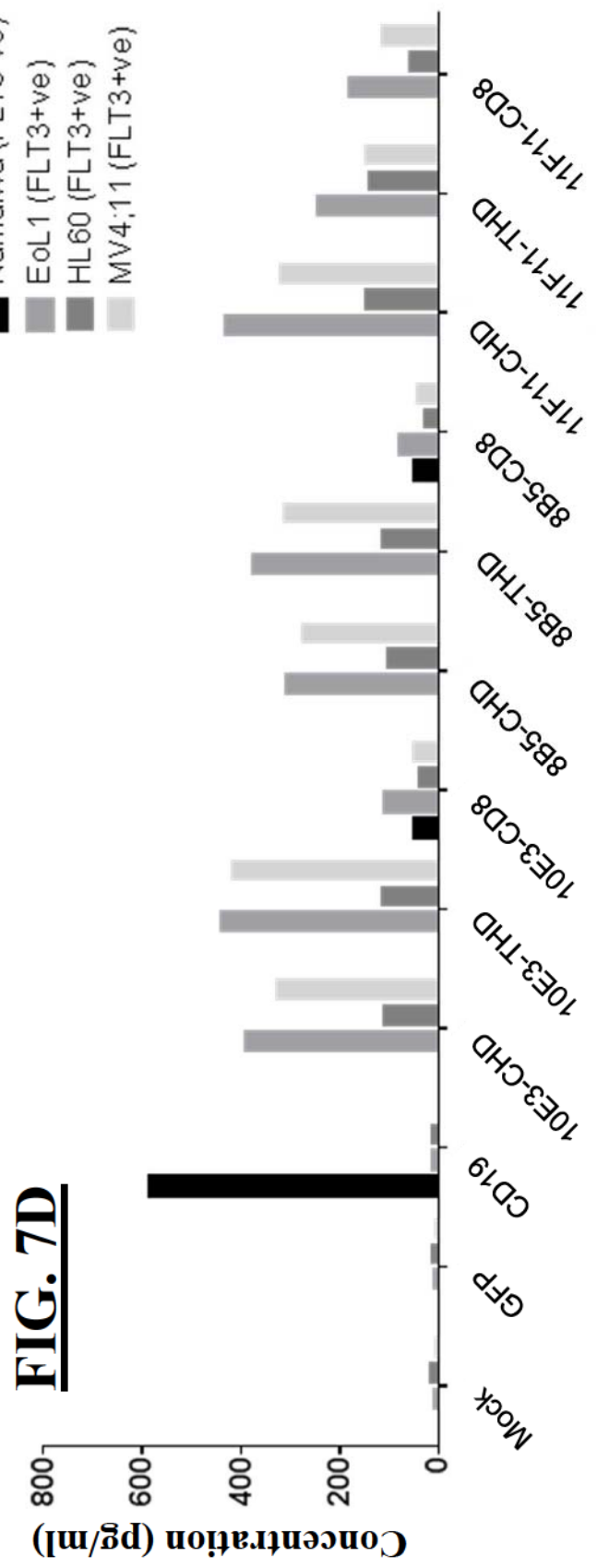


FIG. 6A**FIG. 6B**





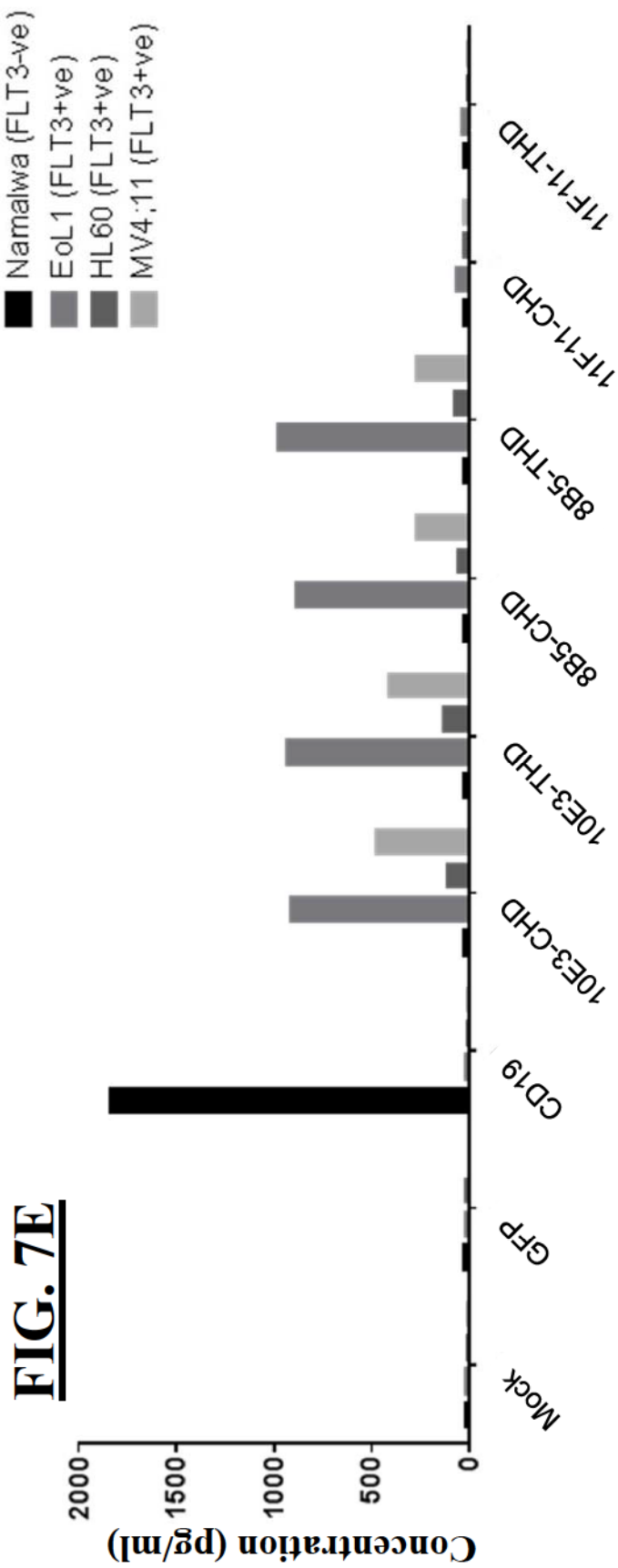
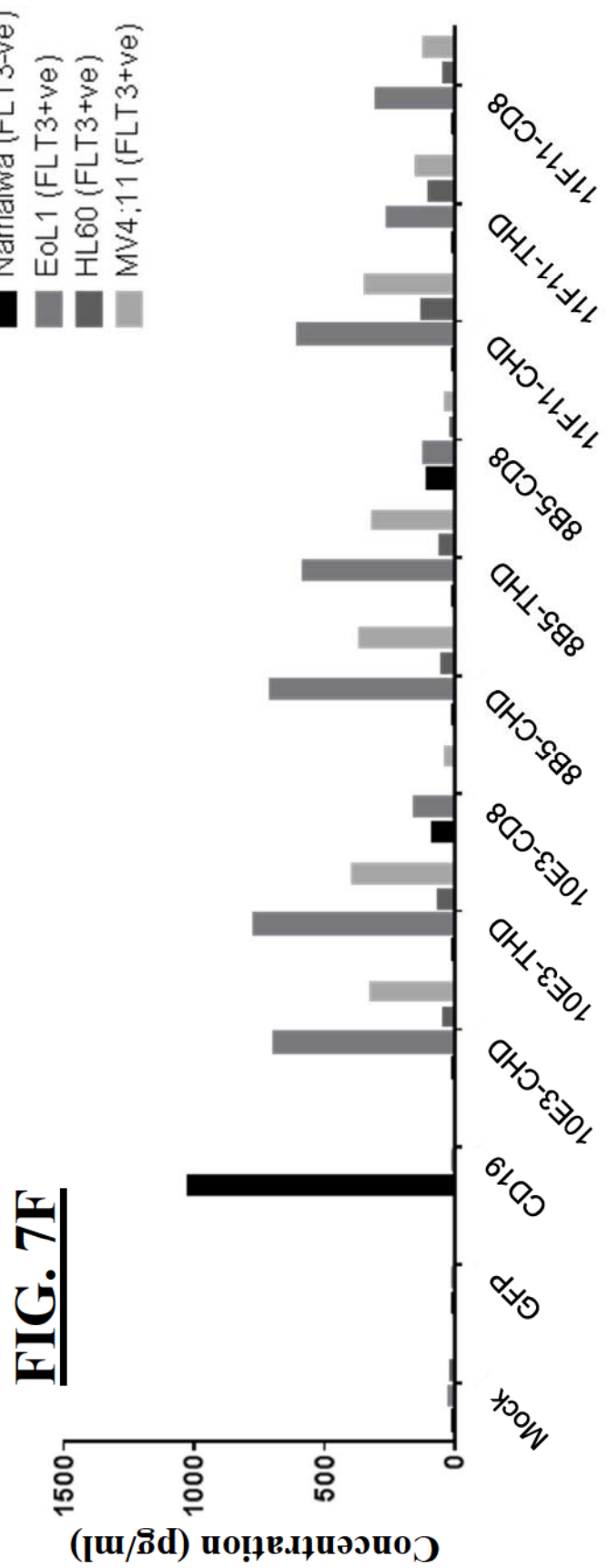


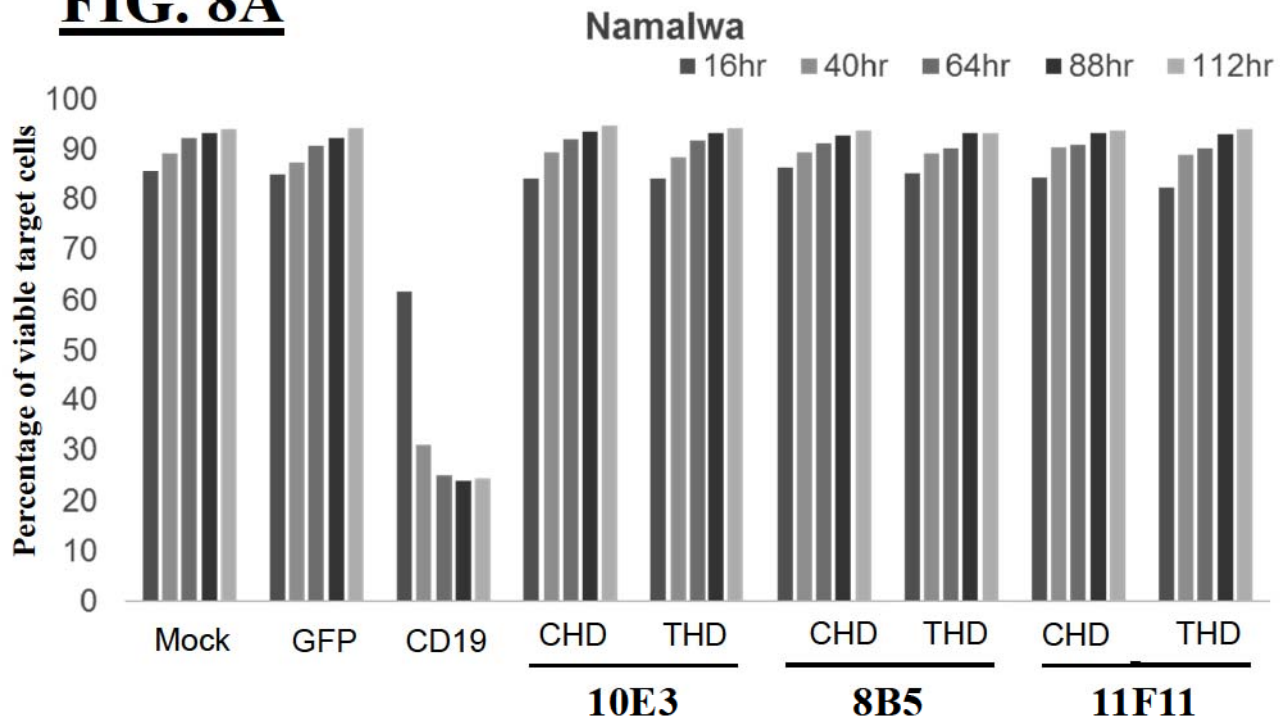
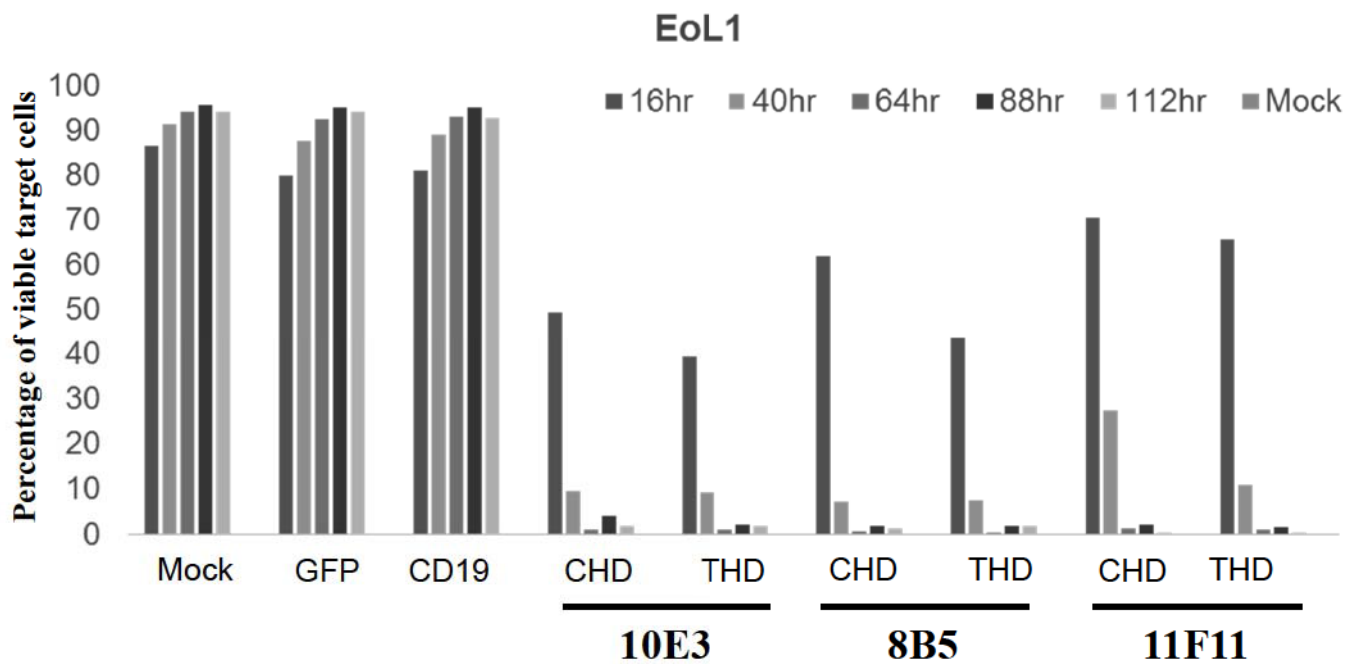
FIG. 8A**FIG. 8B**

