

FIG. 1

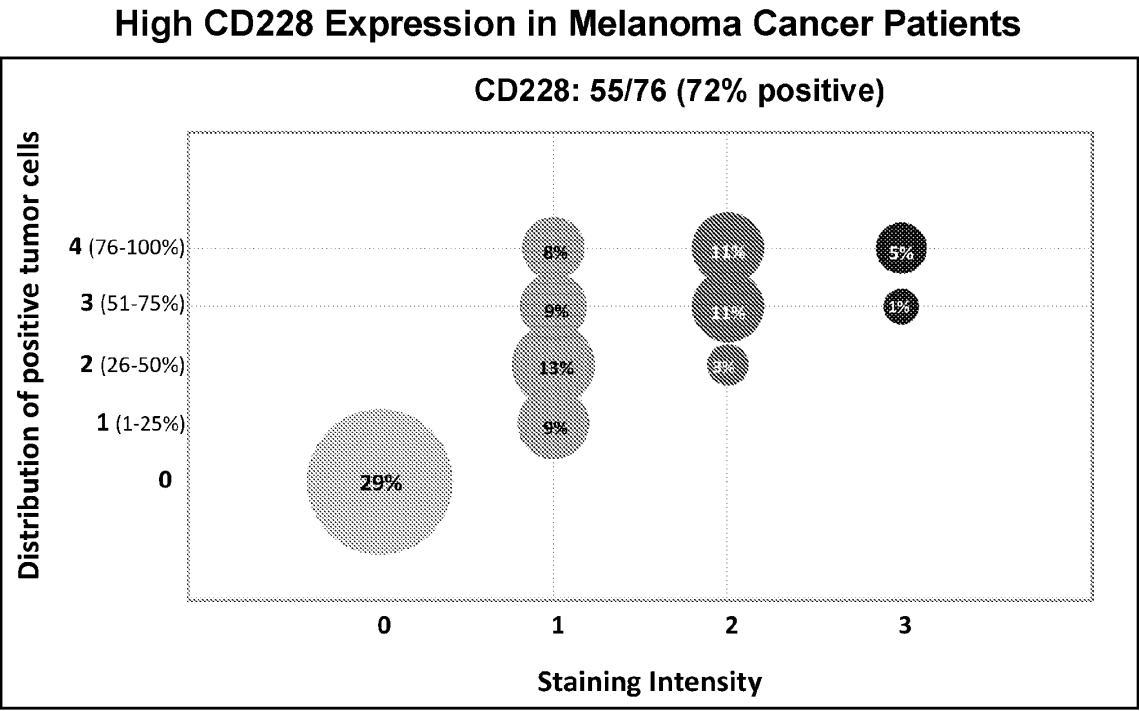


FIG. 2

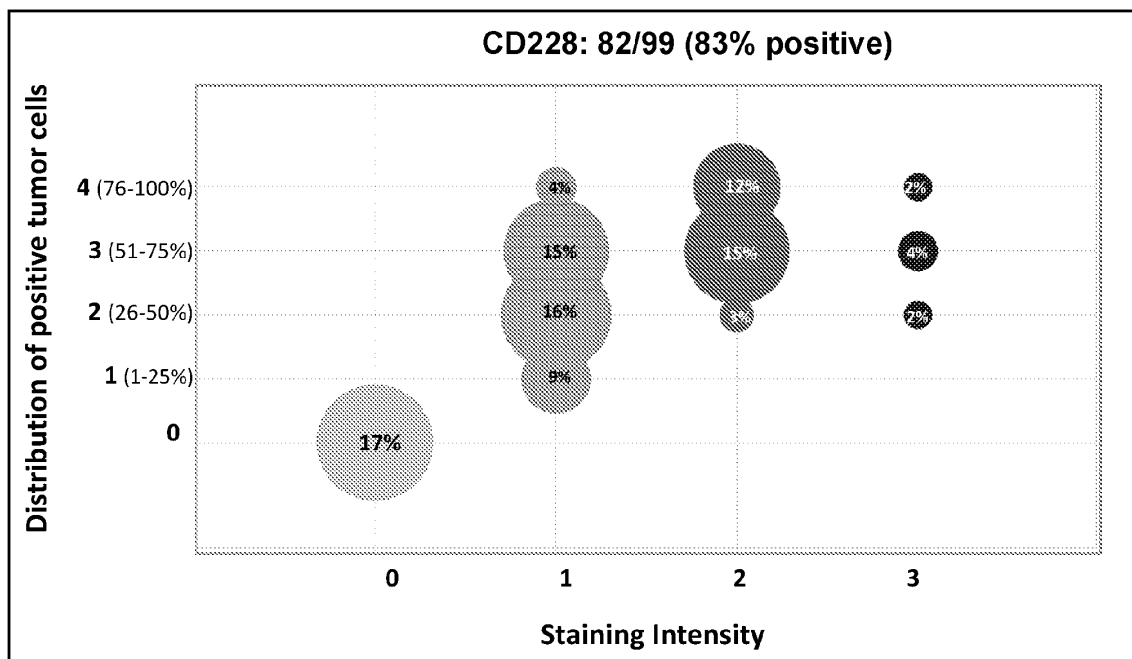
High CD228 Expression in Mesothelioma Cancer Patients

FIG. 3

High CD228 Expression in Colorectal Cancer Patients

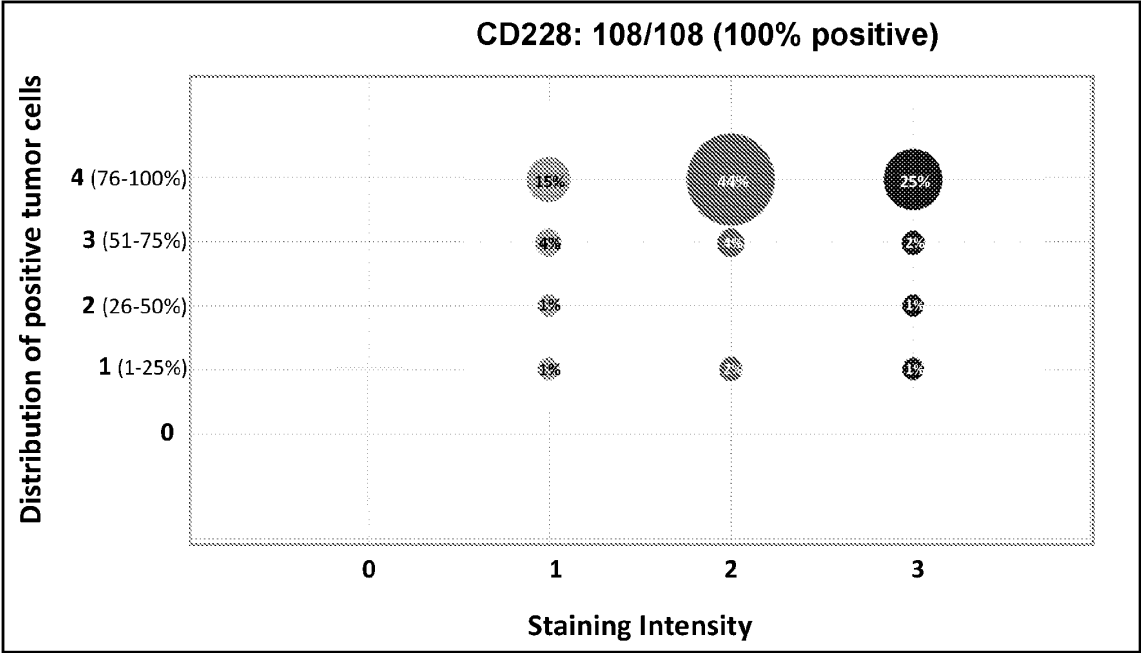
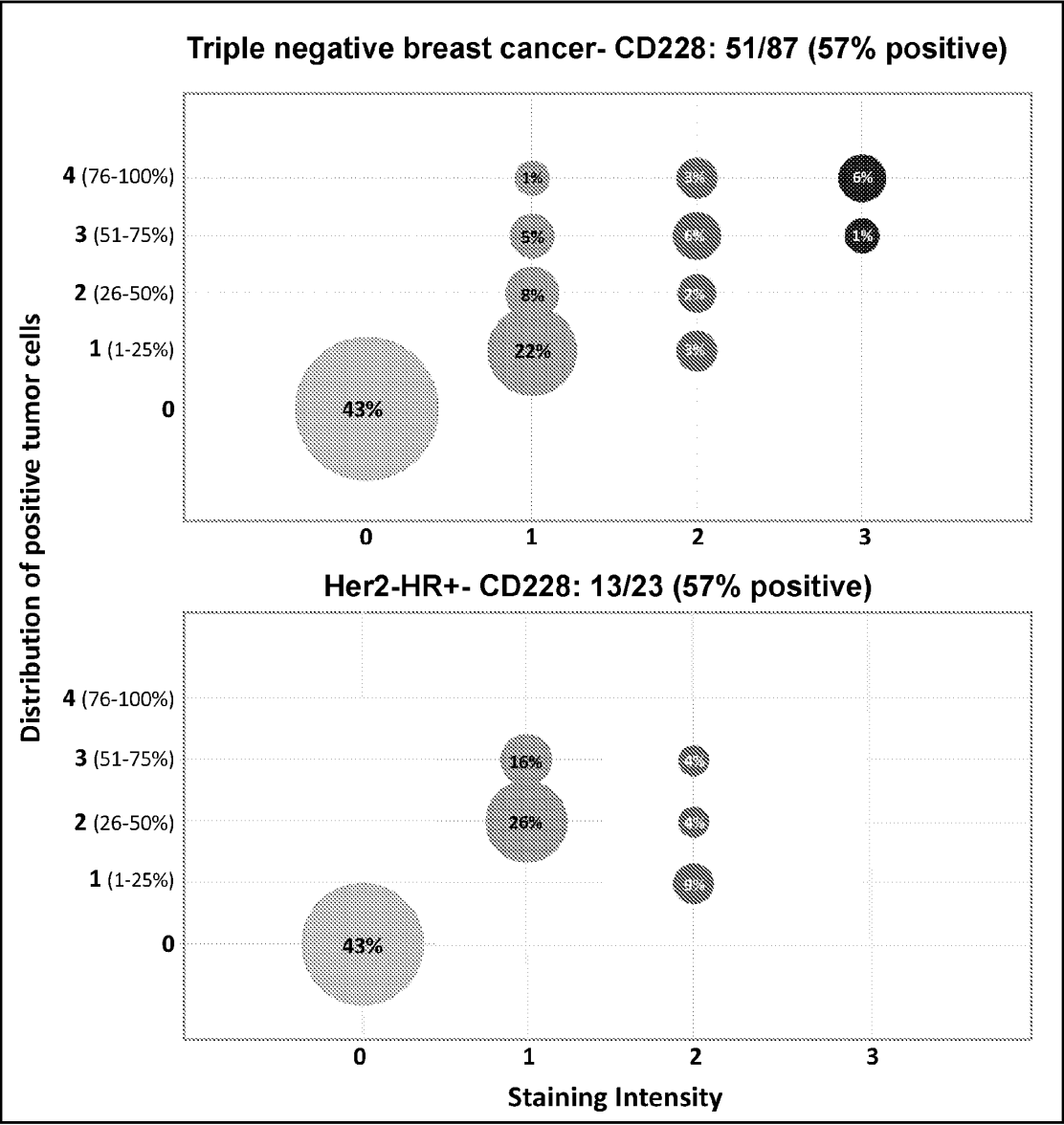