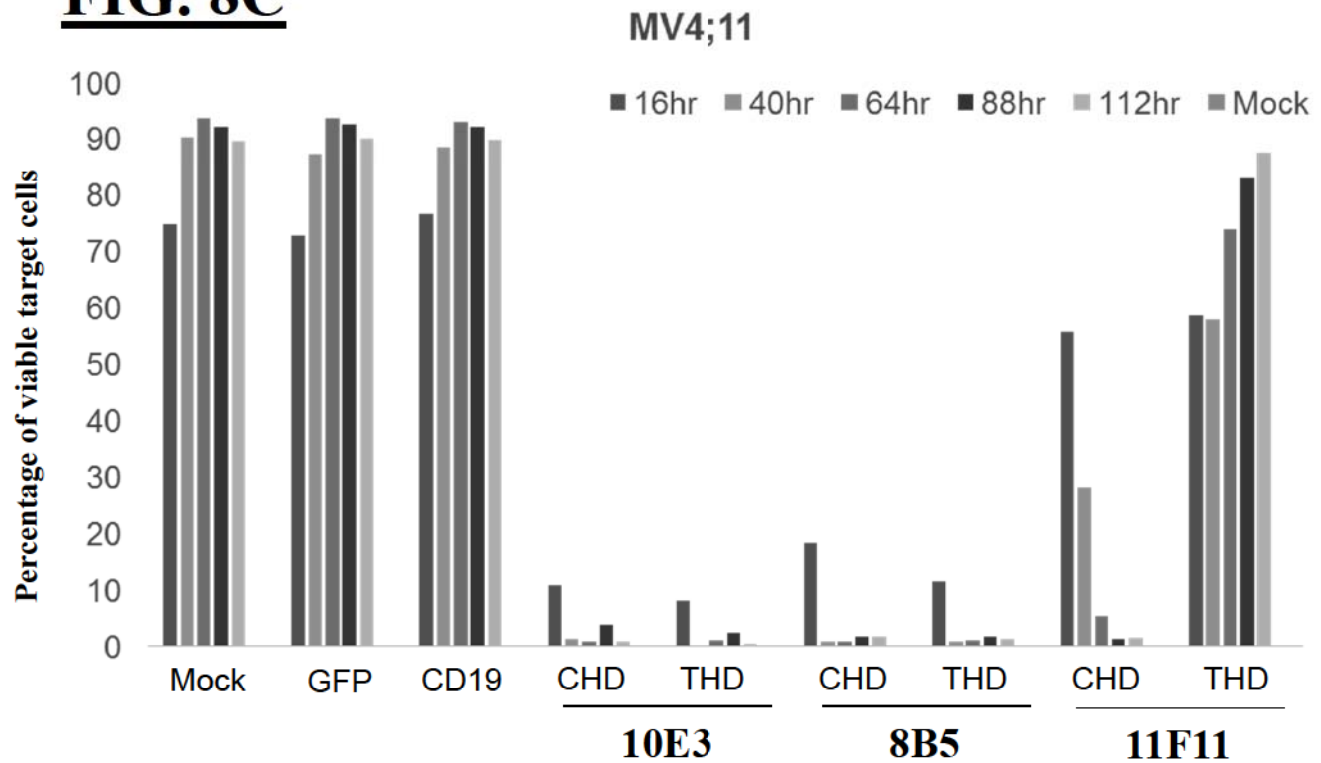
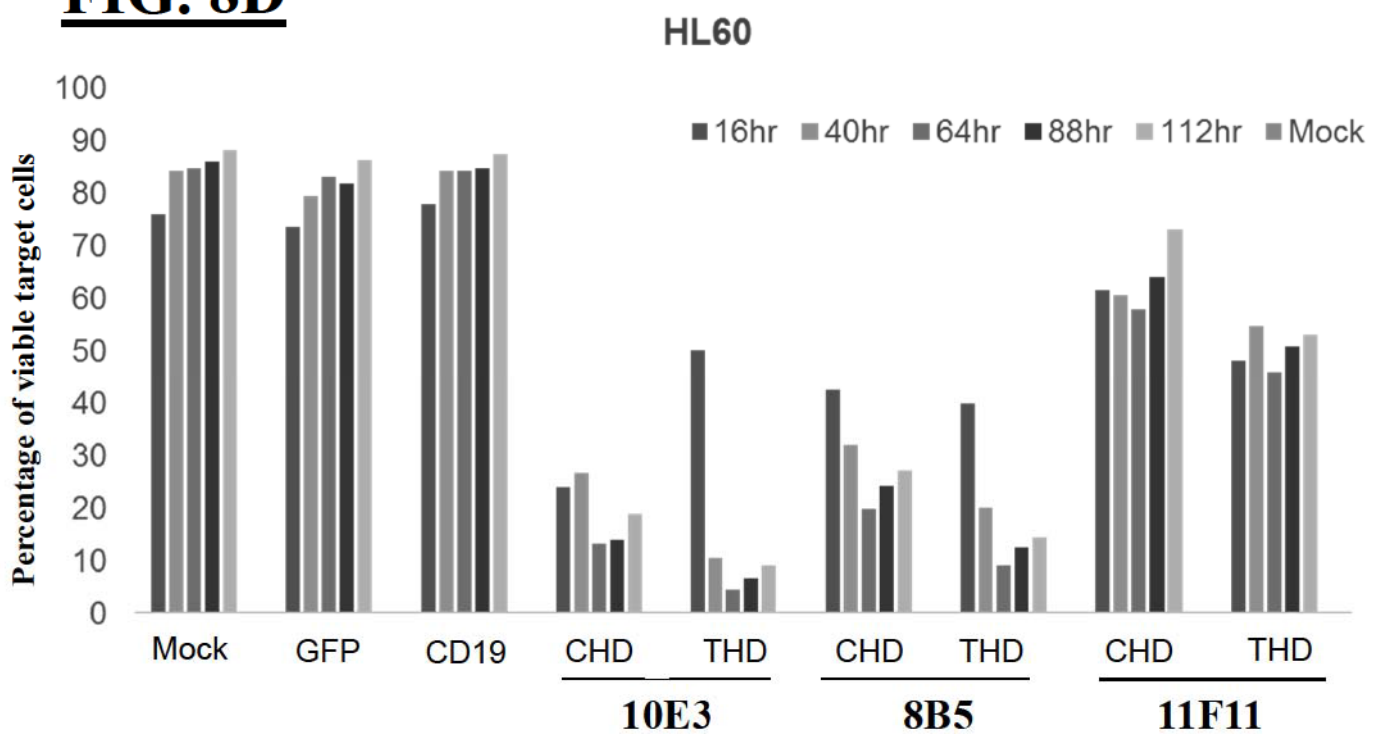
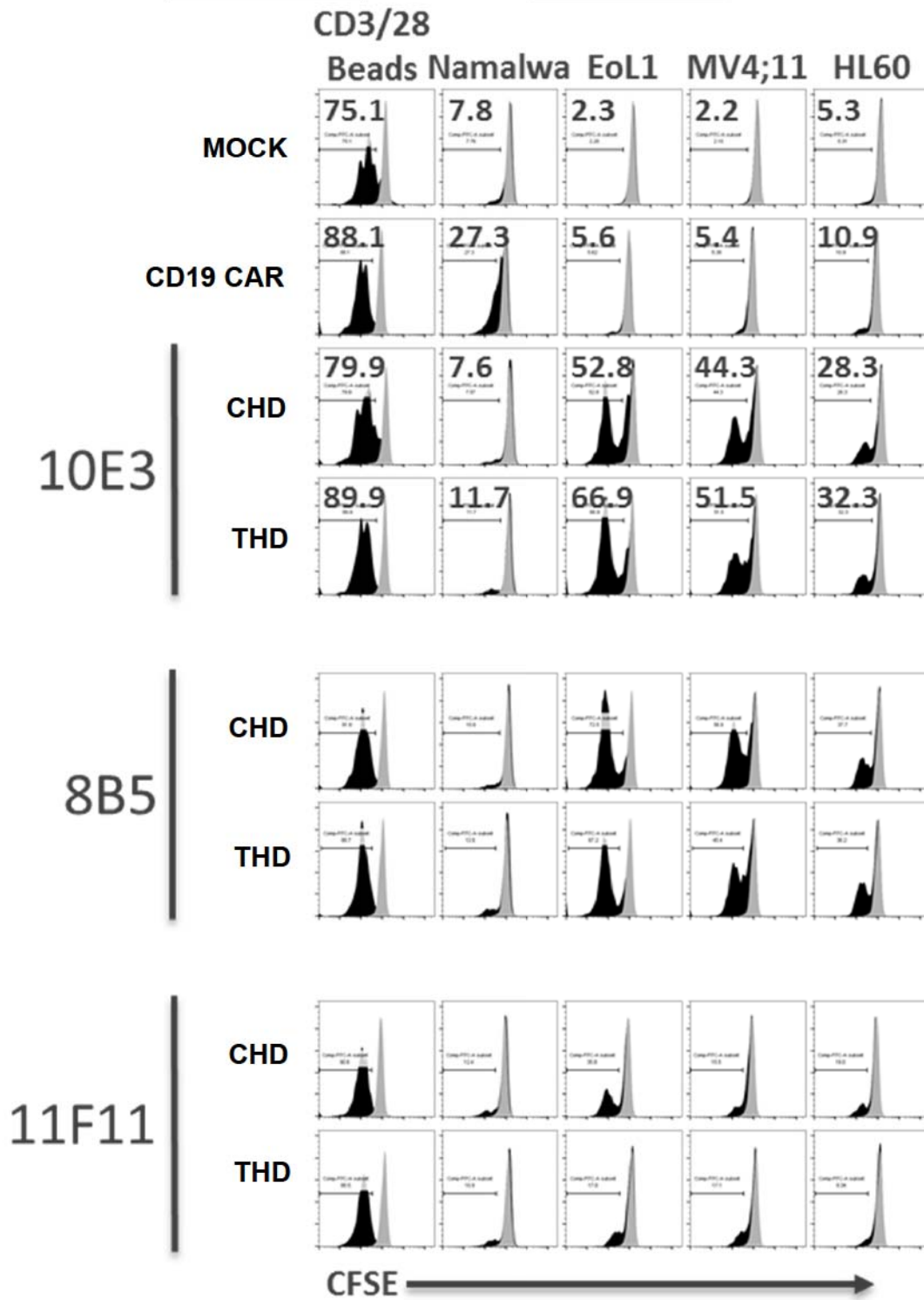
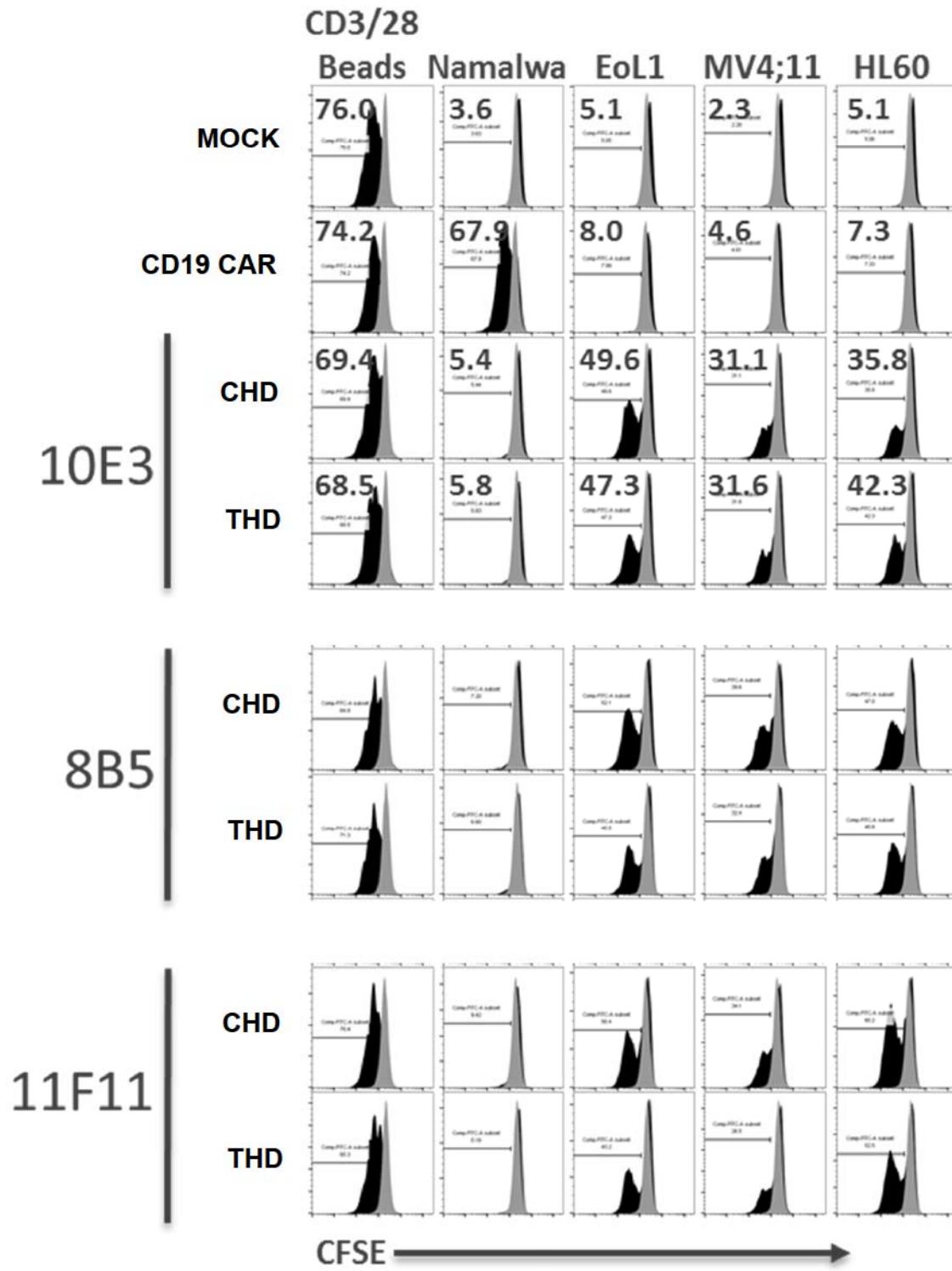
FIG. 8C**FIG. 8D**

FIG. 9A**Donor 1**

■ Unstimulated T cells ■ T cells + indicated stimulus

FIG. 9B**Donor 2**

■ Unstimulated T cells ■ T cells + indicated stimulus

FIG. 10A

Mock

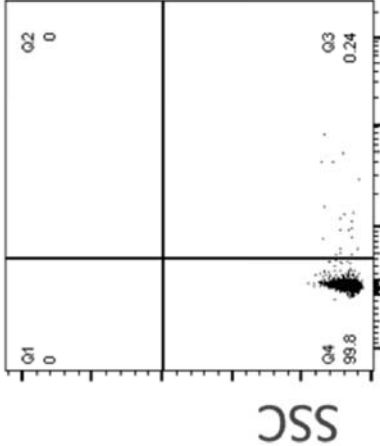


FIG. 10B

10E3-CHD

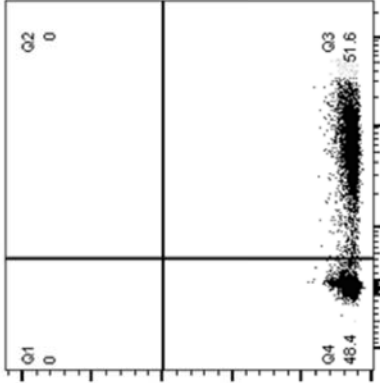


FIG. 10C

10E3-THD

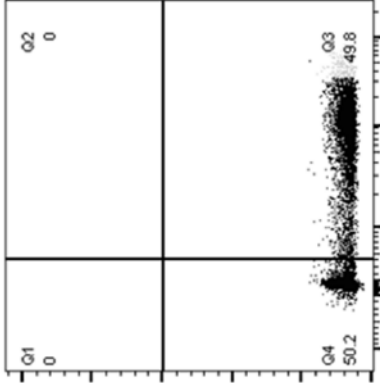


FIG. 10D

8B5-THD

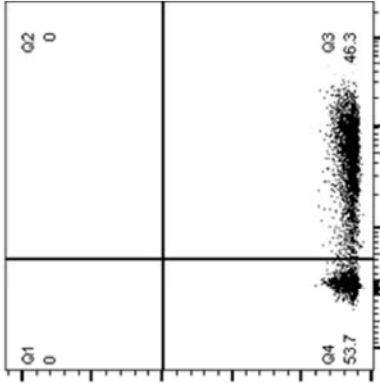


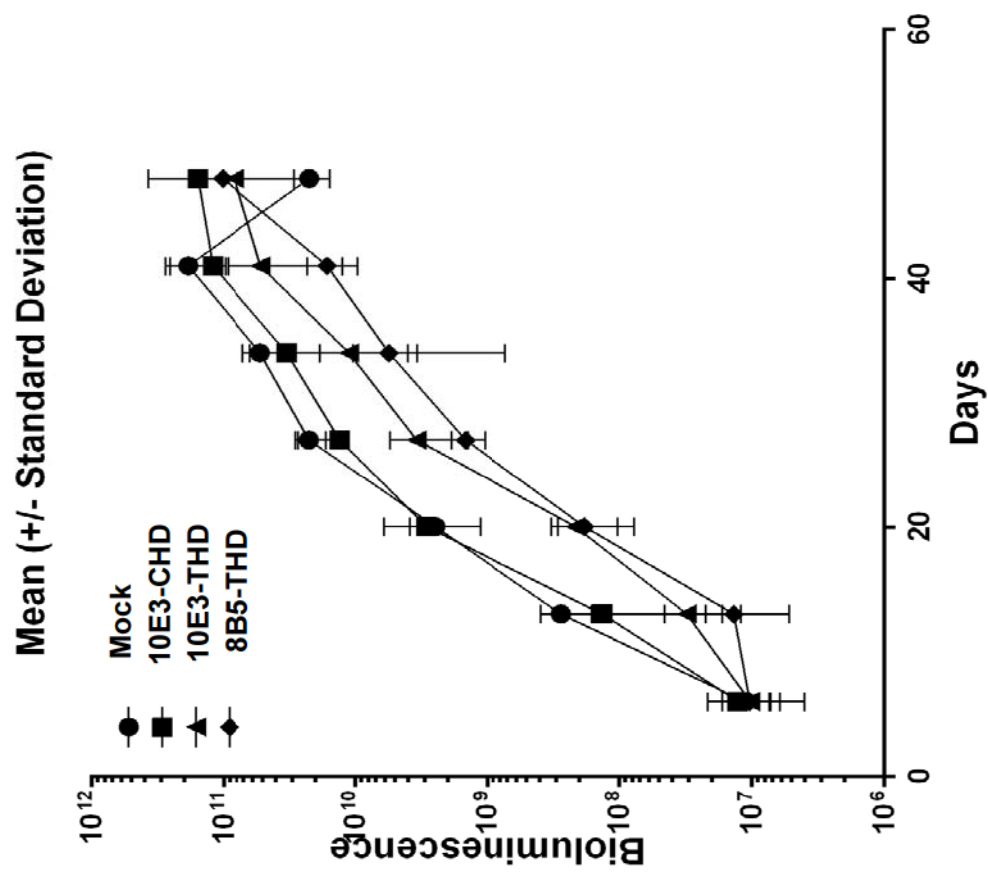
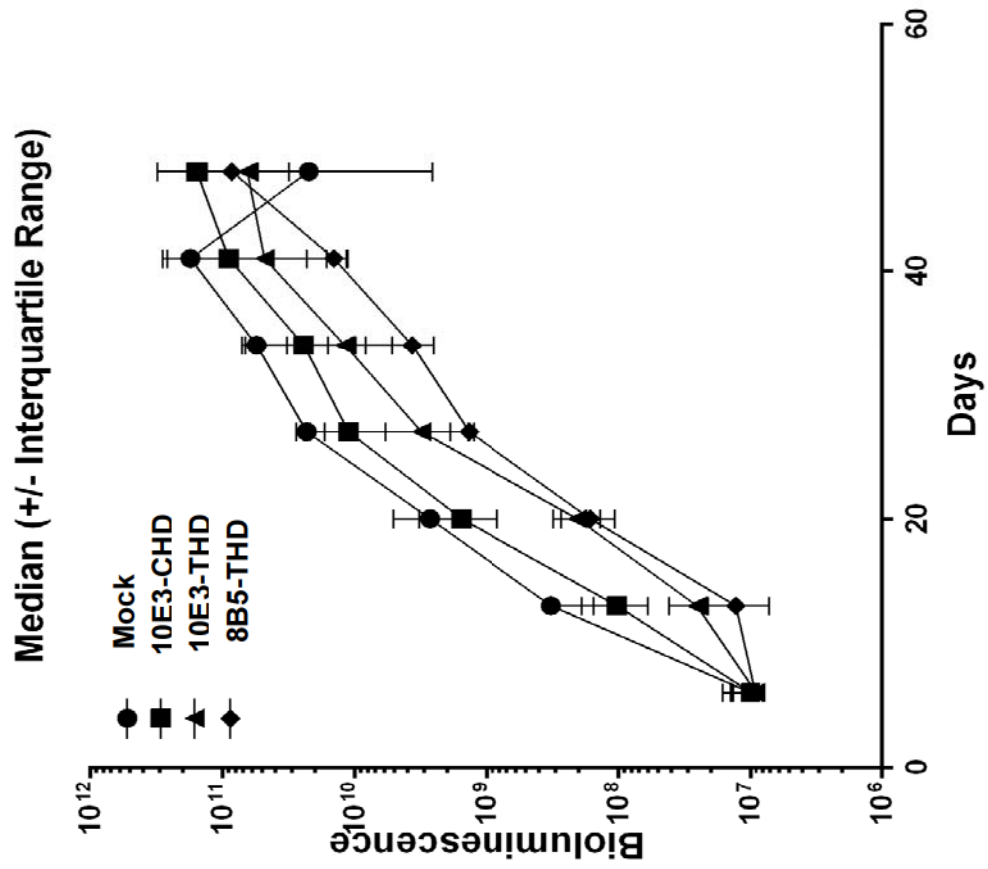
FIG. 10E**FIG. 10F**