FIG. 4

High CD228 Expression in Breast Cancer Patients



5/35

FIG. 5

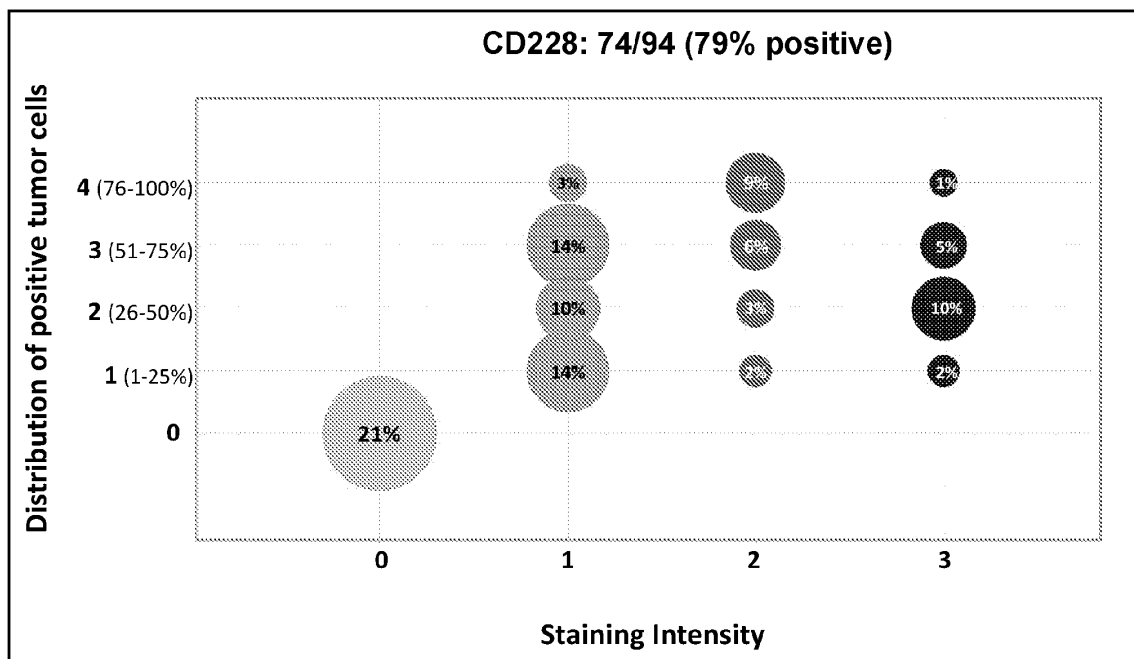
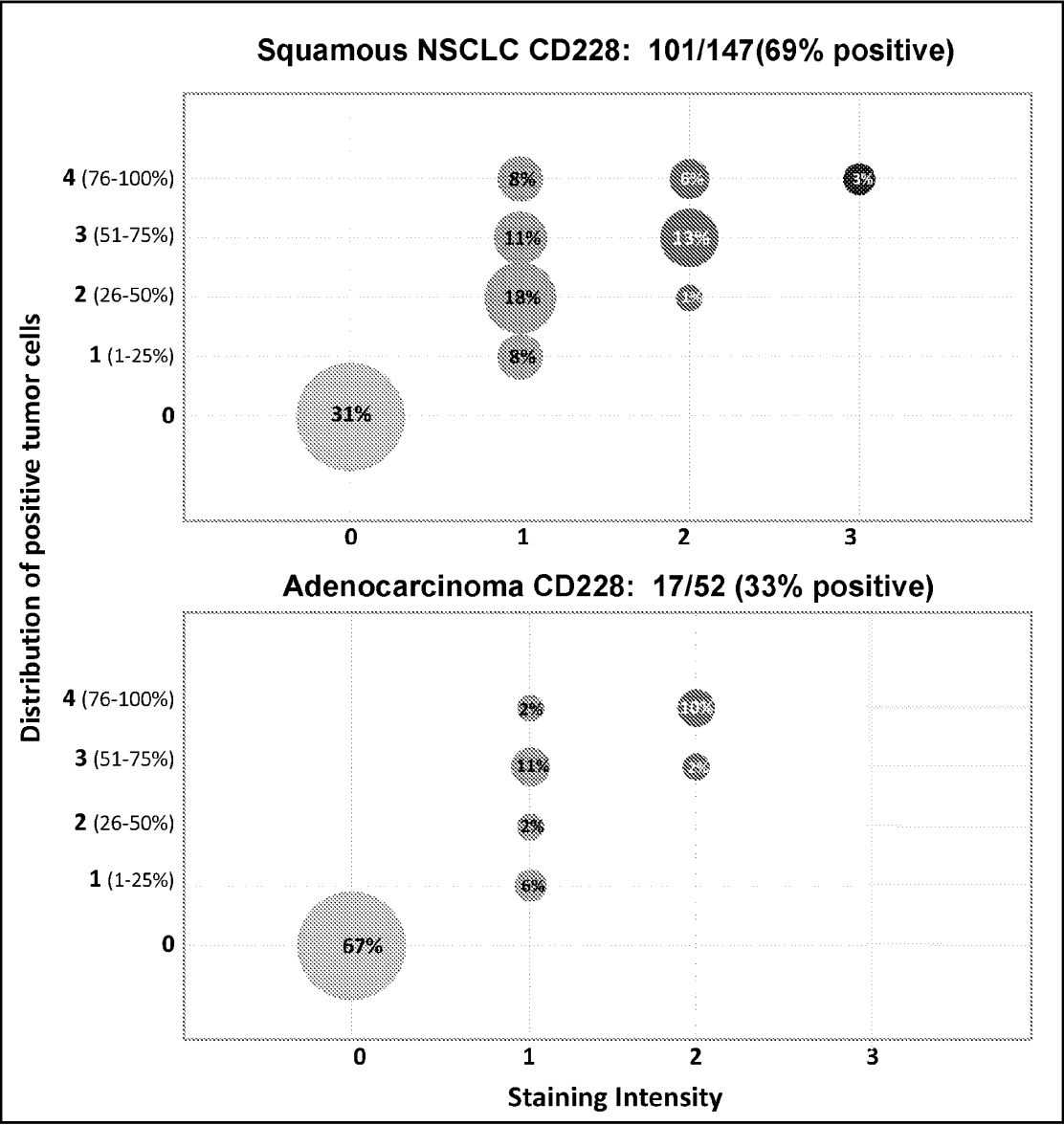
High CD228 Expression in Pancreatic Cancer Patients