FIG. 10G

Day	Mock vs 10E3-CHD	Mock vs 10E3-THD	Mock vs 8B5-THD	10E3-THD vs 8B5-THD
6	0.756	0.657	0.690	0.959
13	0.067	0.0004	0.0002	0.028
20	0.777	0.0022	0.0020	0.639
27	0.158	<0.0001	<0.0001	0.042
34	0.200	0.0004	0.0001	0.142
41	0.376	0.0072	0.0009	0.054

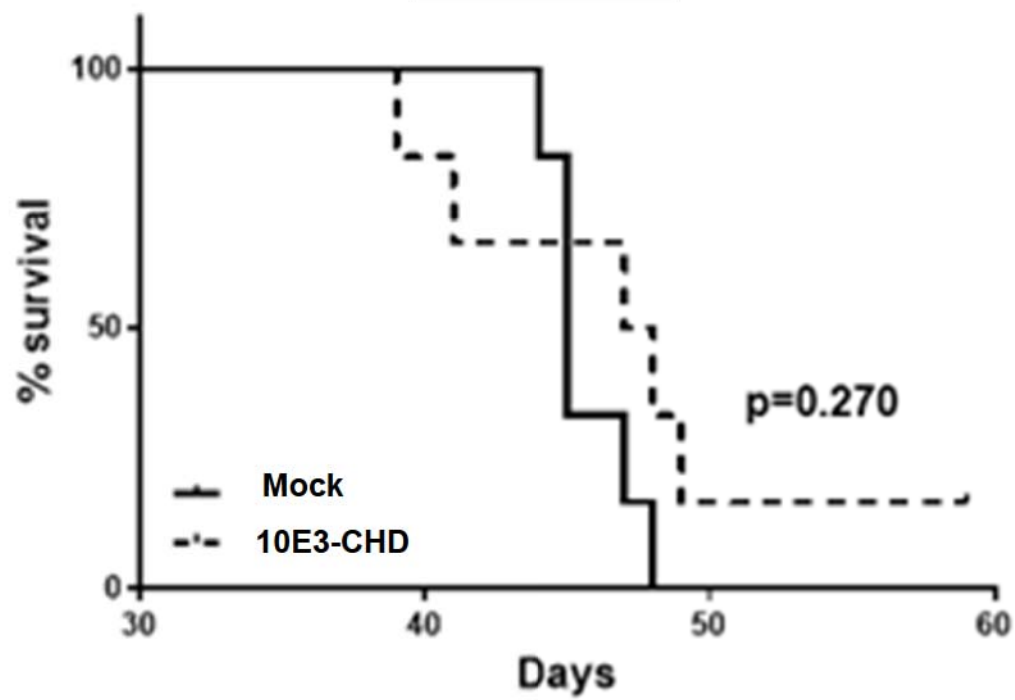
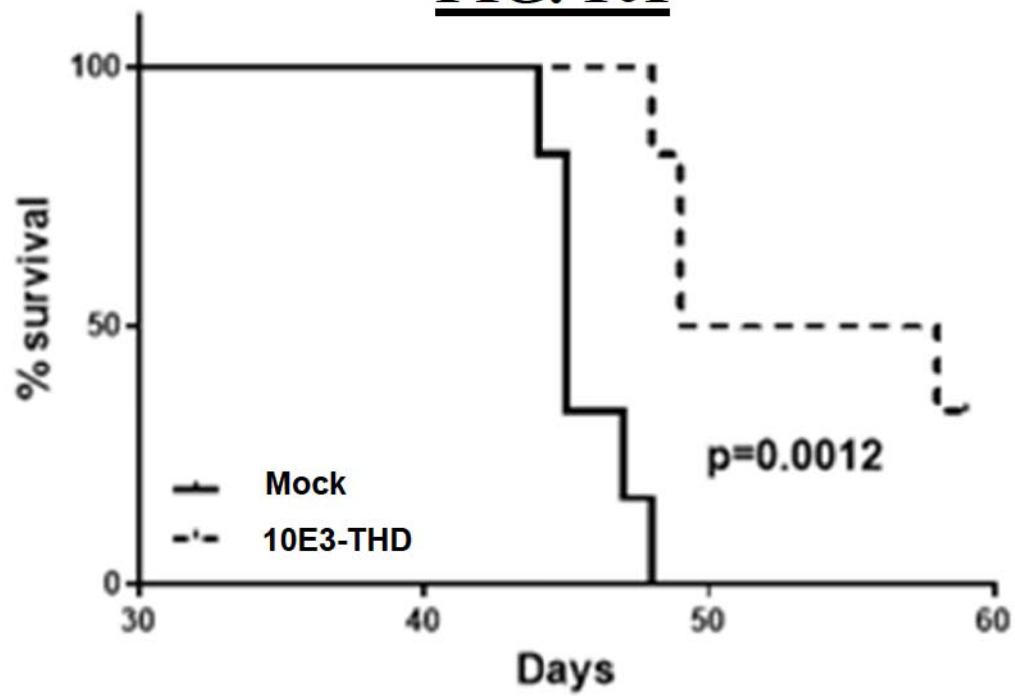
FIG. 10H**FIG. 10I**

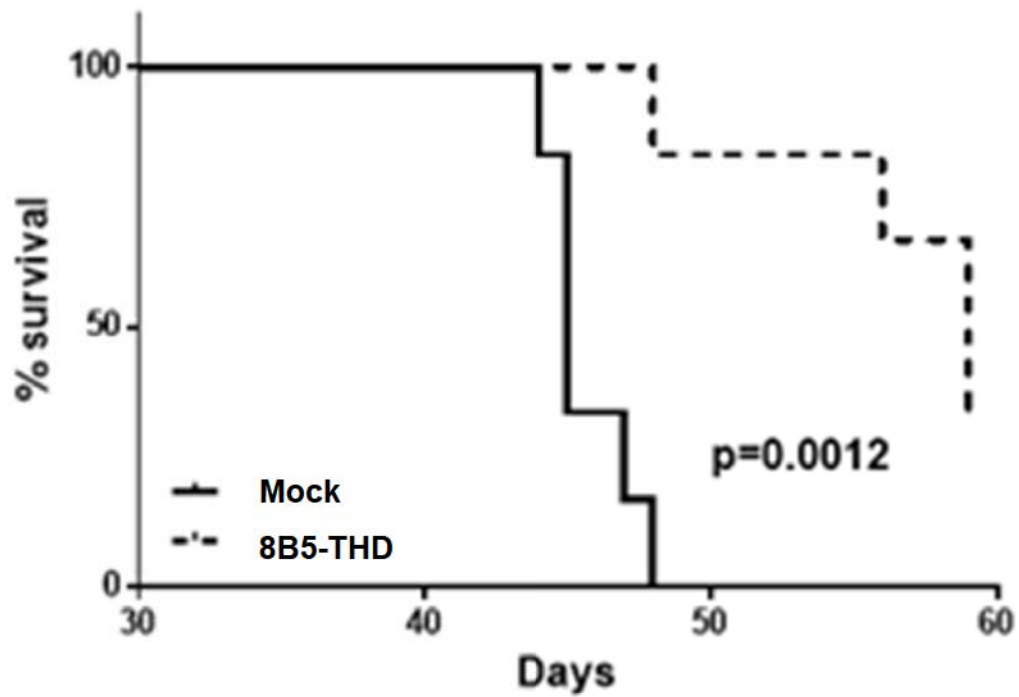
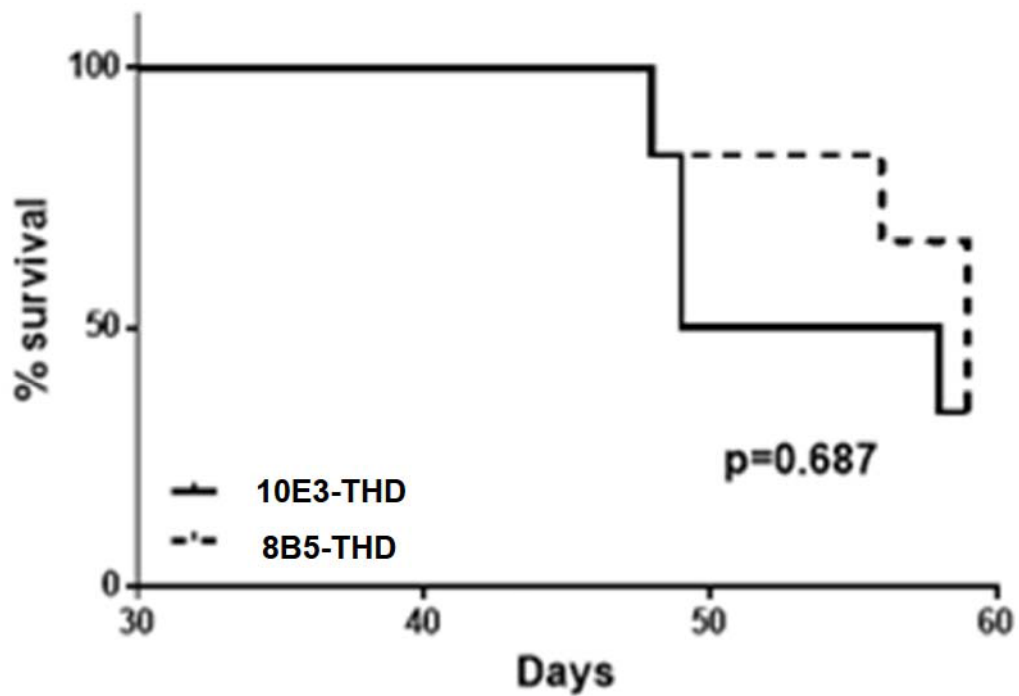
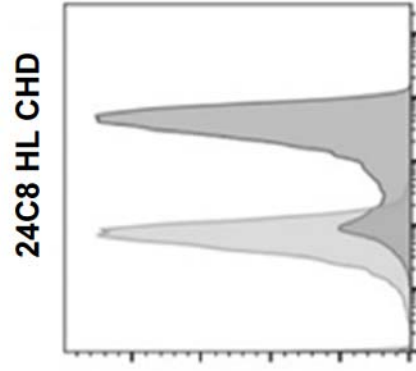
FIG. 10J**FIG. 10K**