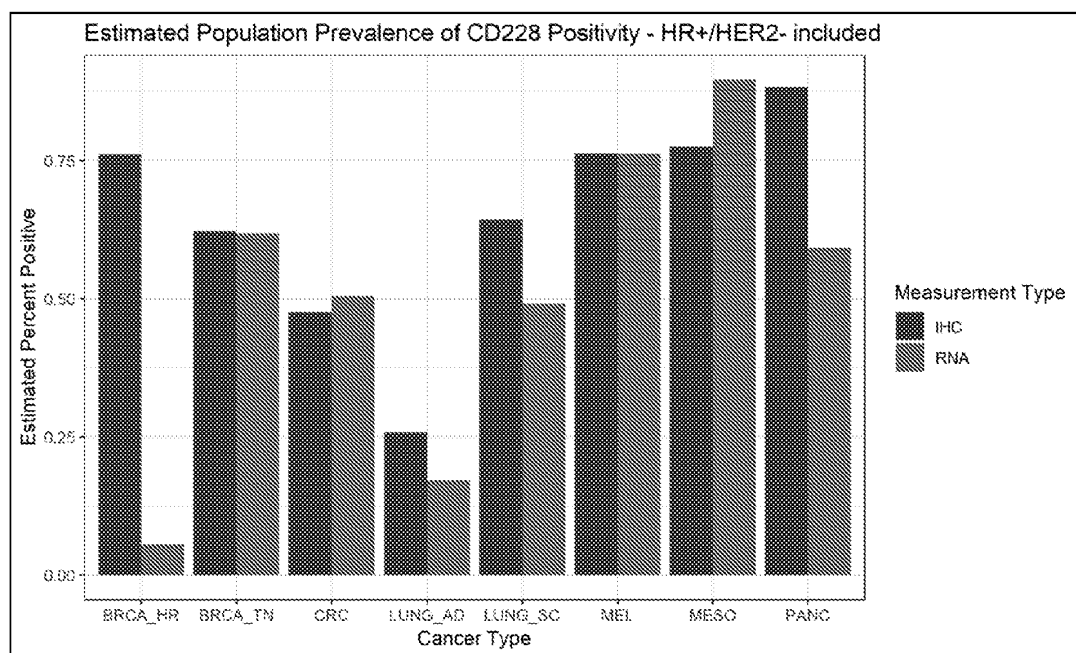
FIG. 6

High CD228 Expression in Non-Small Cell Lung Cancer Patients



7/35

FIG. 7



8/35

FIG. 8: Alignment of hL49 Heavy Chain Variants with Human Acceptor Sequence, IGHV4-59/HJ4.

	10	20	30	40	50	60	70
Ma L49 vH	S.....Q.....S.T.D..T.G..N...KF..NK..YM...SD..I.Y.....IS.T						
Hu IGHV4-59/HJ4	QVQLQESGPGGLVKPSETLSLTCTVSGGSISSYYWQWIRQPPGKGLEWIGYIYYSGSTNYNPSLKSRVTIS						
hvHA	D..T.G..N.....Y.....SD..I.Y.....						
hvHB	D..T.G..N.....F.....YM...SD..I.Y.....I...						
hvHC	D..T.G..N.....F.....YM...SD..I.Y.....I...						
Kabat CDRs			*****		*****		
IMGT CDRs			+++++++		+++++++		

	80	90	100	110
Ma L49 vH	YY.Q.NF...E...T.N...RTLATYYAM.....S...			
Hu IGHV4-59/HJ4	VDTSKNQFSLKLSGVTAADTAVYYCAR-----YFDYWGQGTLLVTVSS			
hvHA	R.....Y.....RTLATYYAM.....			
hvHB	R.....Y.....RTLATYYAM.....			
hvHC	R.....Y.....F.....N...RTLATYYAM.....			
Kabat CDRs			*****	
IMGT CDRs			+++++++	

FIG. 9: Alignment of hL49 Heavy Chain Variants

	10	20	30	40	50	60	70
hvHA	QVQLQESGPGGLVKPSETLSLTCTVSGDSITSGYWNWIRQPPGKGLEWIGYISDSGITYYNPSLKSRVTIS						
hvHB	F.....M.....I...						
hvHC	F.....M.....I...						
Kabat CDRs			*****		*****		
IMGT CDRs			+++++++		+++++++		

	80	90	100	110
hvHA	RDTSKNQYSLKLSGVTAADTAVYYCARRTLATYYAMDYWGQGTLLVTVSS			
hvHB				
hvHC	F.....N.....			
Kabat CDRs			*****	
IMGT CDRs			+++++++	

FIG. 10: Alignment of hL49 Light Chain Variants with Human Acceptor Sequence, IGKV2-30/KJ2.

	10	20	30	40	50	60
Mu L49 vL						
Hu IGKV2-30/KJ2	DFVMTQSPFLSLPVTLGQPASISCRSSQSLVYSDGNTYLNWFQQRPGQSPRRLLIYKVSNRDSGVPDRFSGS					
hvLA						
hvLB						
hvLC						
Kabat CDRs		*****			*****	
IMGT CDRs		+++++			+++	

	70	80	90	100
Mu L49 vL				
Hu IGKV2-30/KJ2	GGGTDFTLKISPRVEAEDVGYYCMQGTHTWPTFGGQGTKLEIKR			
hvLA				
hvLB				
hvLC				
Kabat CDRs		*****		
IMGT CDRs		+++++		

FIG. 11: Alignment of hL49 Light Chain Variants

	10	20	30	40	50	60
hvLA	DFVMTQSPFLSLPVTLGQPASISCRASQSLVHNGNTYLNWFQQRPGQSPRRLLIYRVSNRFSGVPDRFSGS					
hvLB						
hvLC						
Kabat CDRs		*****			*****	
IMGT CDRs		+++++			+++	

	70	80	90	100
hvLA	GGGTDFTLKISPRVEAEDVGYYCSQSTHVPPTFGGQGTKLEIKR			
hvLB				
hvLC				
Kabat CDRs		*****		
IMGT CDRs		+++++		

FIG. 12A

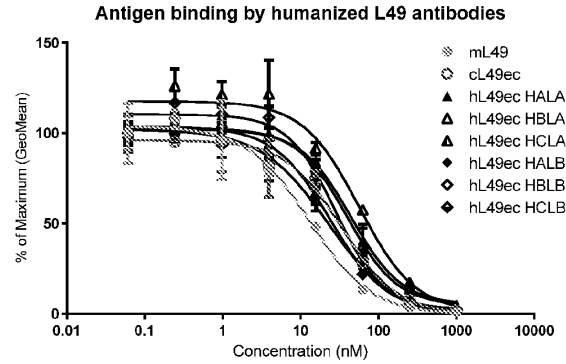


FIG. 12D

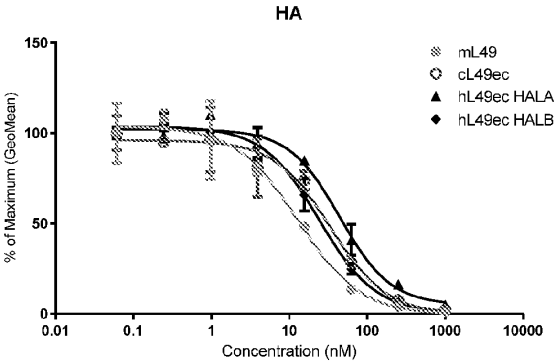


FIG. 12B

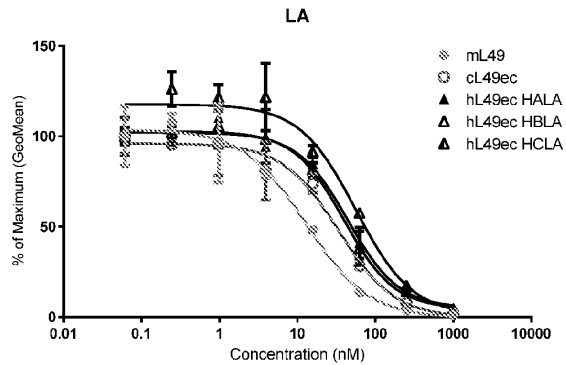


FIG. 12E

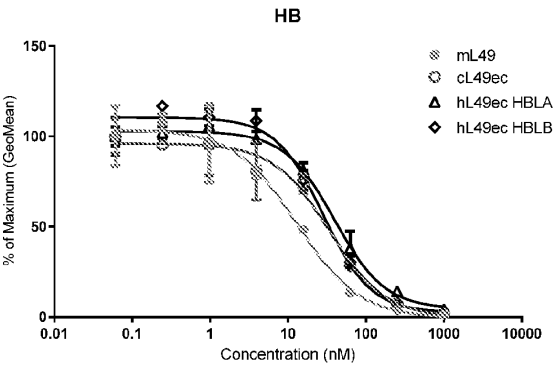


FIG. 12C

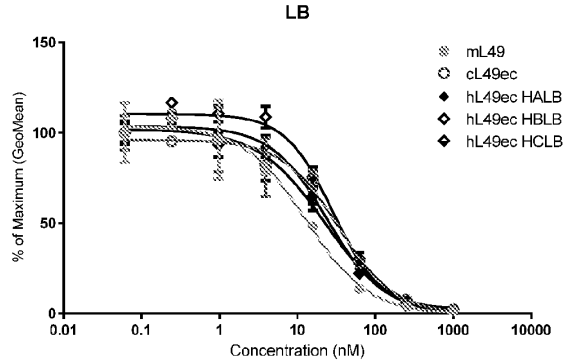


FIG. 12F

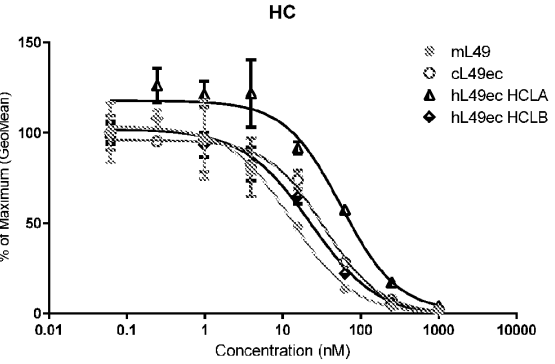
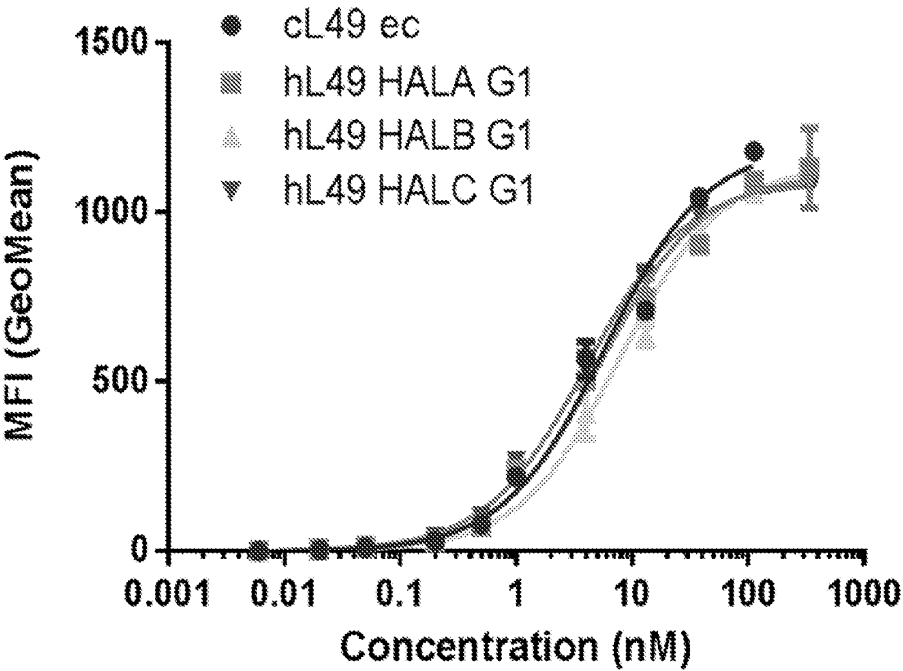


FIG. 13



kD	cL49 ec	hL49 HALA G1	hL49 HALB G1	hL49 HALC G1
nM	5.8	5.3	7.8	4.0
ug/mL	0.9	0.8	1.2	0.6