FIG. 11A

Protein L

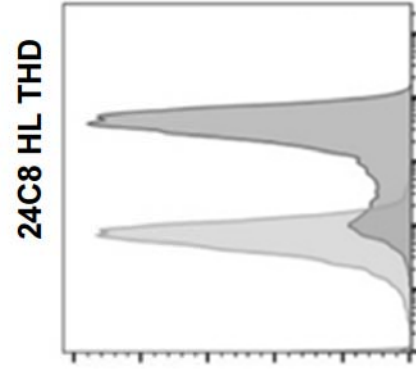
FIG. 11B

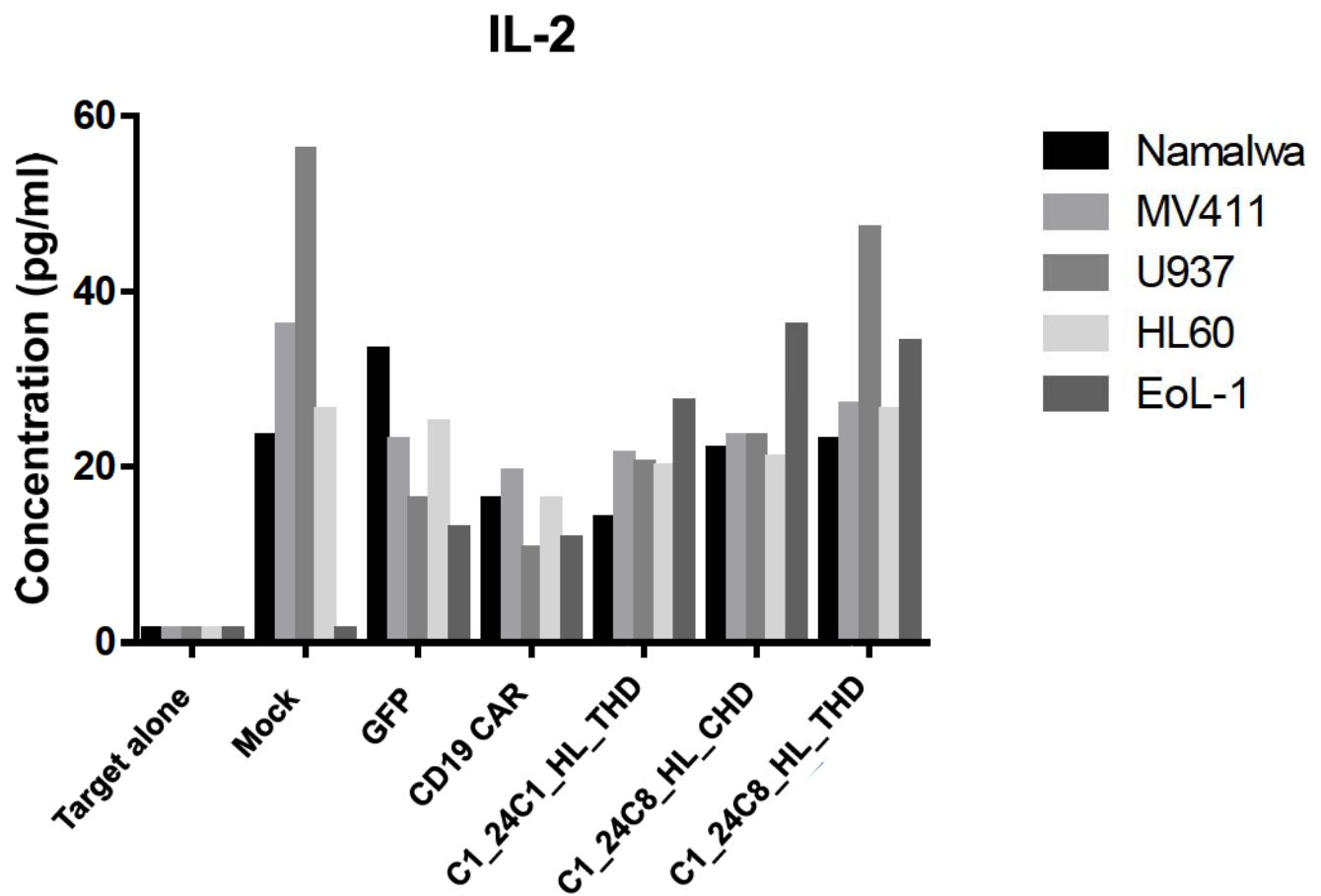
FIG. 12A

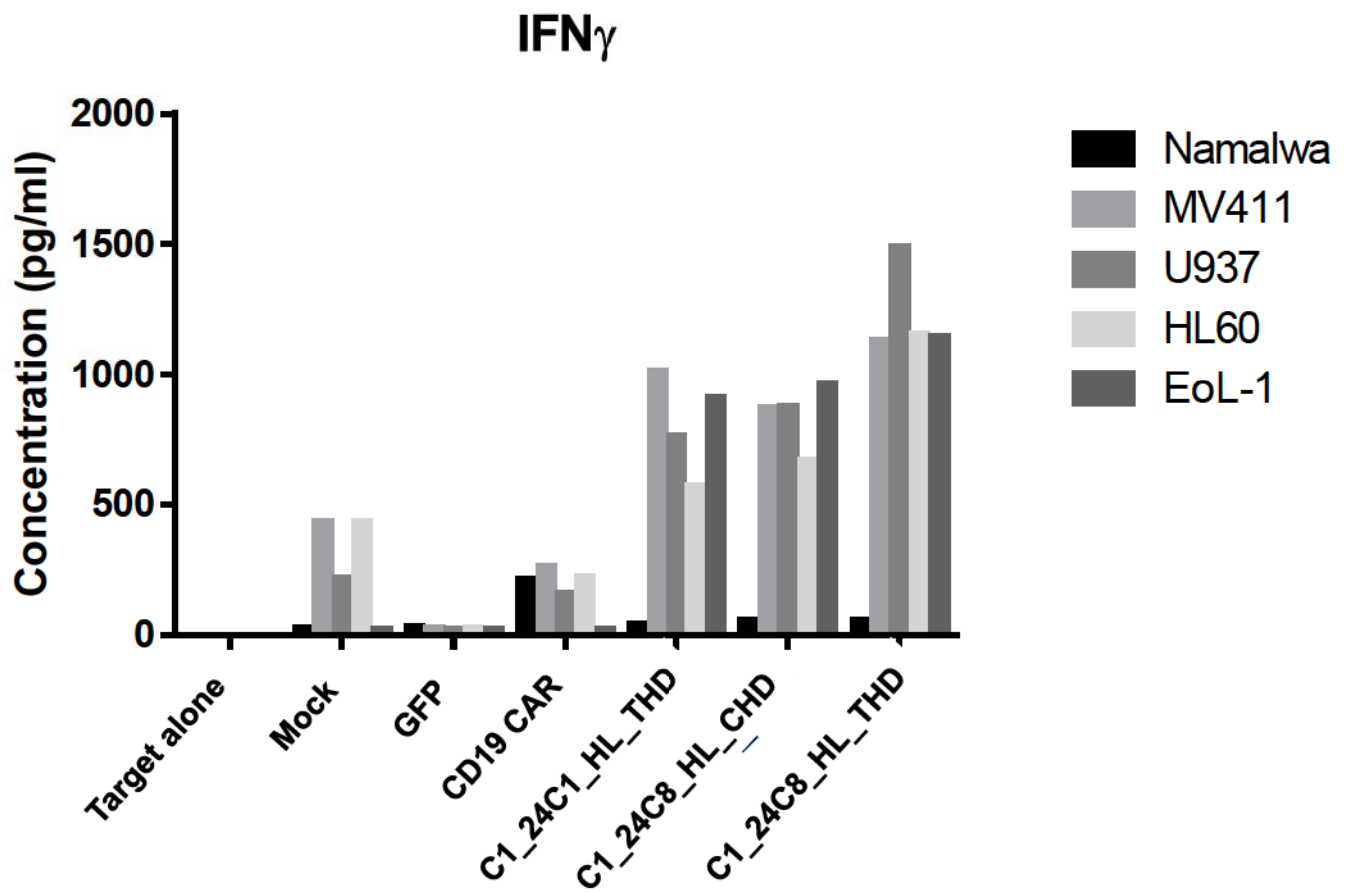
FIG. 12B

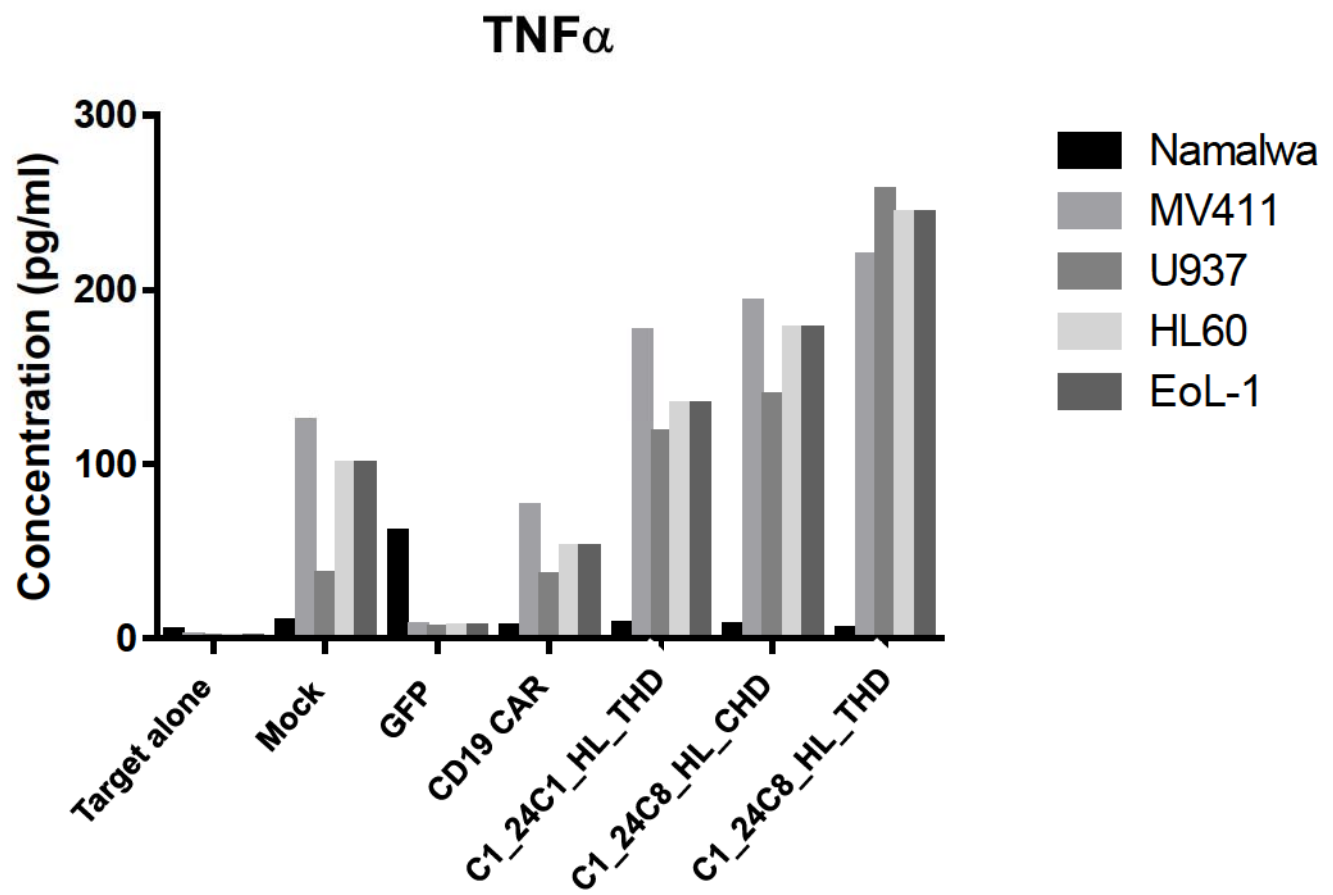
FIG. 12C

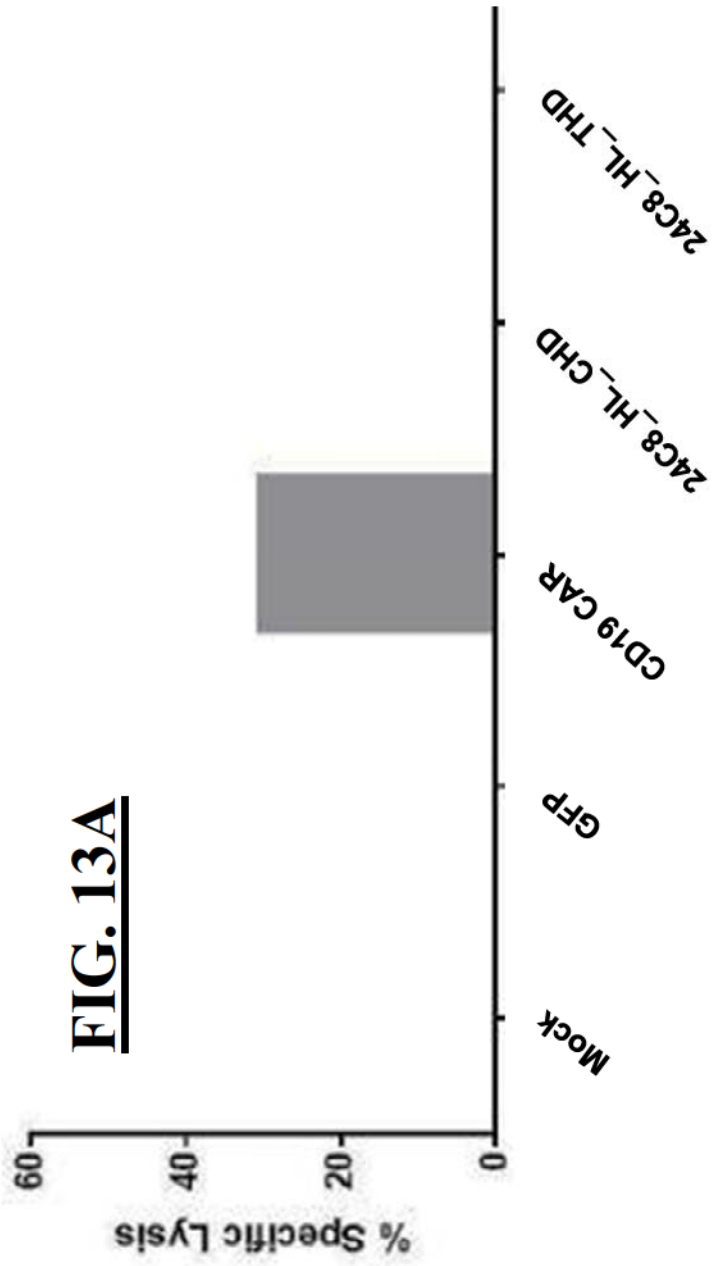
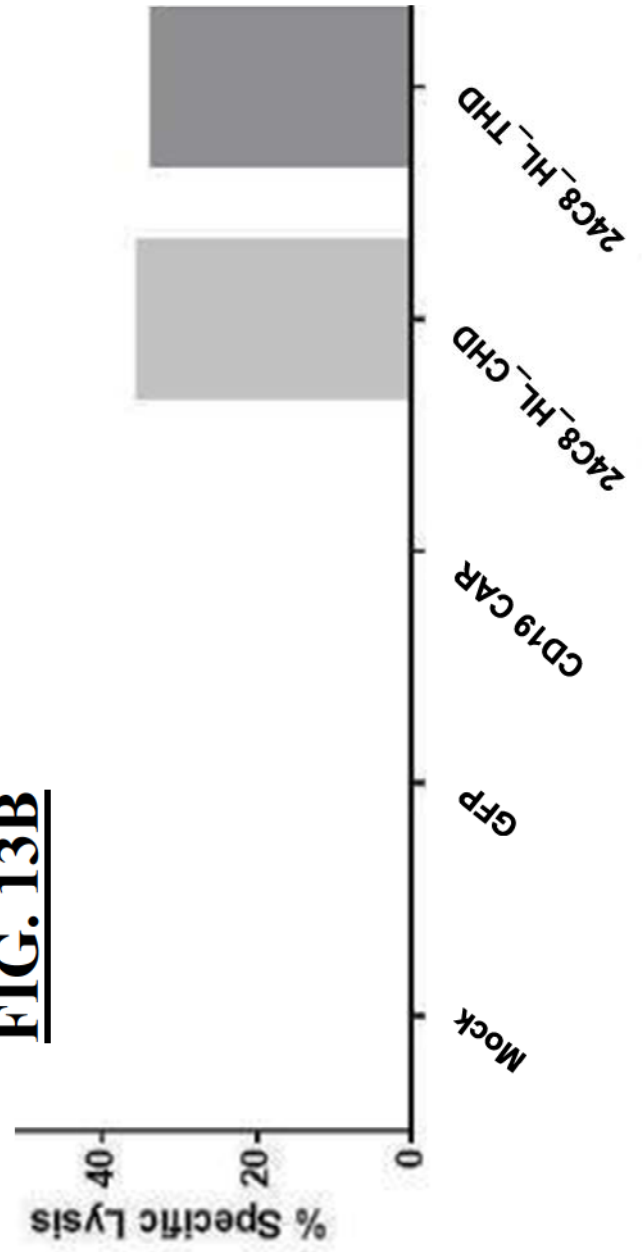
FIG. 13A**FIG. 13B**

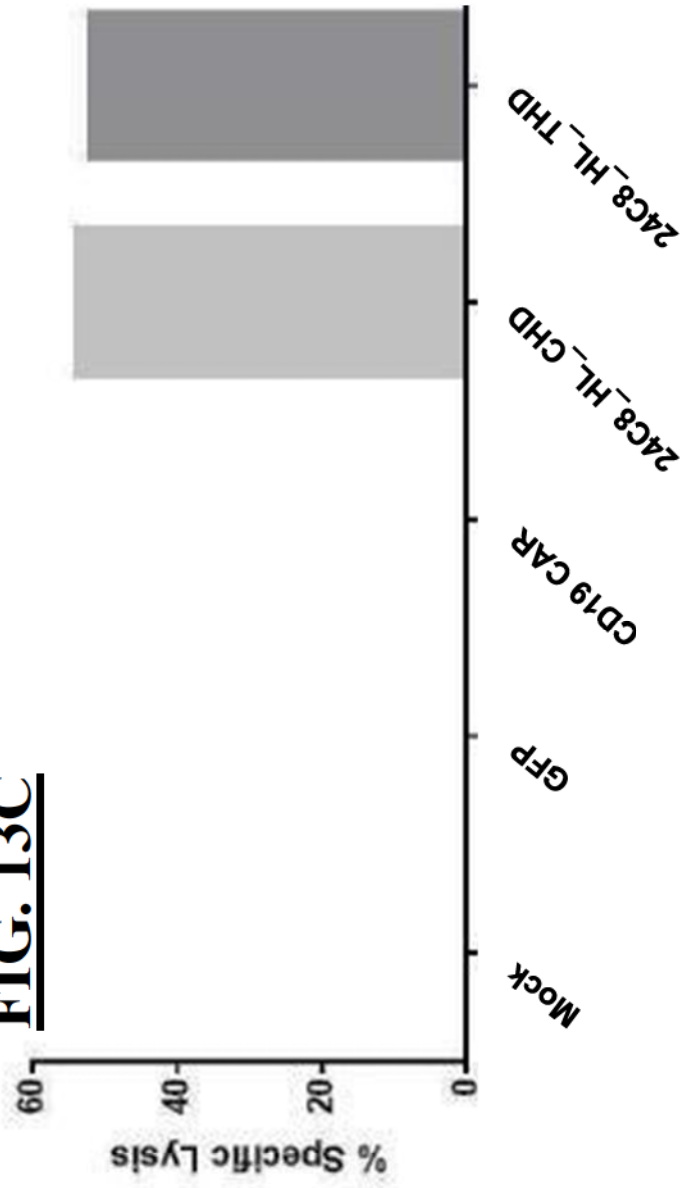
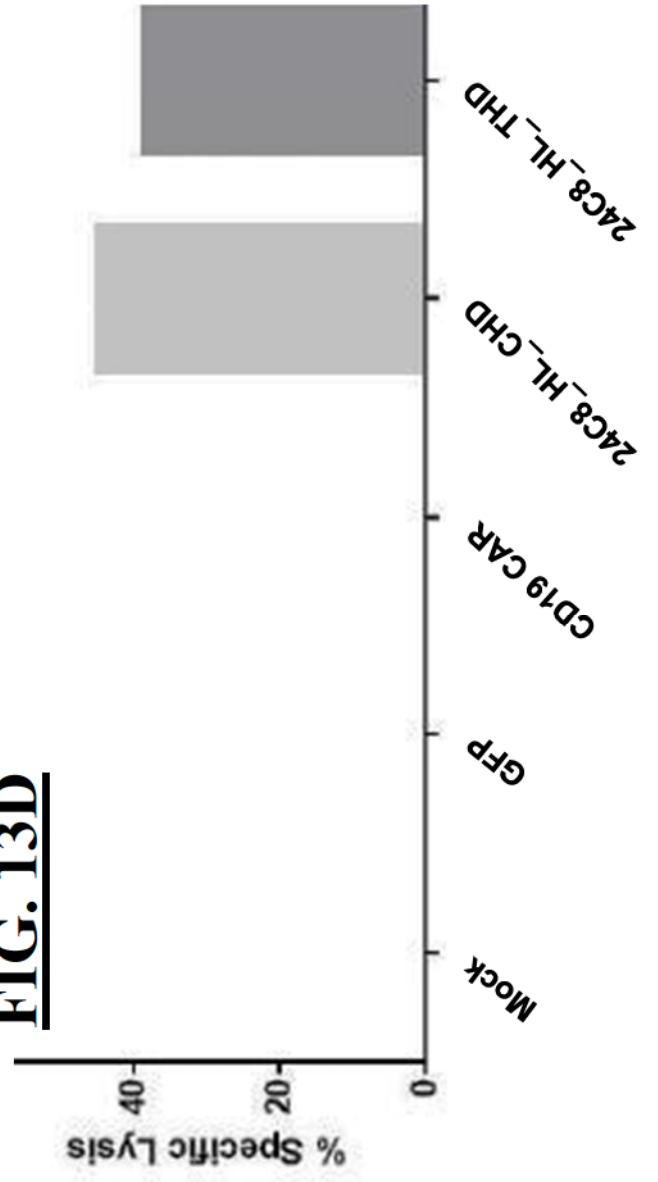
FIG. 13C**FIG. 13D**