FIG. 14A

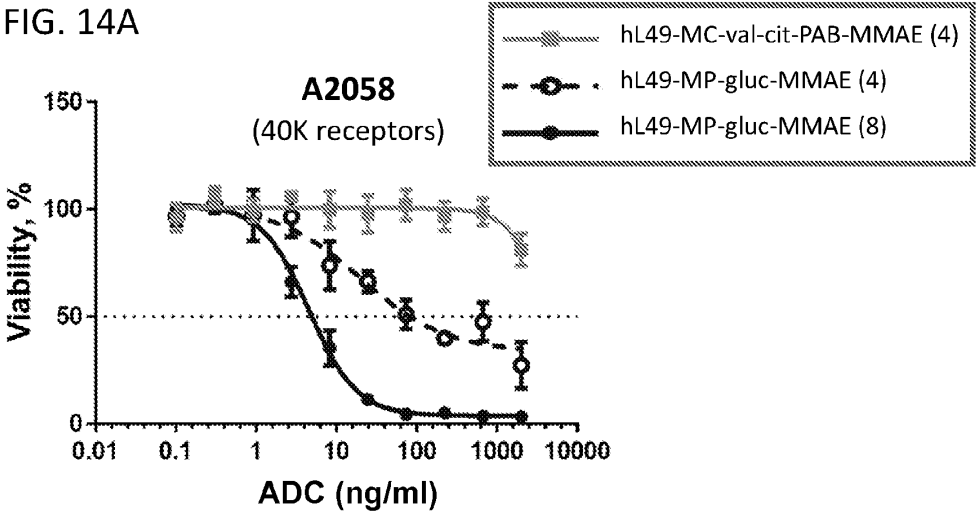


FIG. 14B

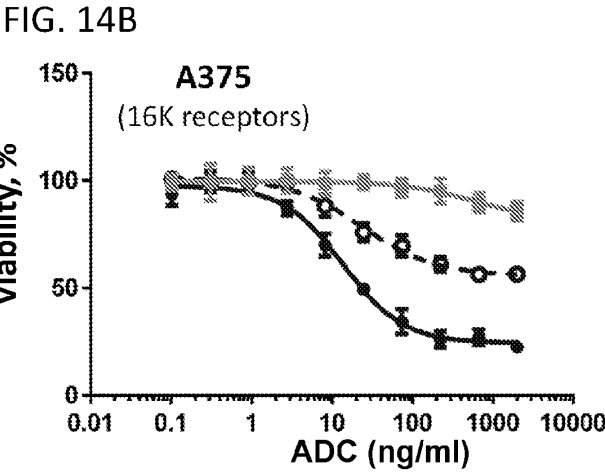


FIG. 14C

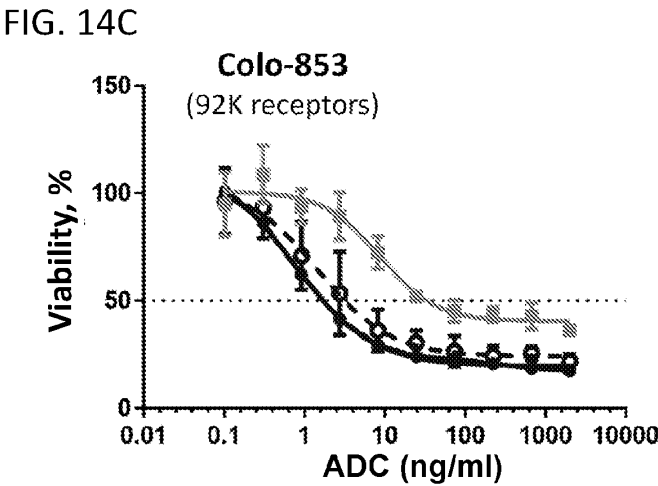


FIG. 15

A2058 melanoma xenograft model
45,000 CD228 molecules

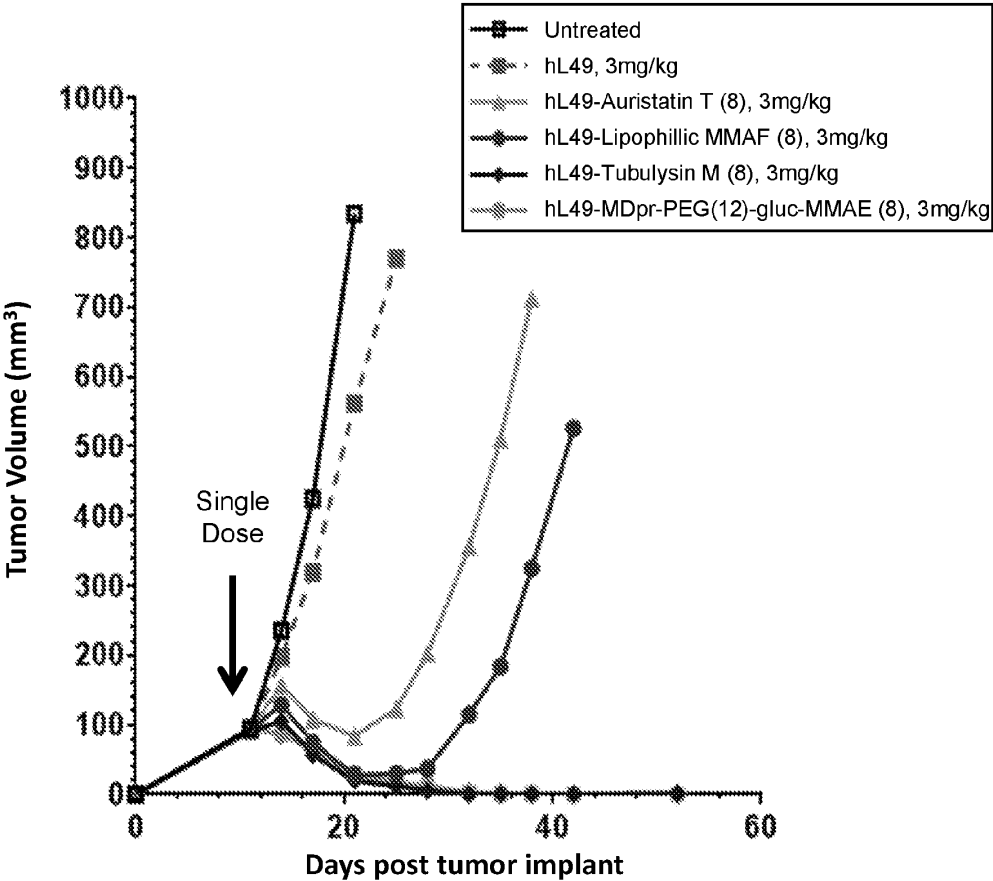


FIG. 17

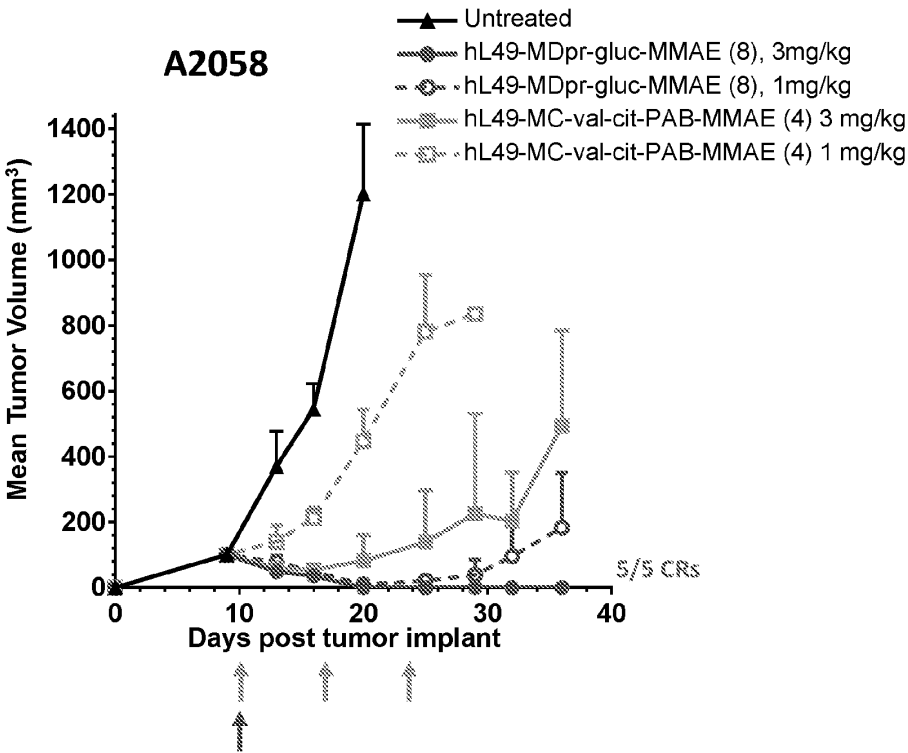


FIG. 18

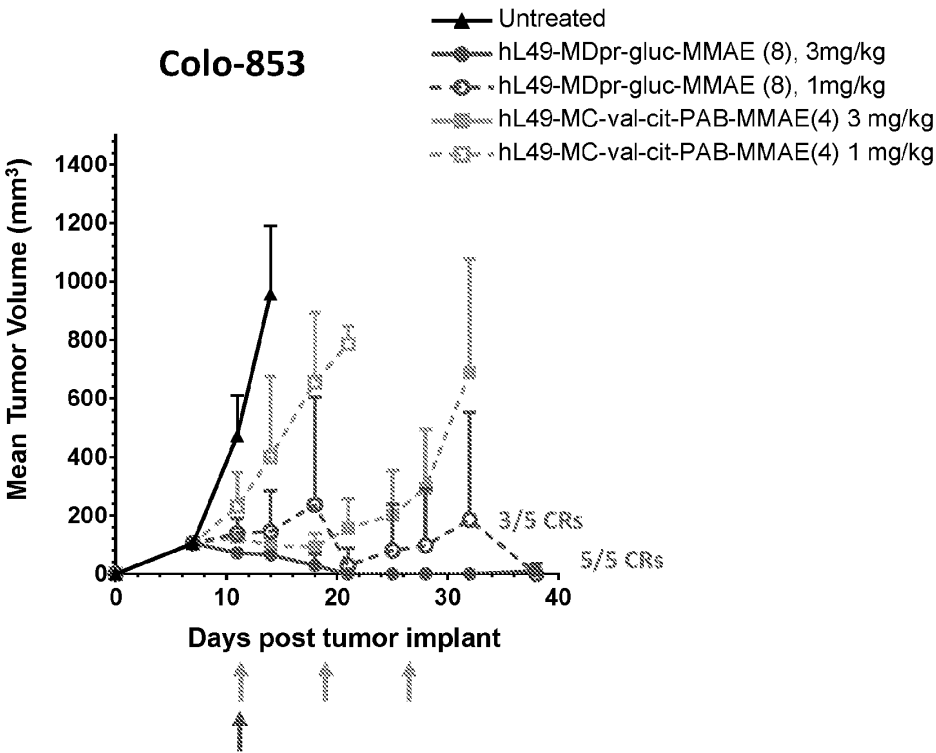


FIG. 19

A2058 melanoma xenograft model
45,000 CD228 molecules

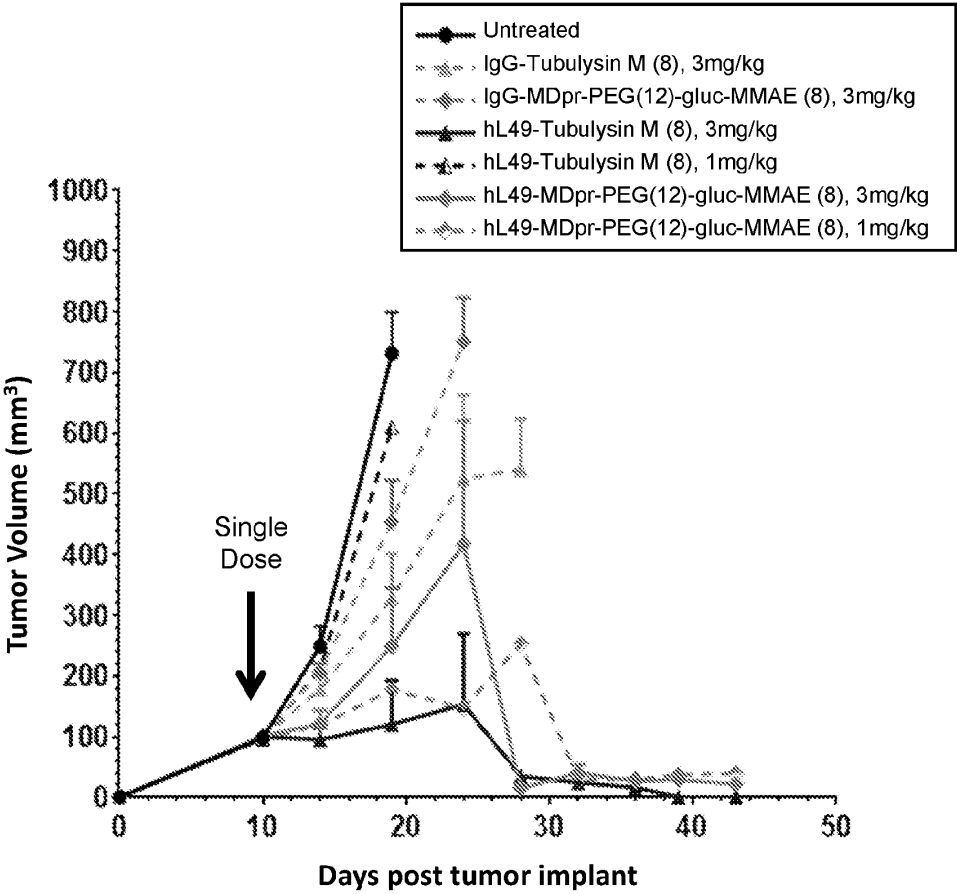


FIG. 21
IGR-37 melanoma xenograft model
24,000 CD228 molecules

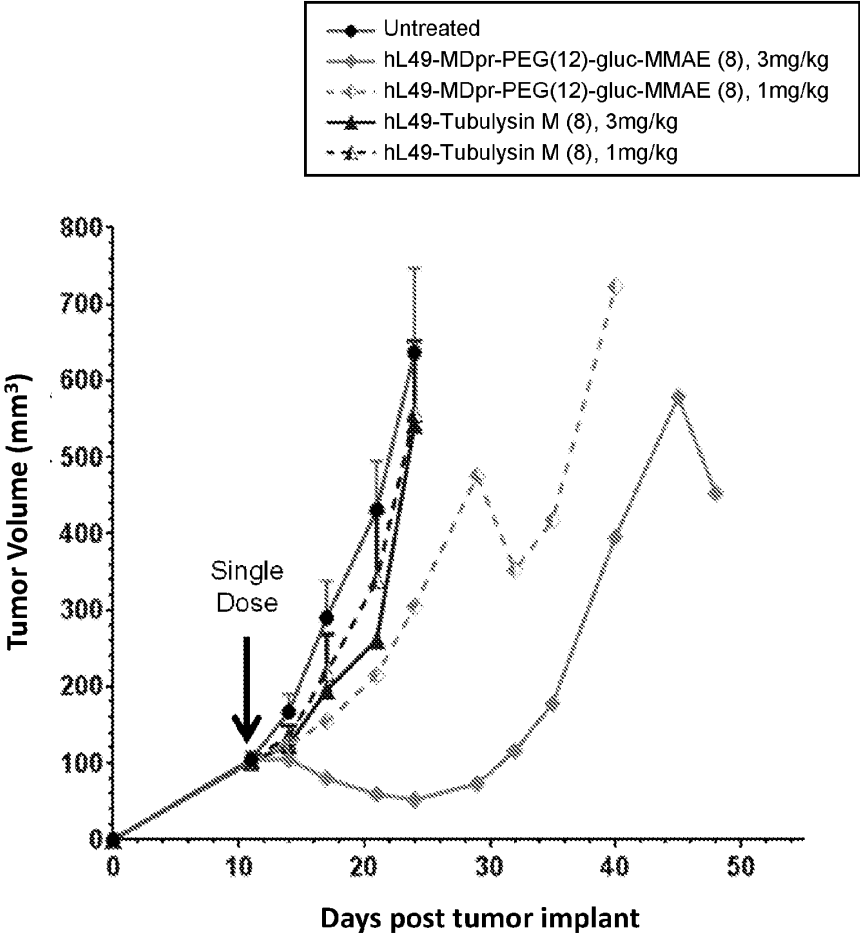


FIG. 22

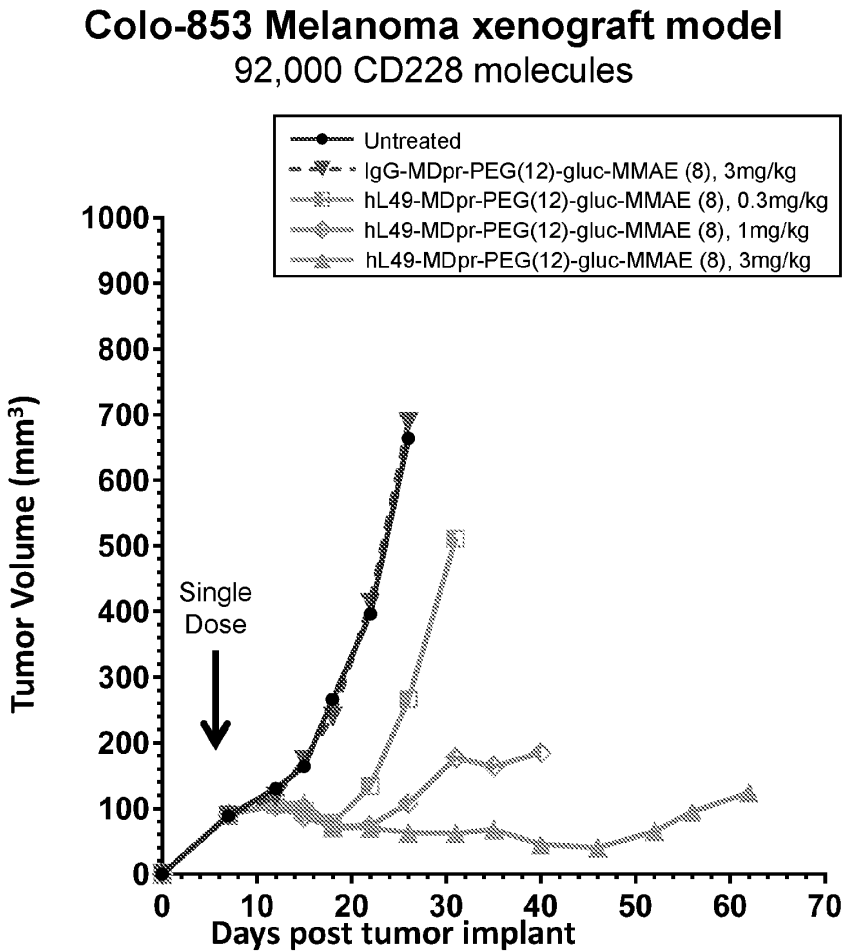


FIG. 23

LU0697 Squamous NSCL PDX model

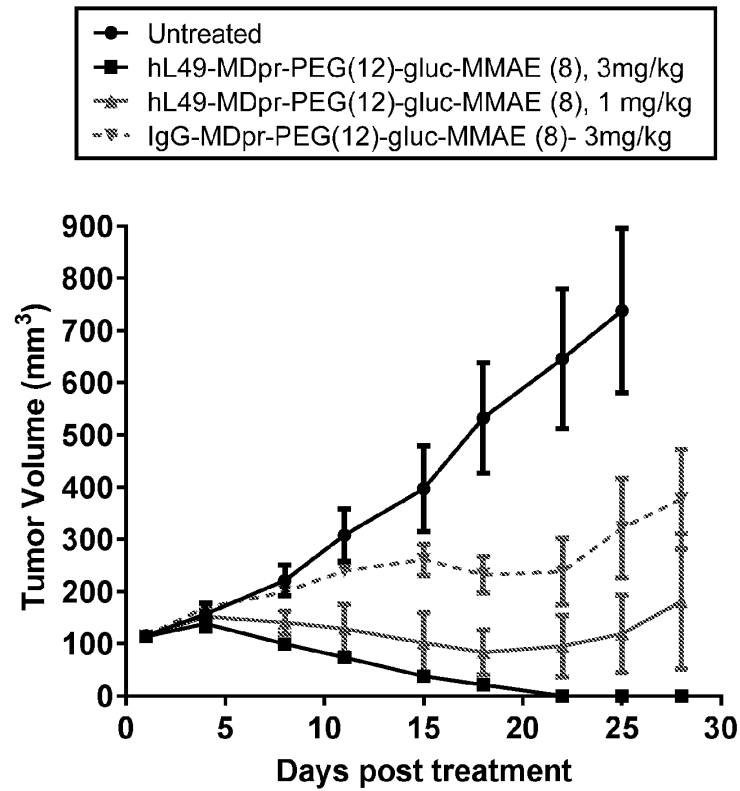