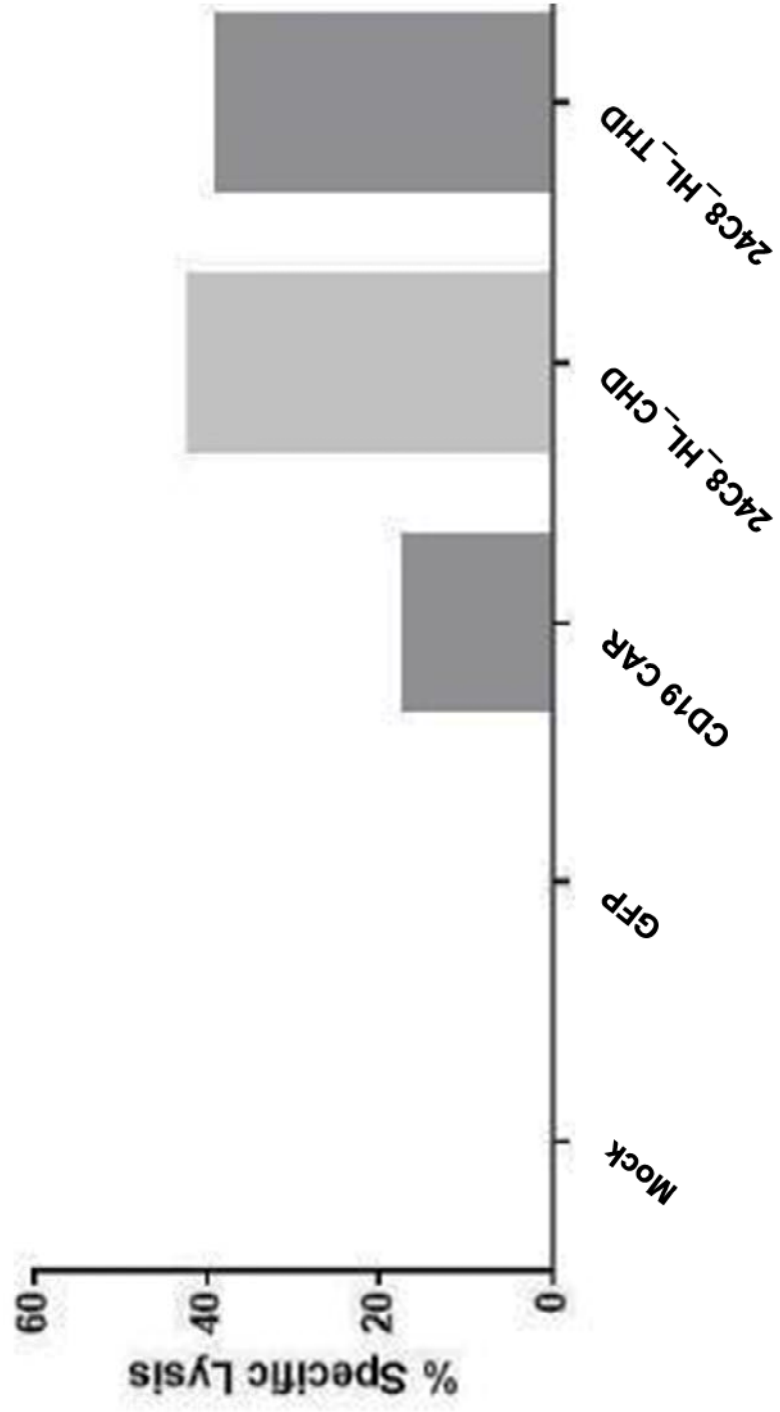
FIG. 13E

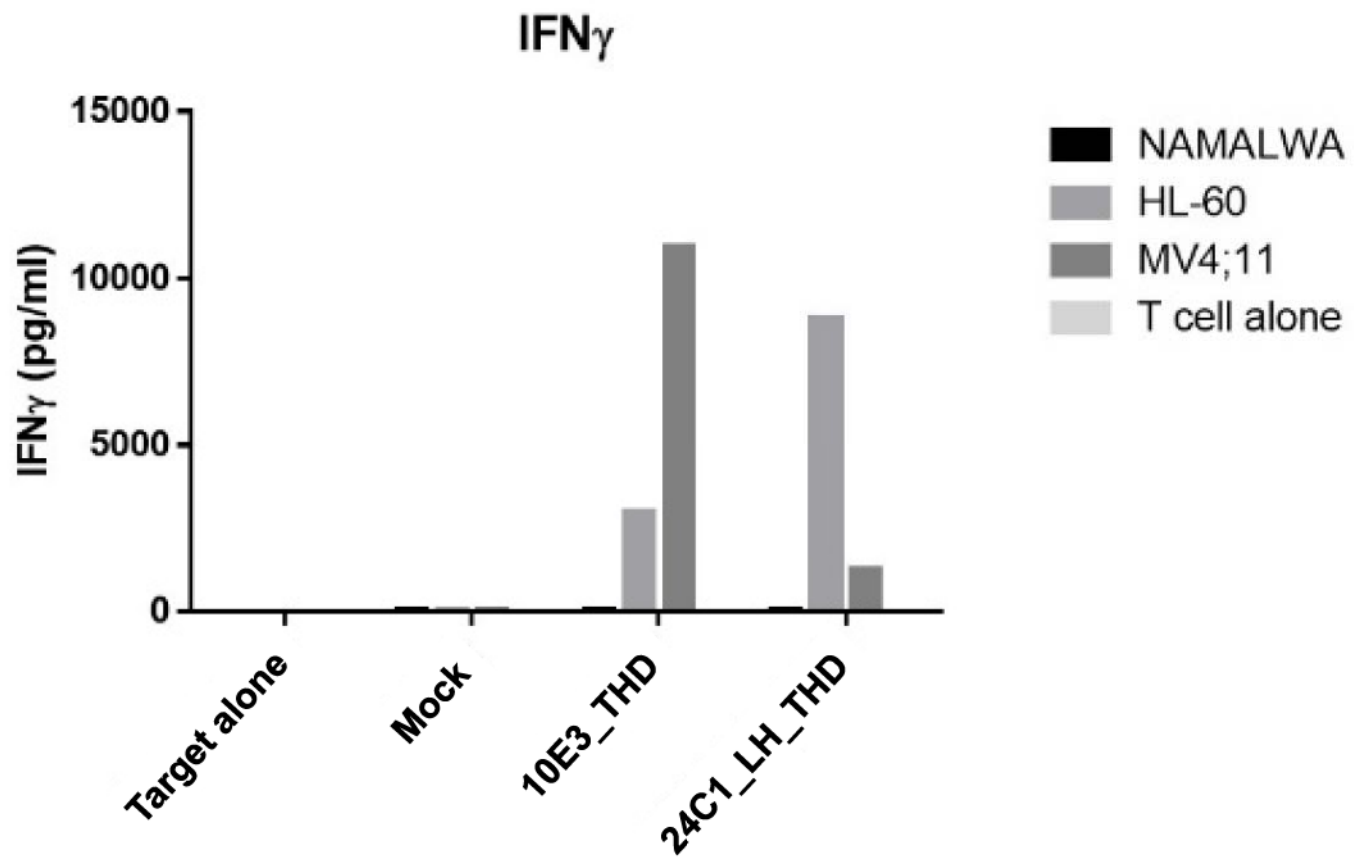
FIG. 14A

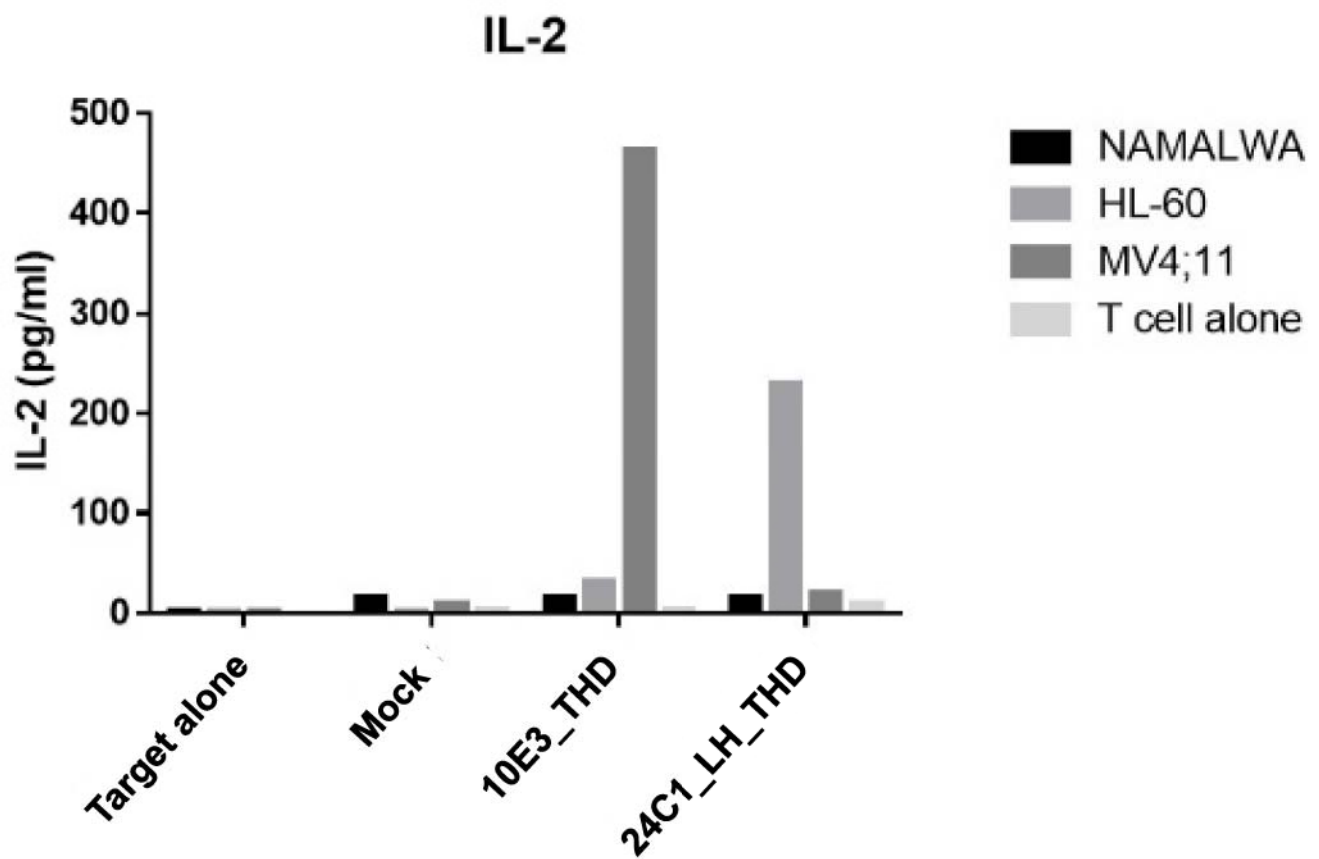
FIG. 14B

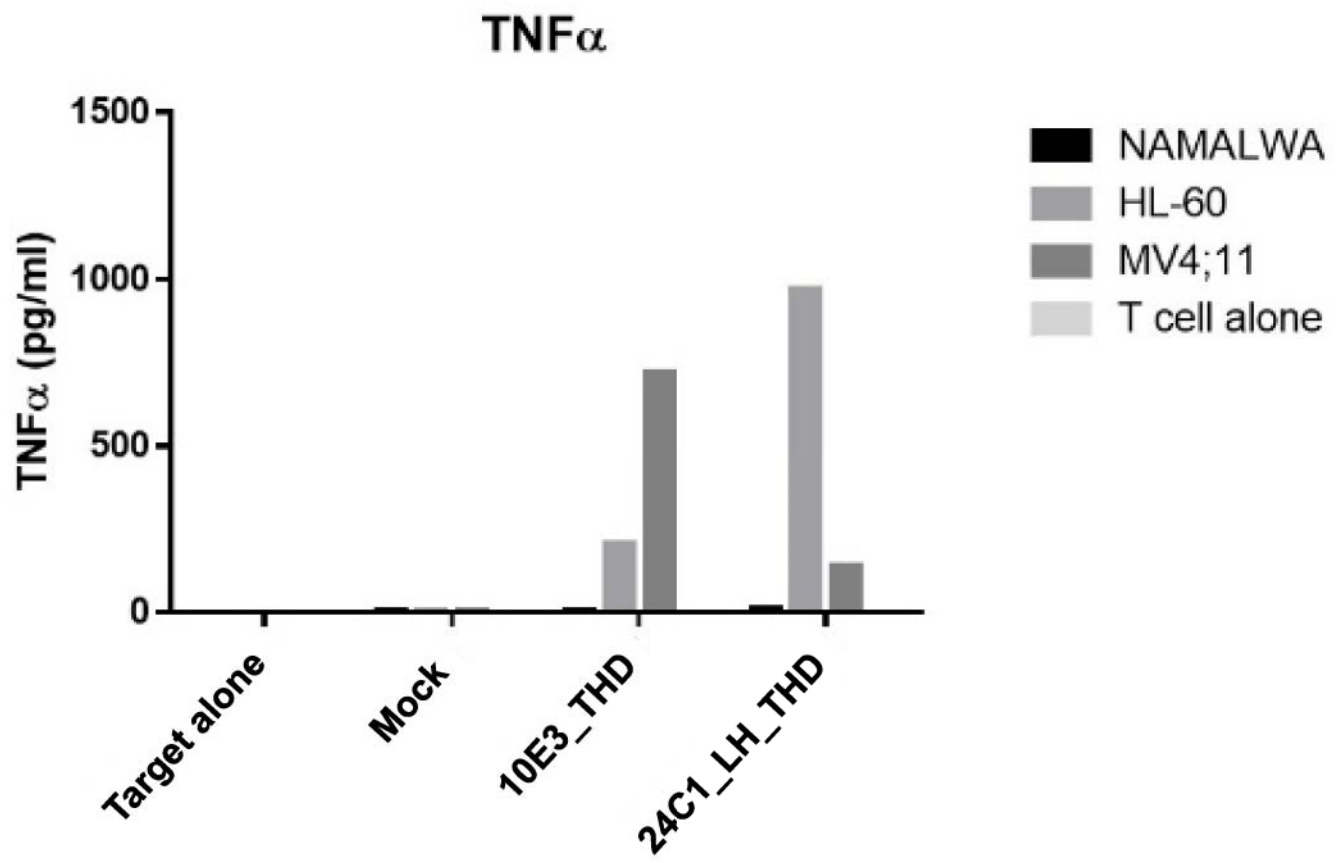
FIG. 14C

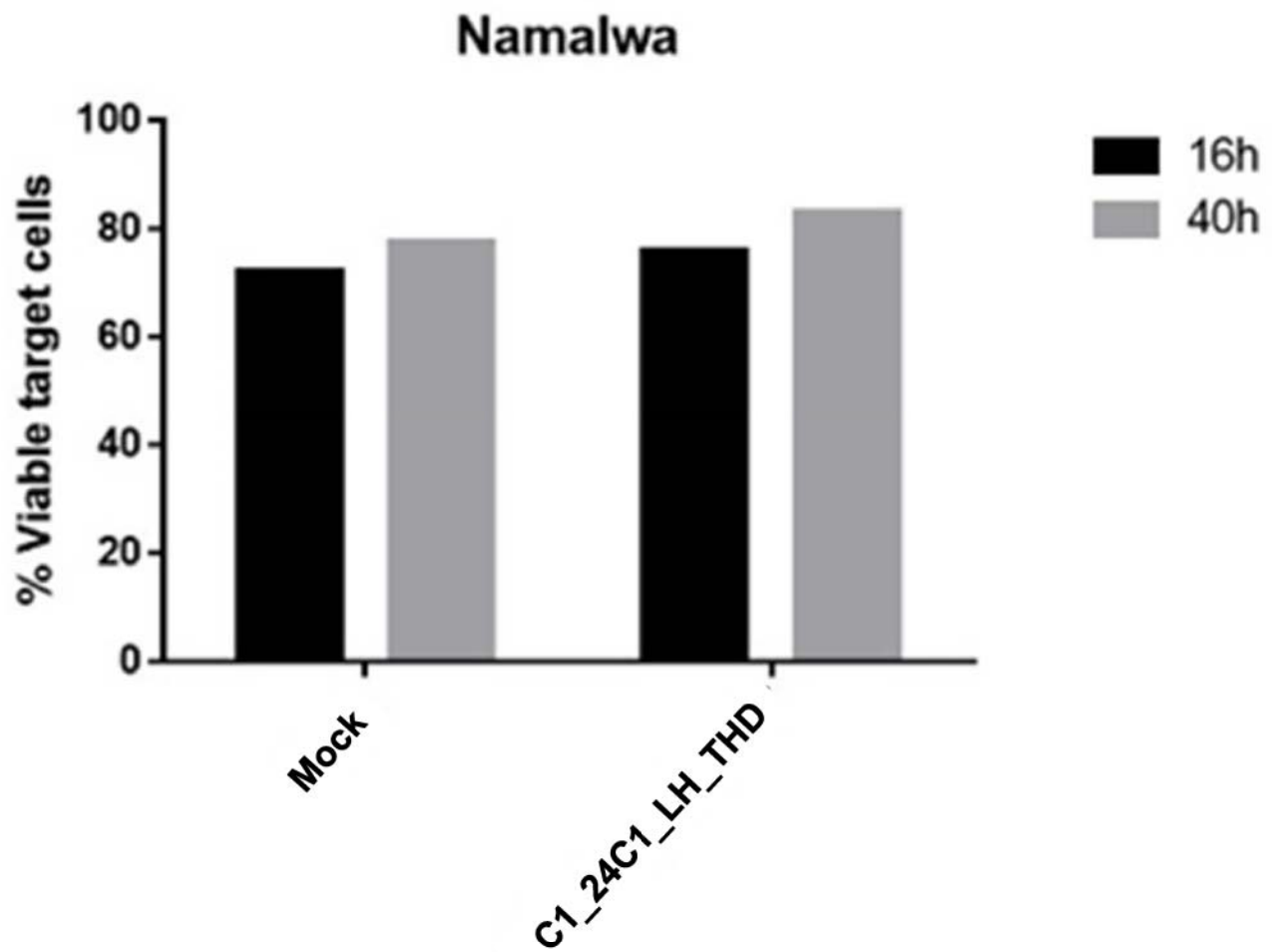
FIG. 15A

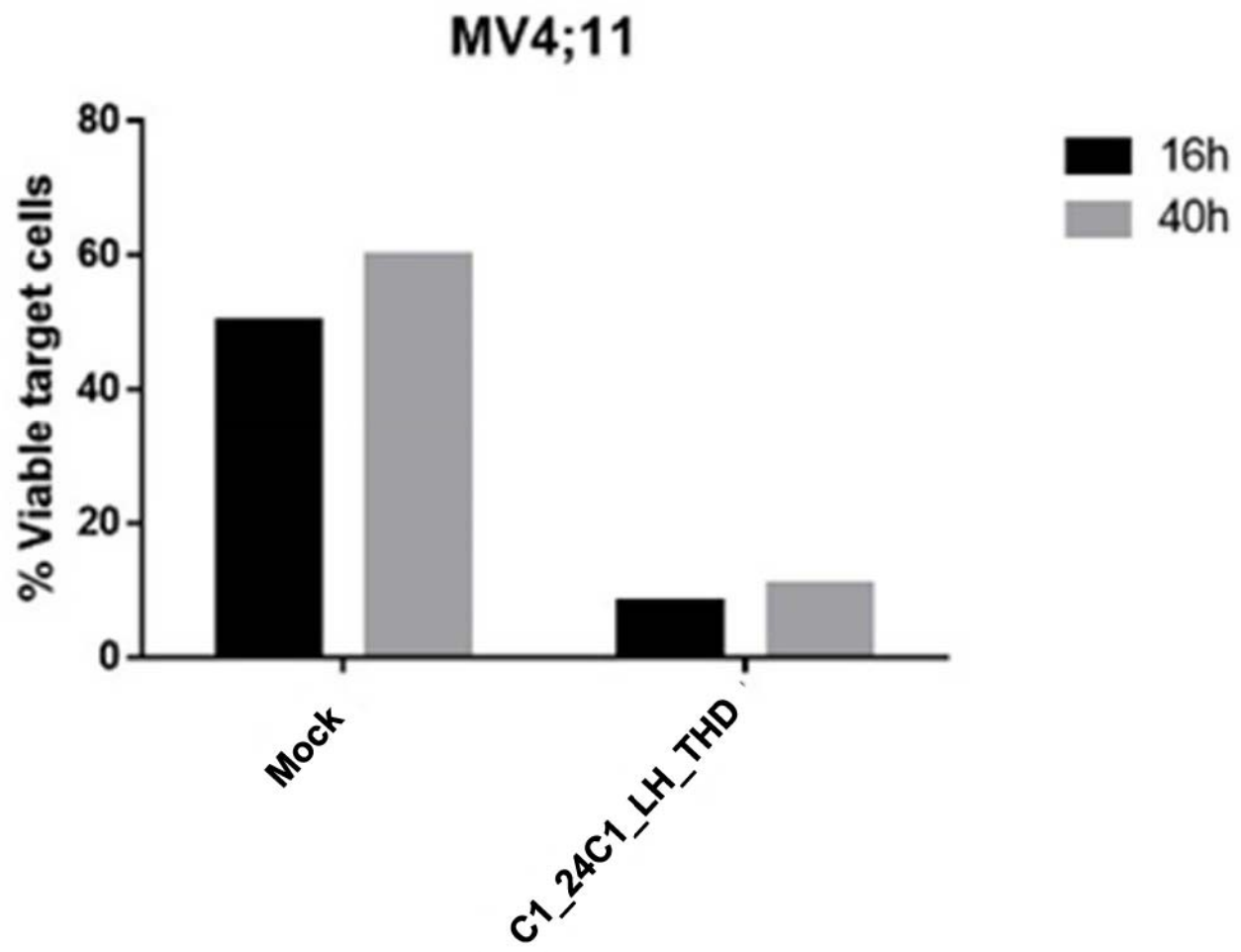