FIG. 24

LU0697 Adenocarcinoma NSCL PDX model

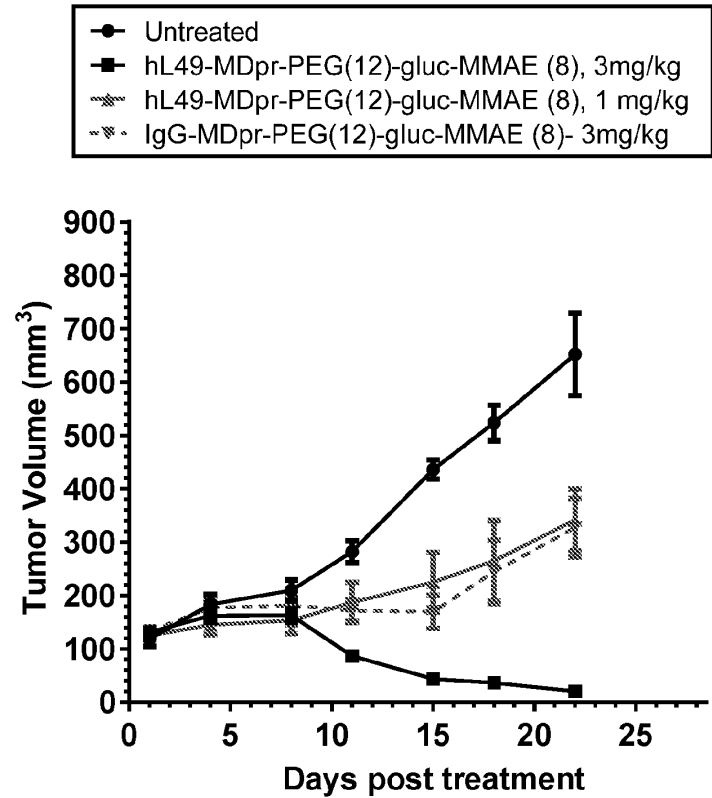


FIG. 25

MDA-MB-231 TNBC xenograft model
175,000 CD228 molecules

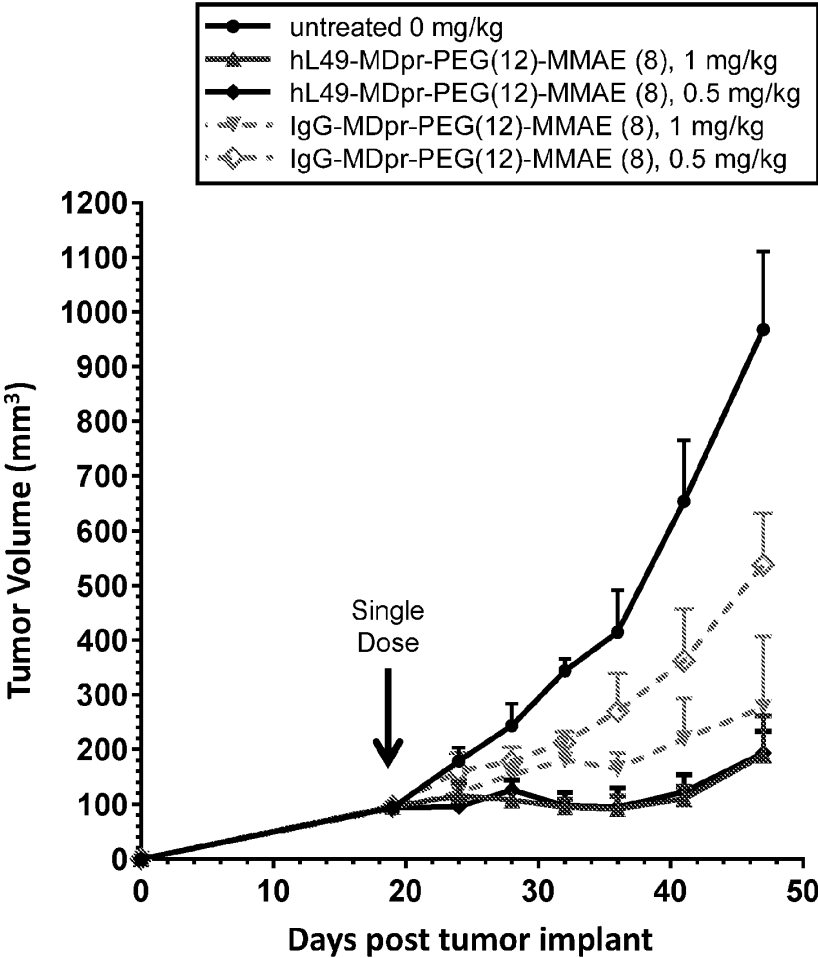


FIG. 26

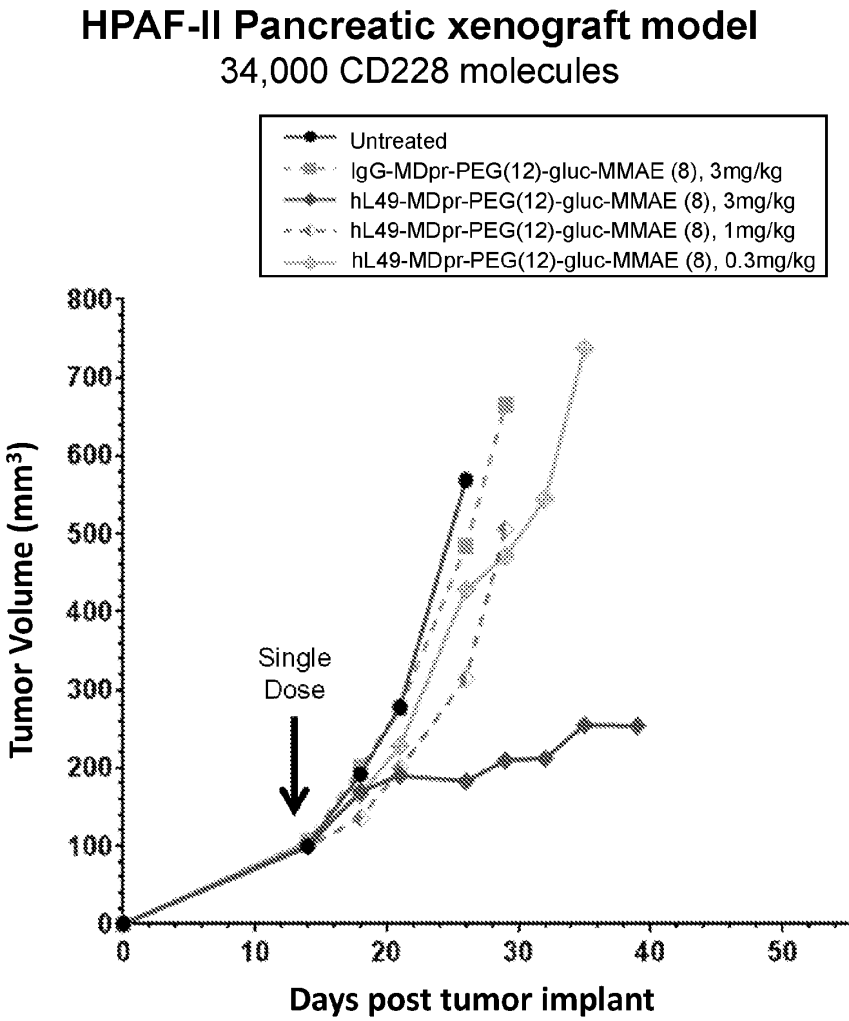


FIG. 27

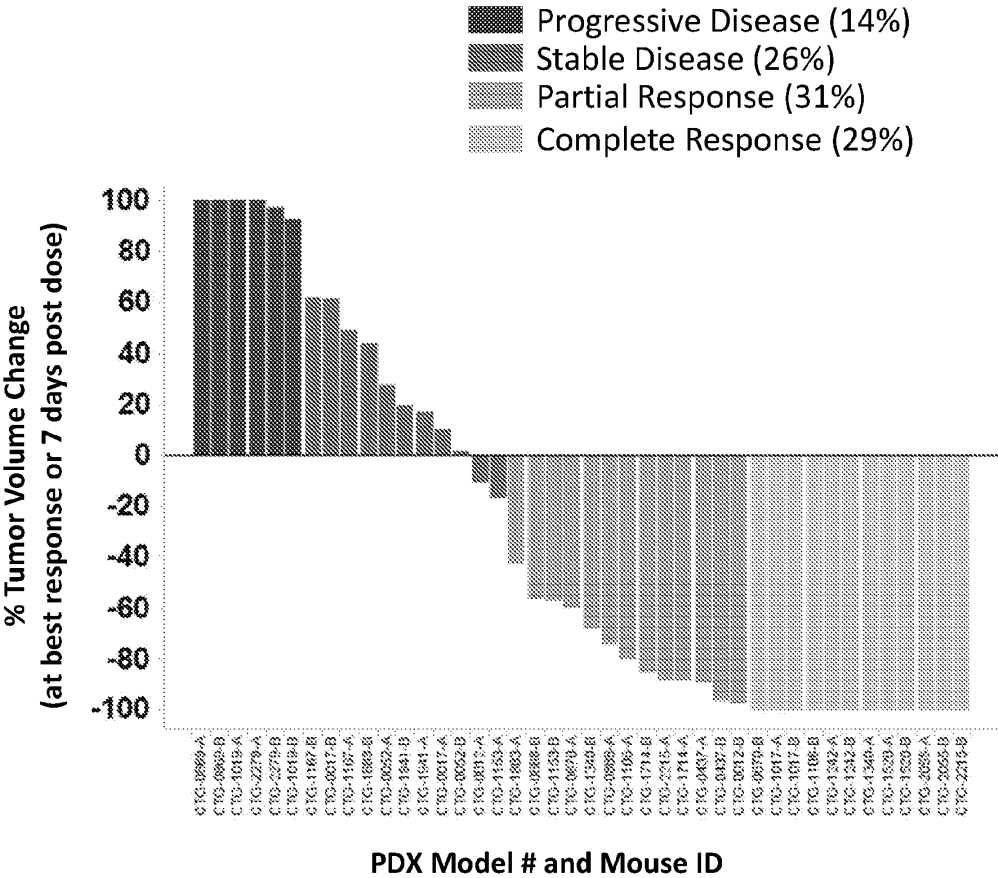


FIG. 28A

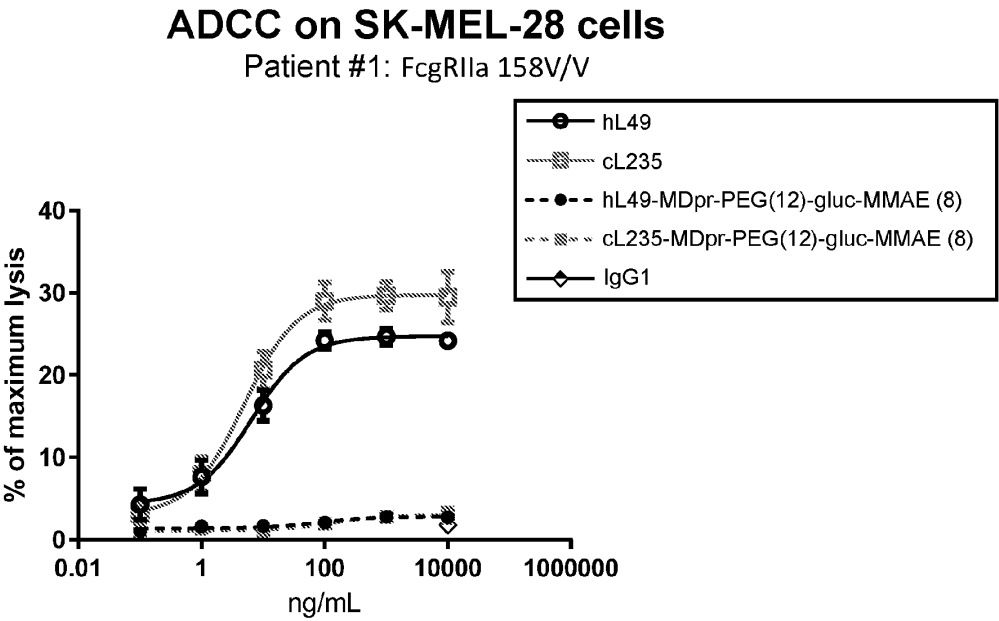