FIG. 15B

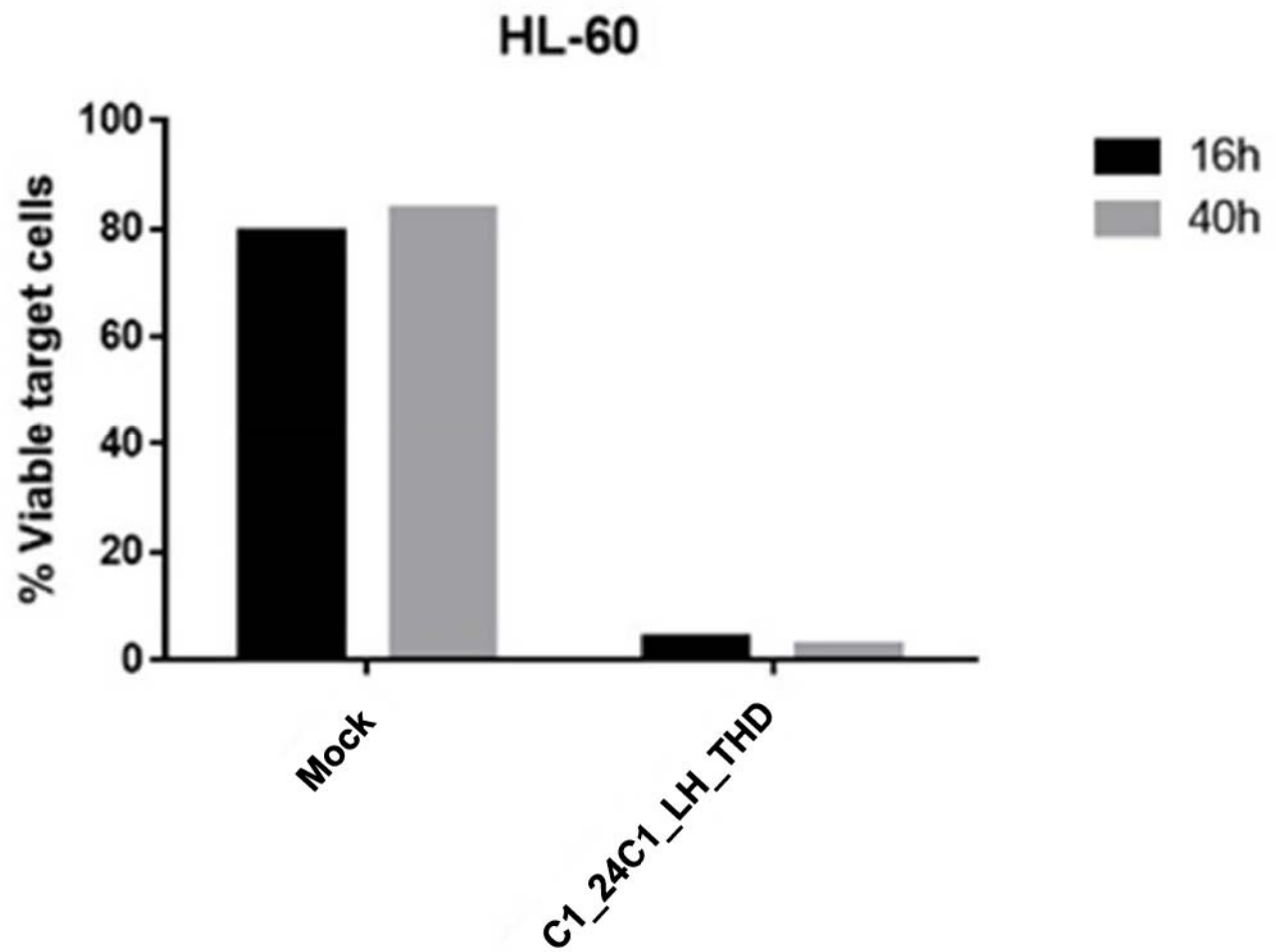
FIG. 15C

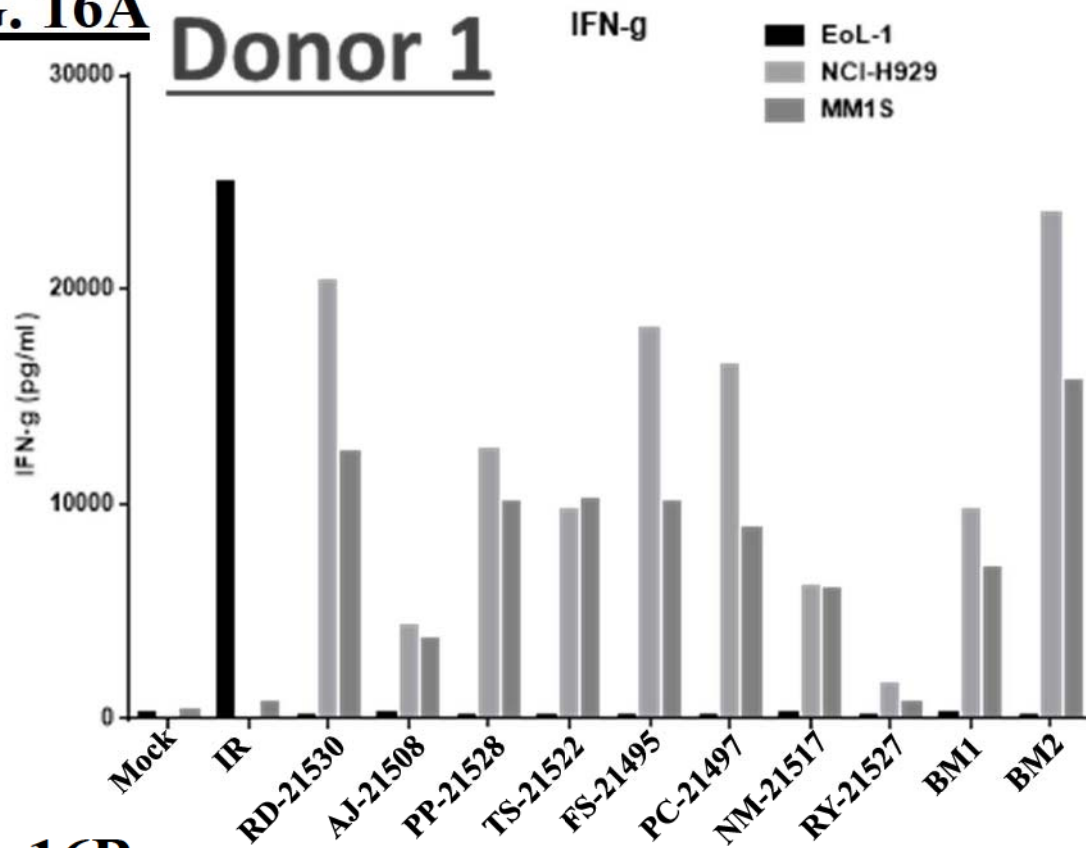
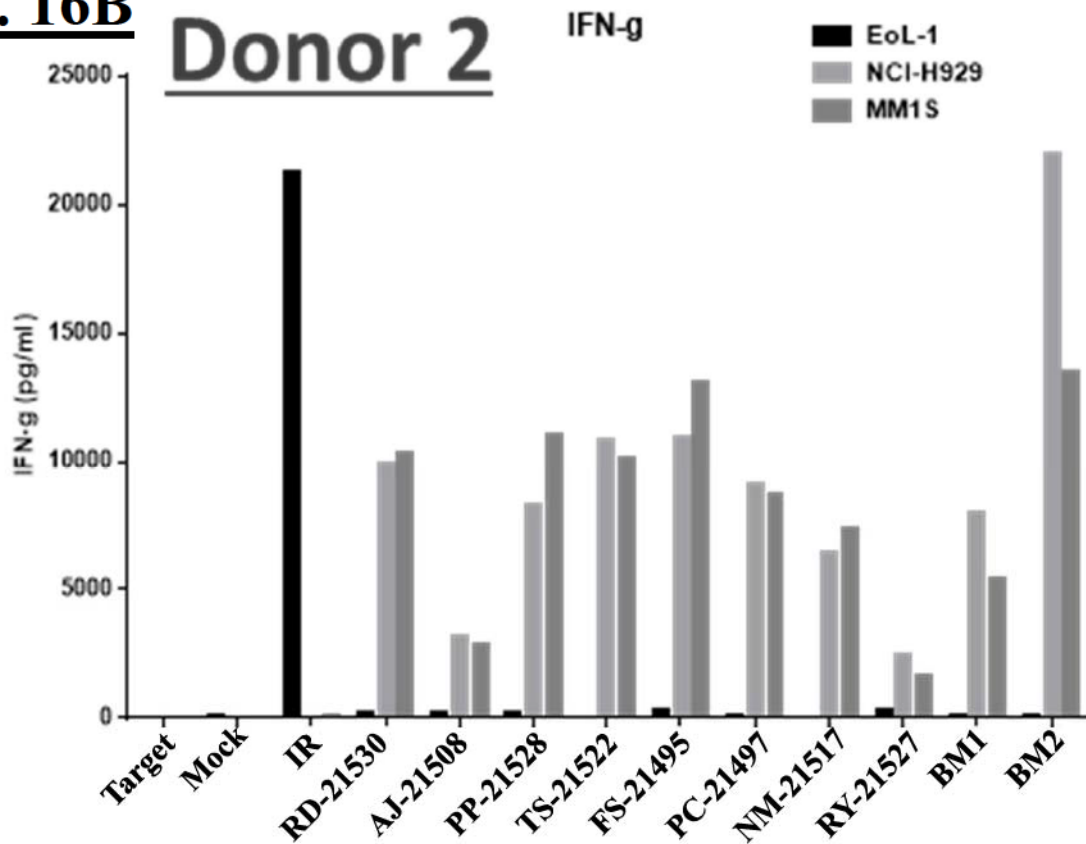
FIG. 16A**FIG. 16B**

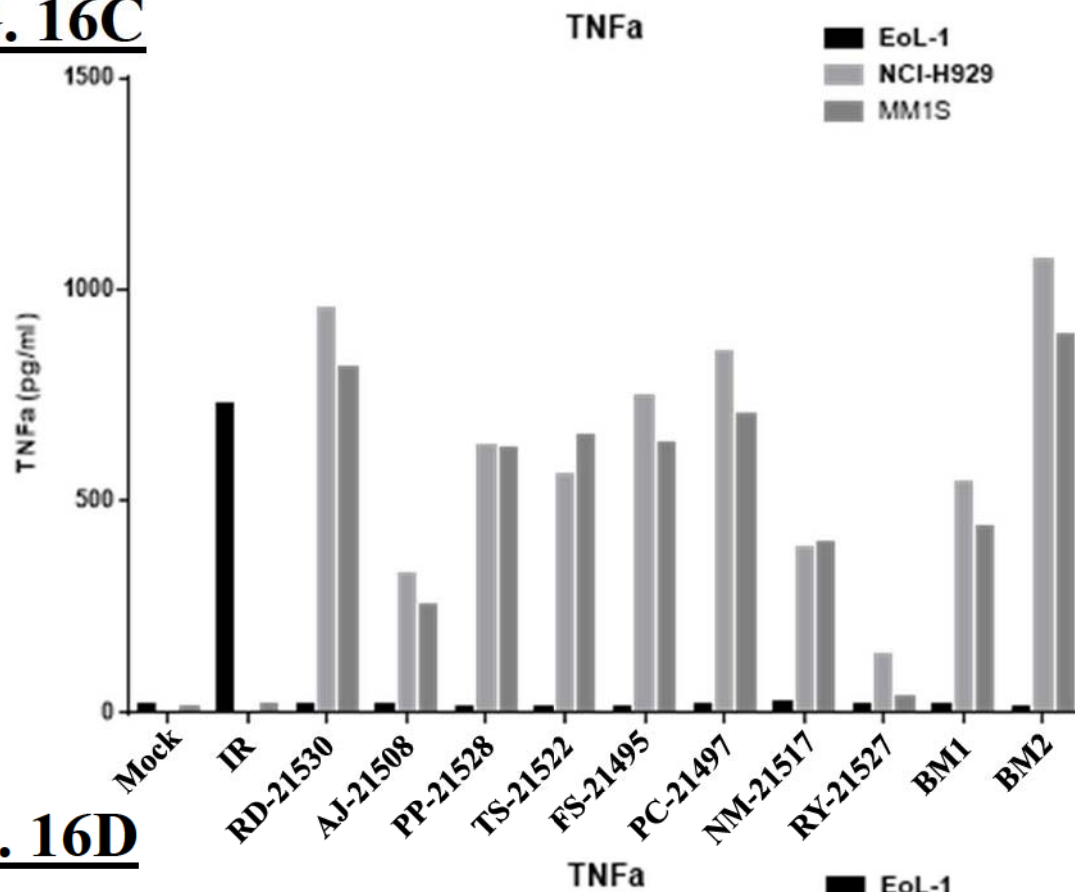
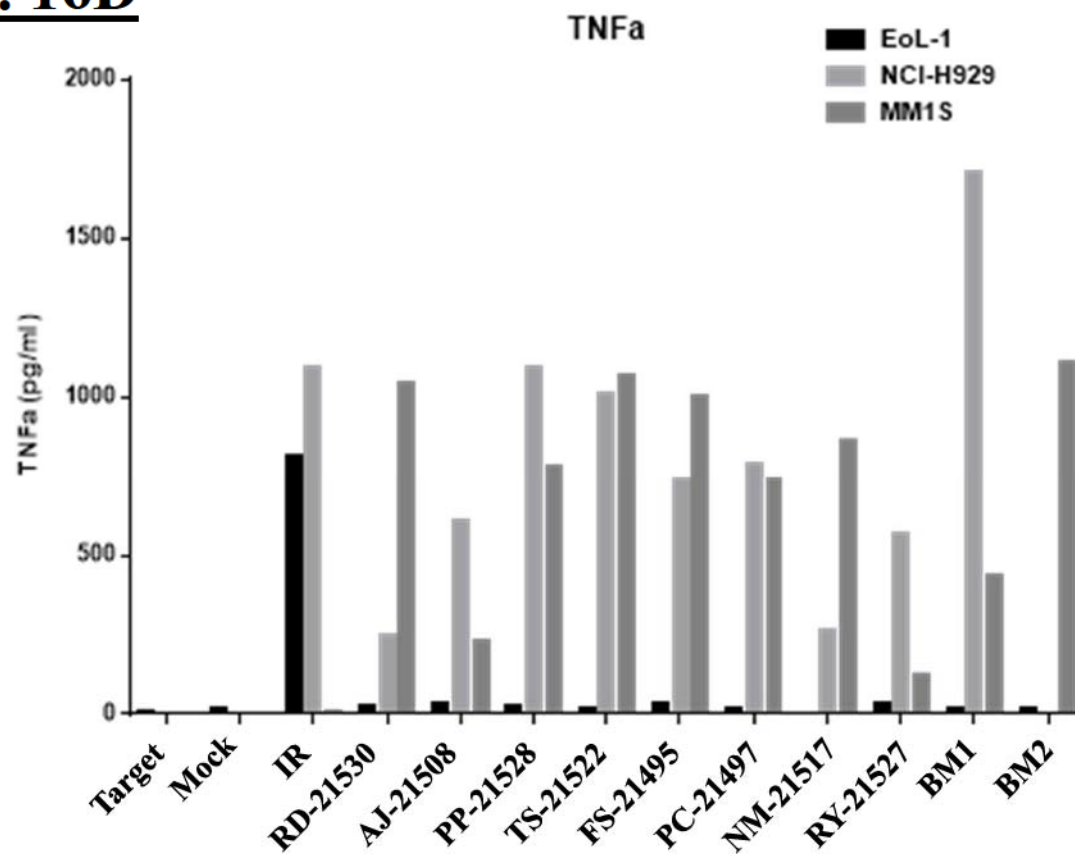
FIG. 16C**FIG. 16D**

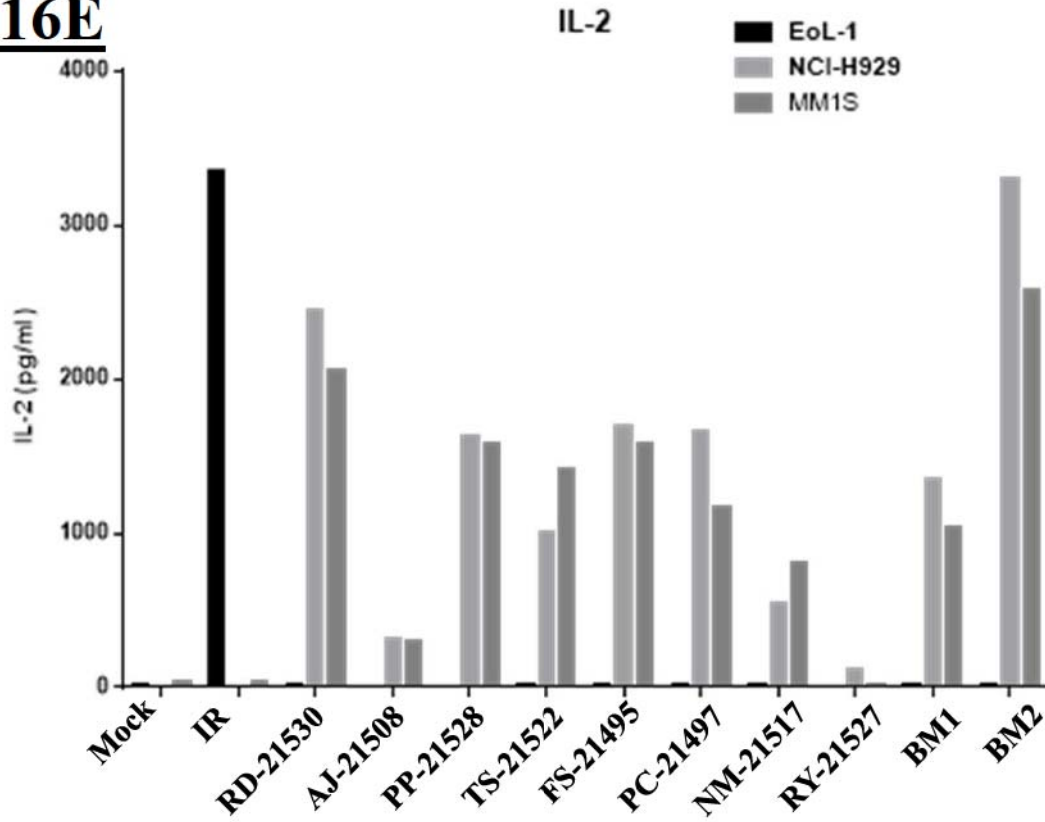
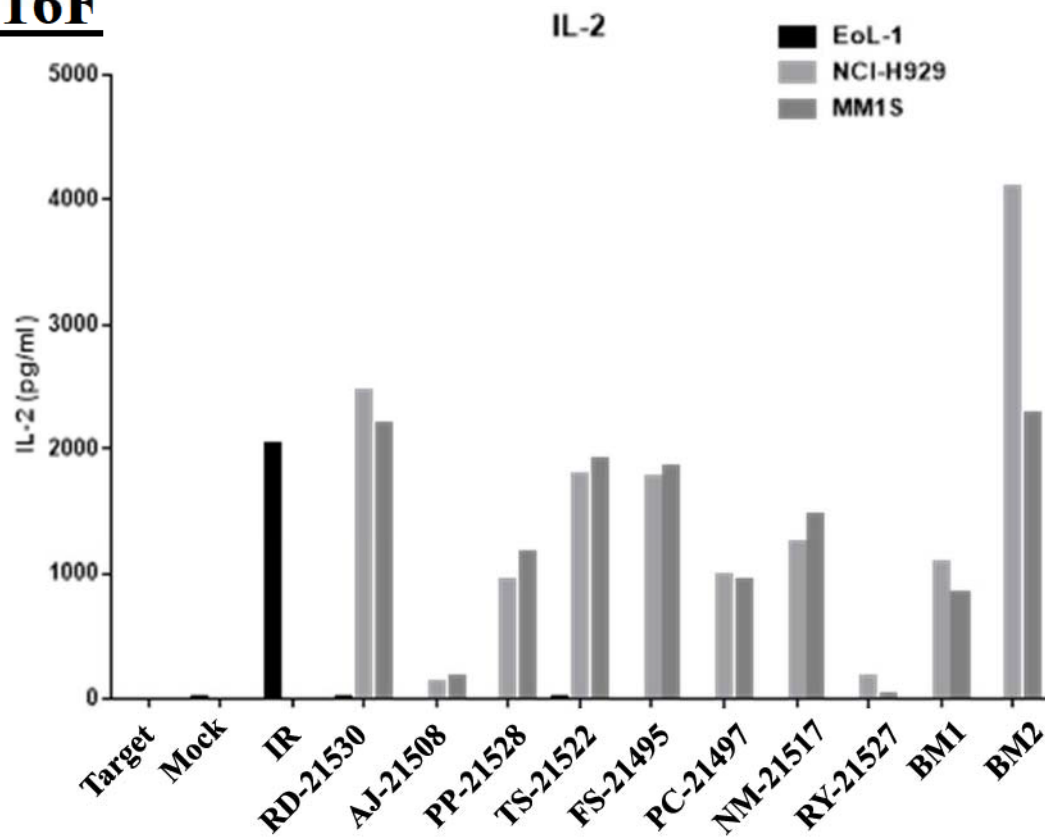
FIG. 16E**FIG. 16F**

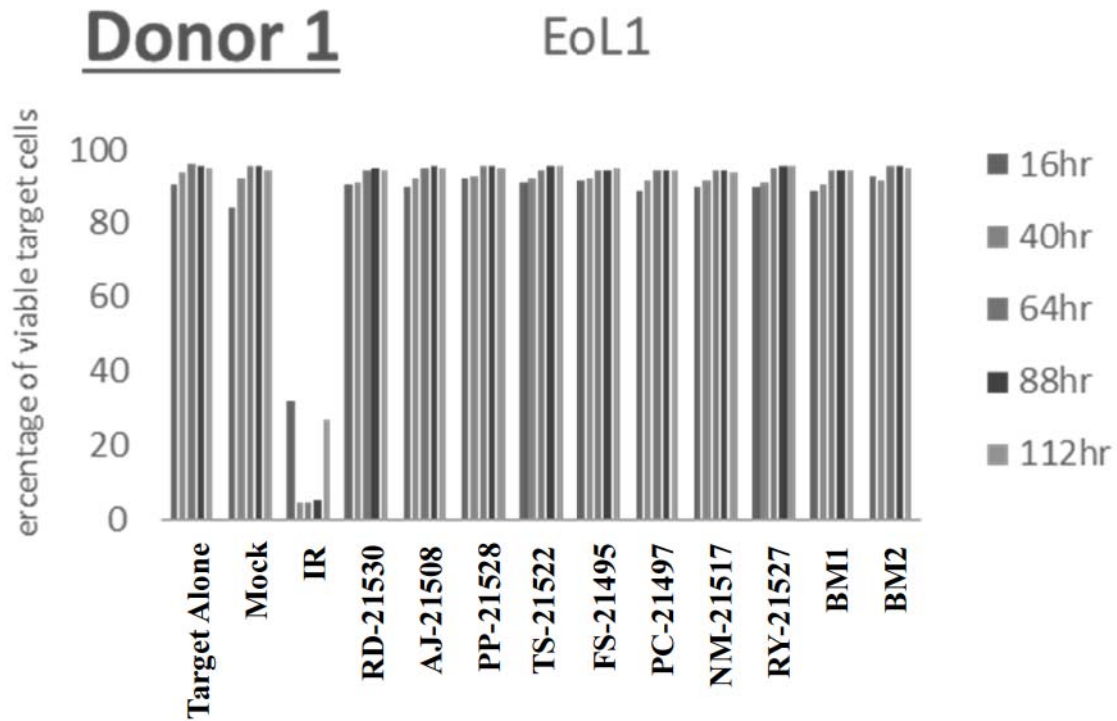
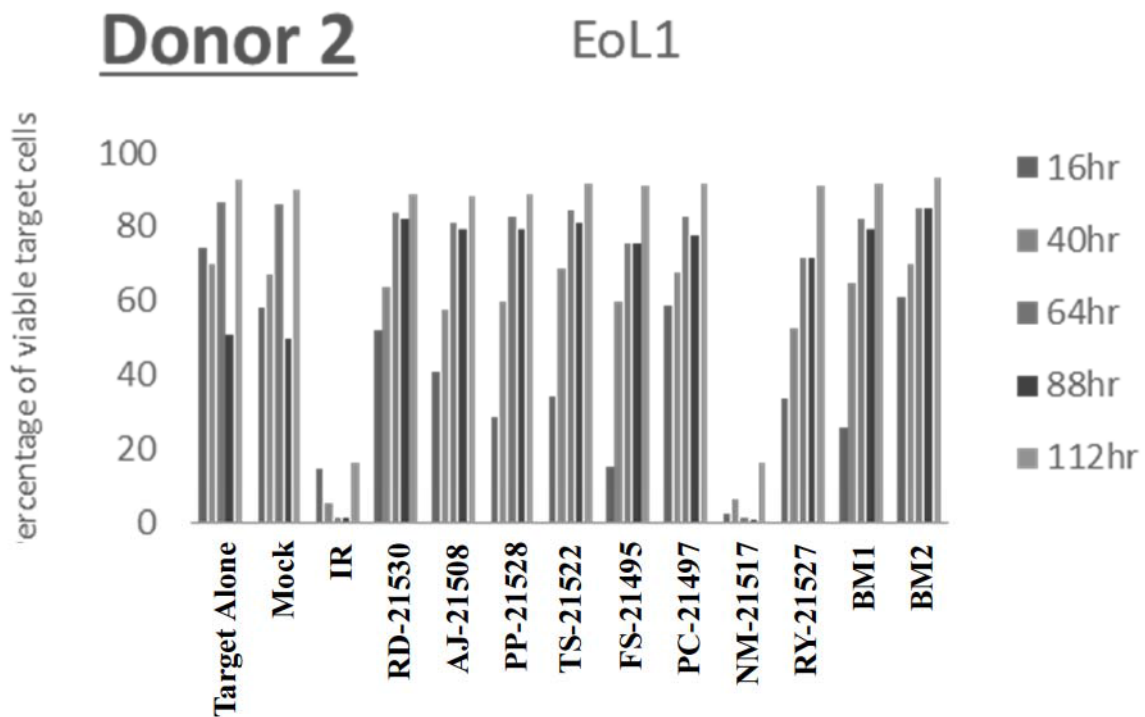
FIG. 17A**FIG. 17B**

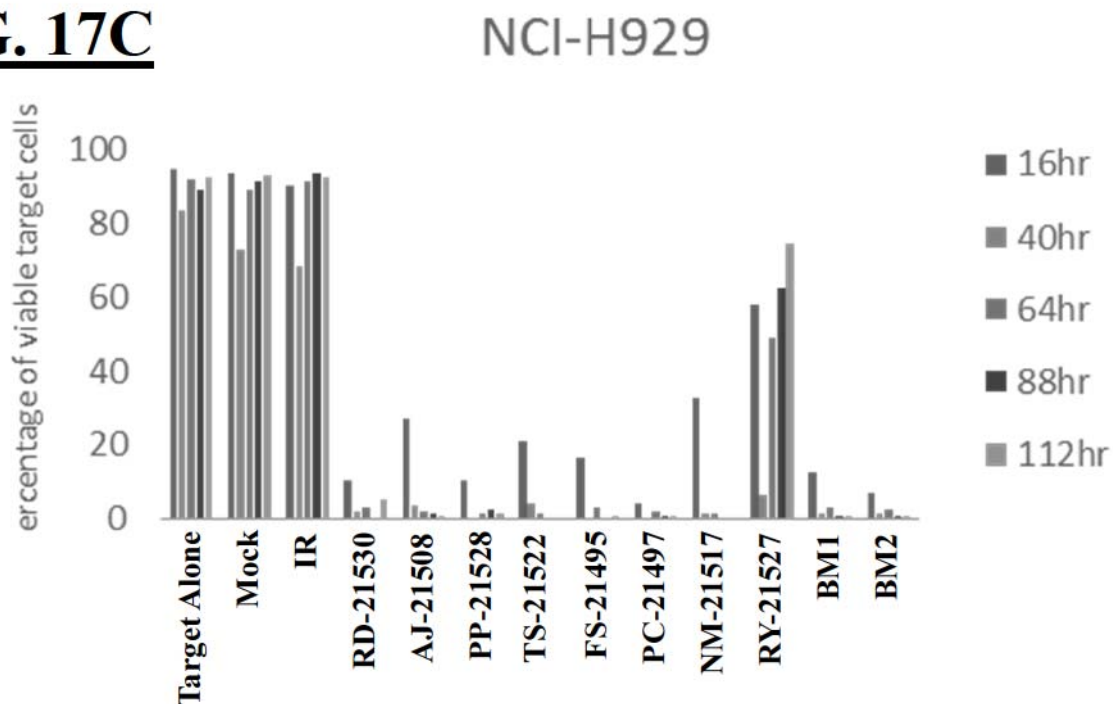
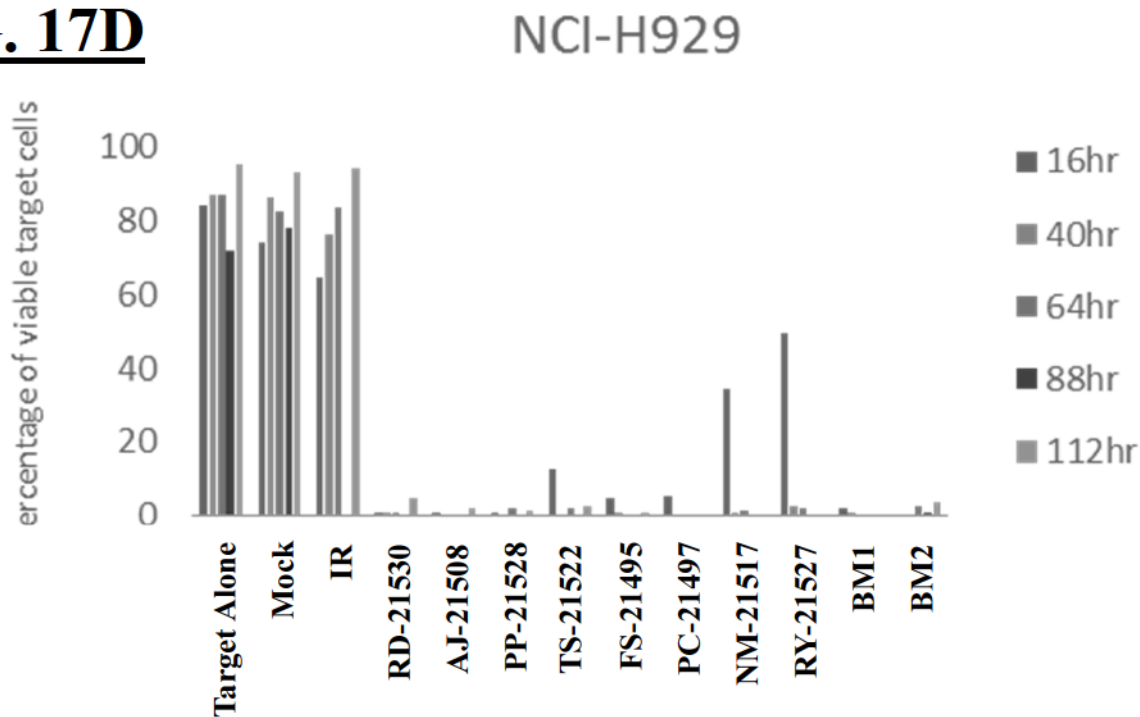
FIG. 17C**FIG. 17D**

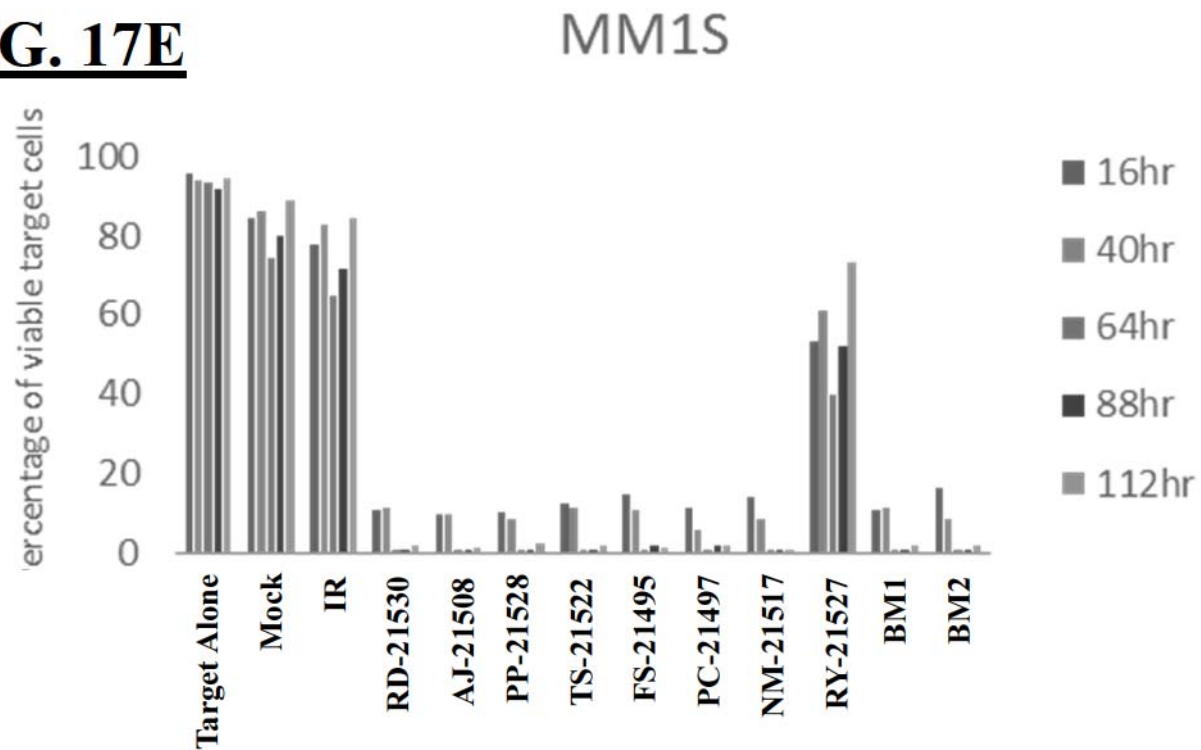
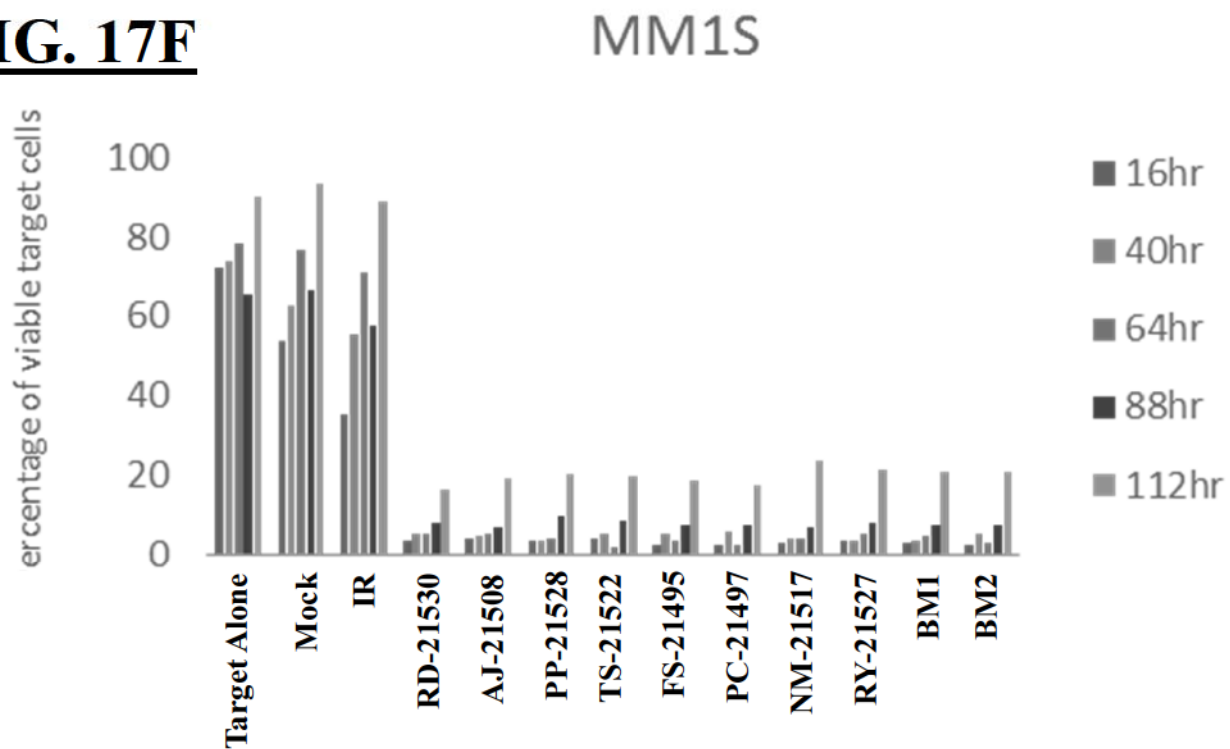
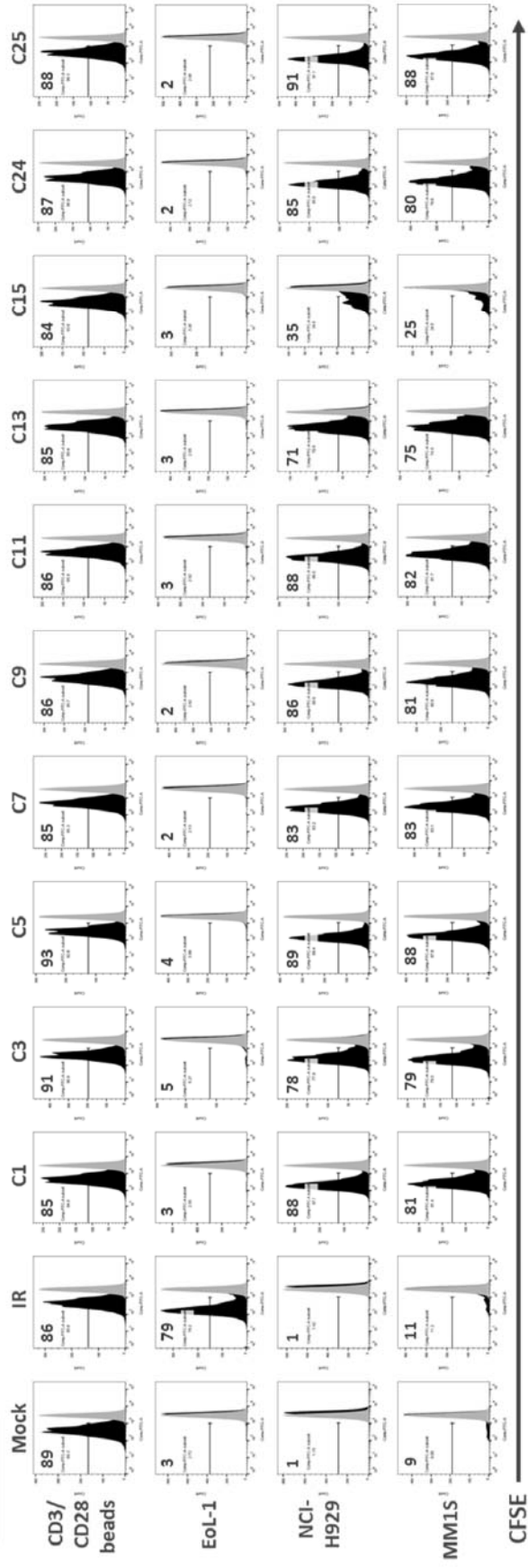
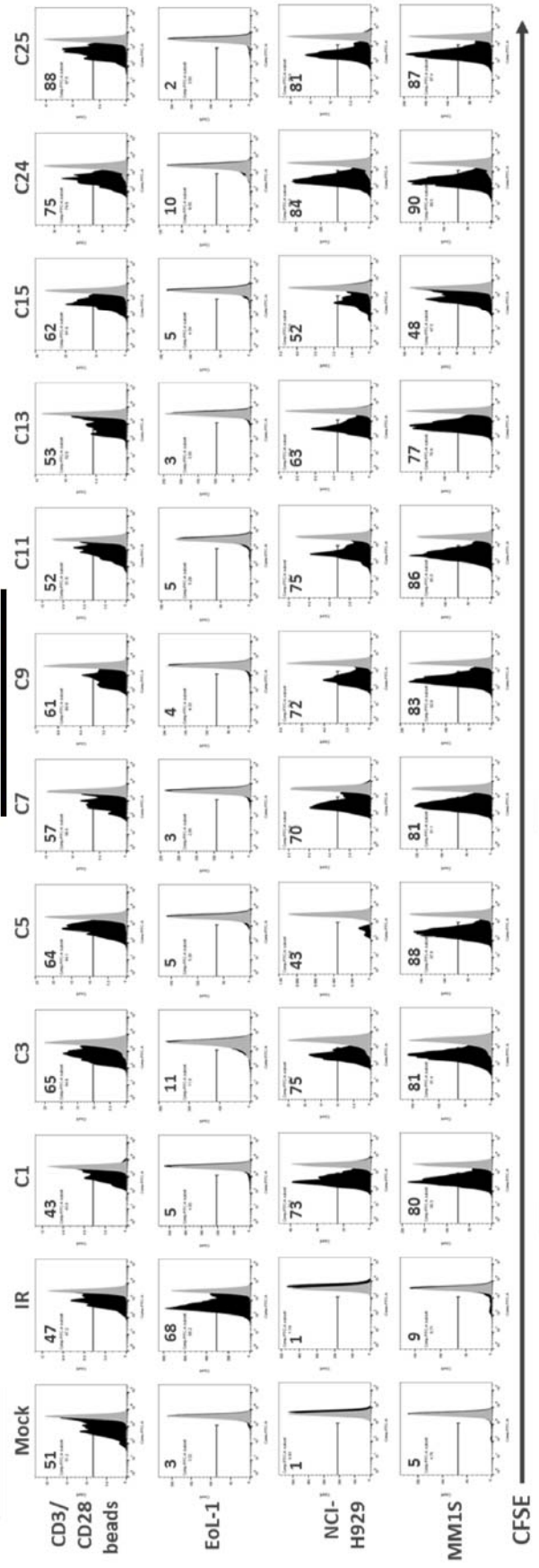
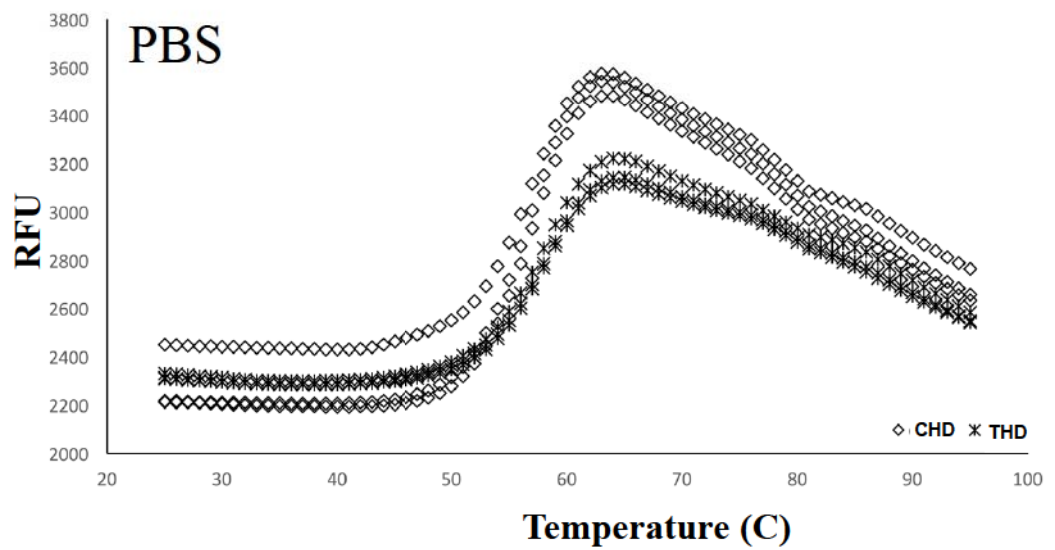
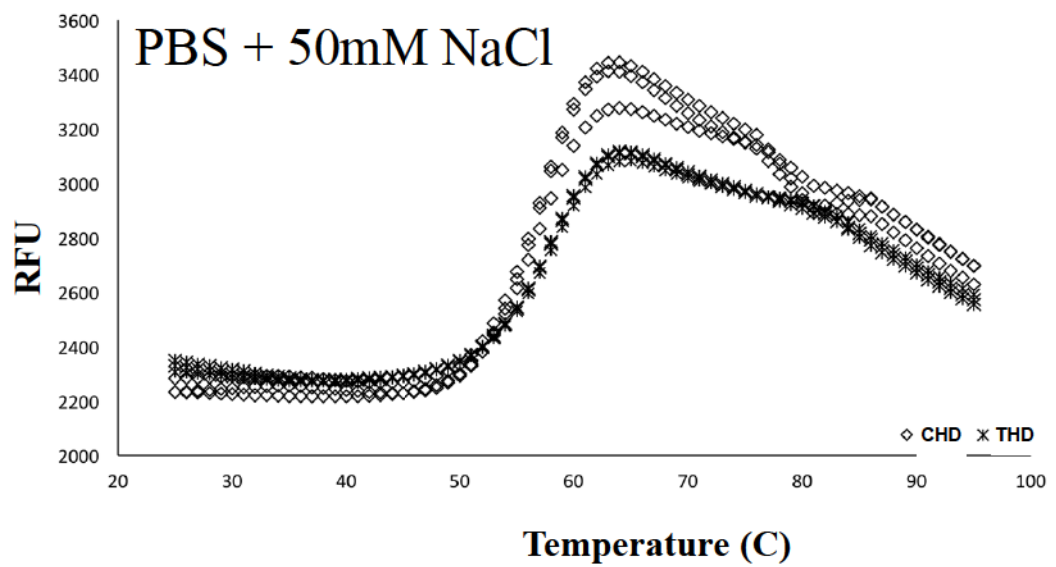
FIG. 17E**FIG. 17F**

FIG. 18A**Donor 1****FIG. 18B****Donor 2**

Unstimulated T cells ■ T cells + indicated stimulus

FIG. 19A**FIG. 19B**

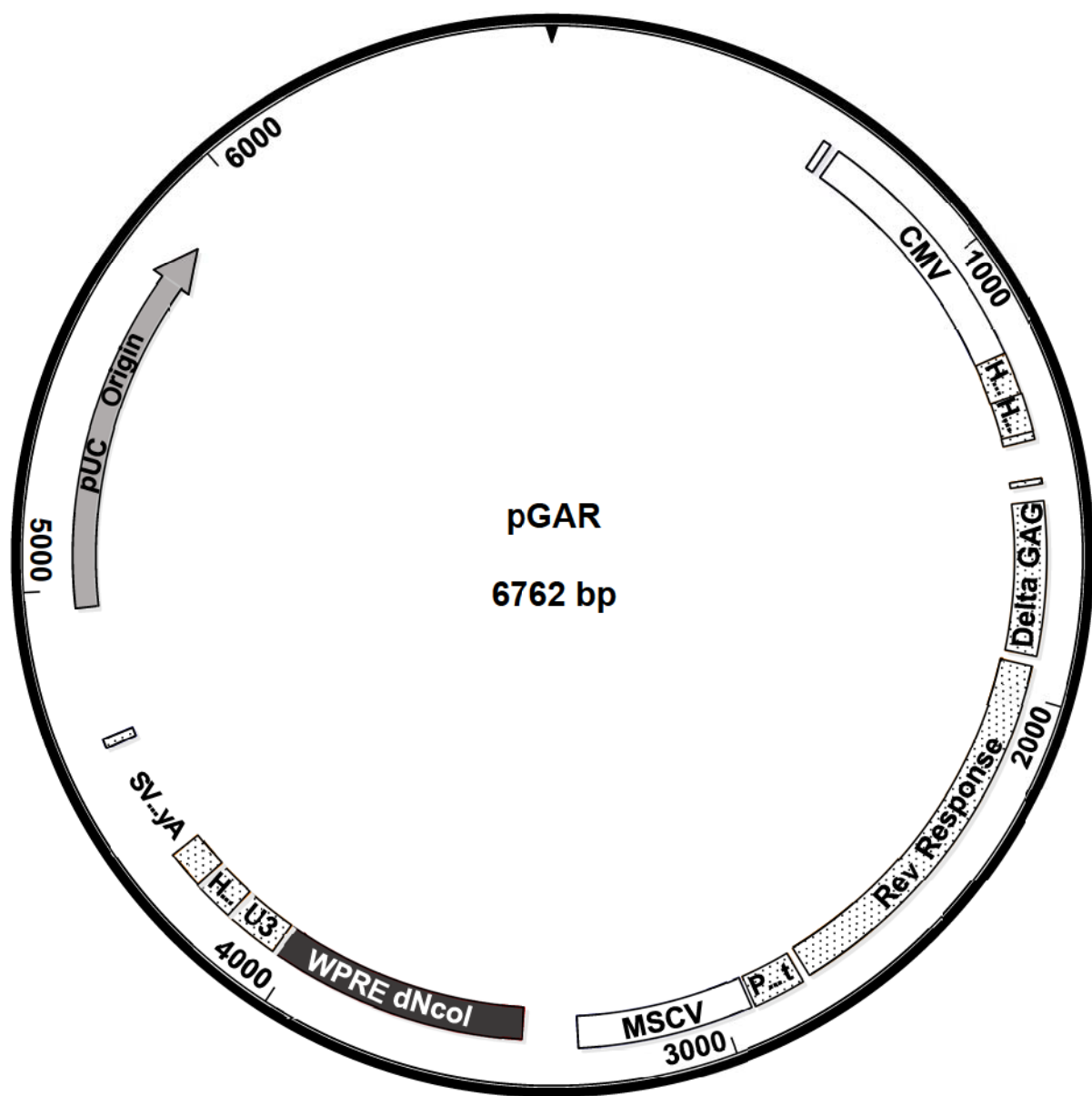


FIG. 20