FIG. 28B

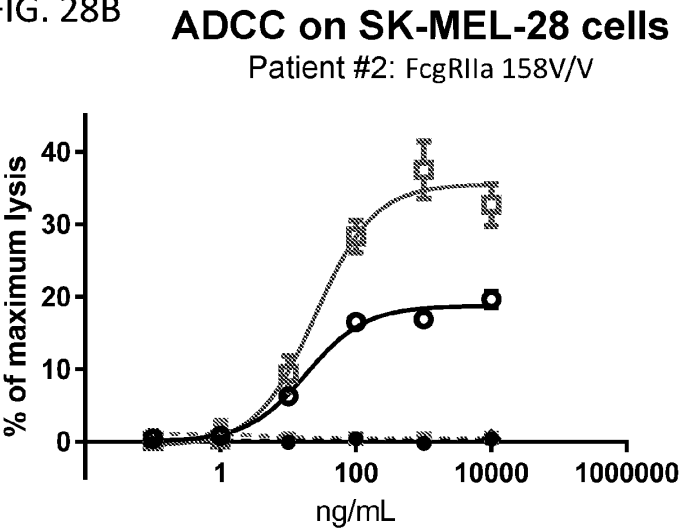


FIG. 29A

PK of hL49-MDpr-PEG(12)-gluc-MMAE(8) in nude mice

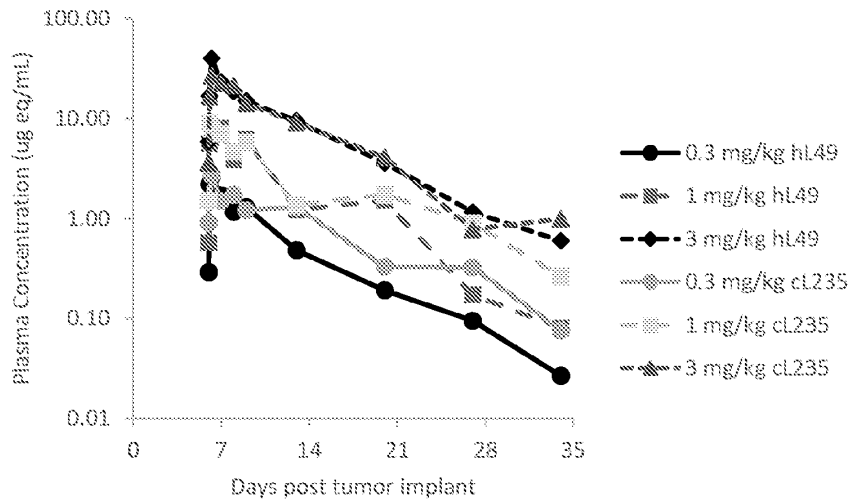
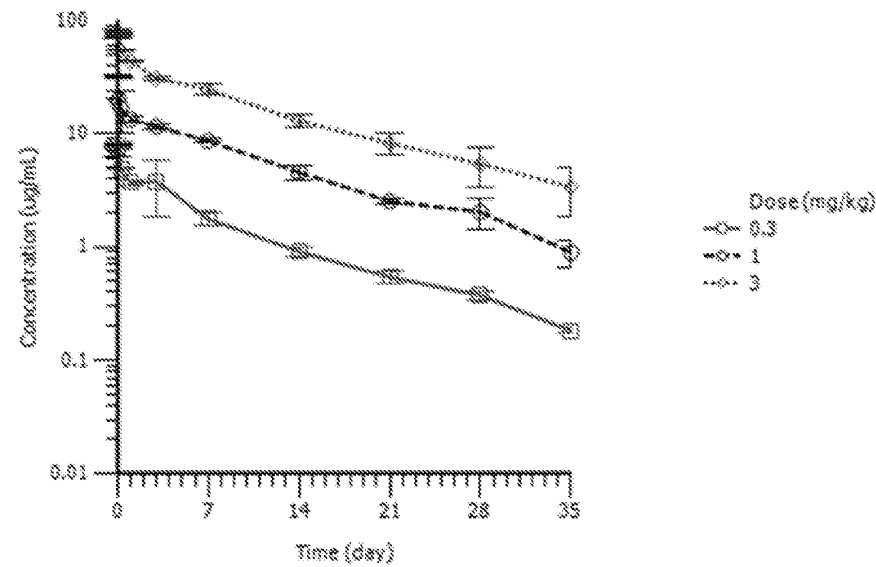


FIG. 29B



28/35

FIG. 30A

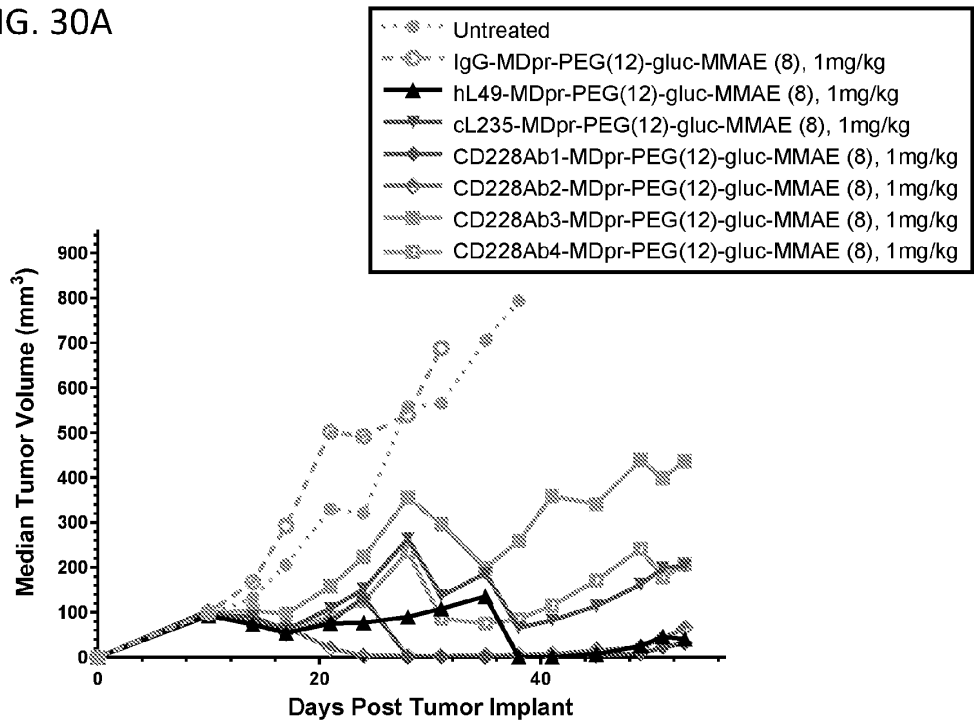


FIG. 30B

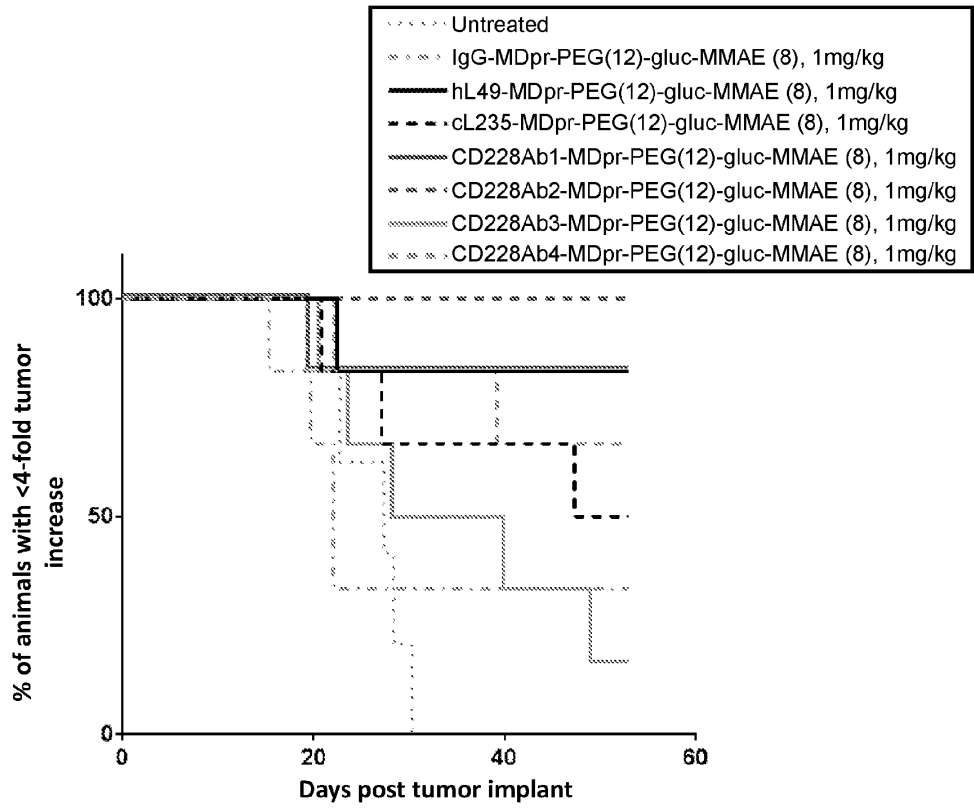


FIG. 31A

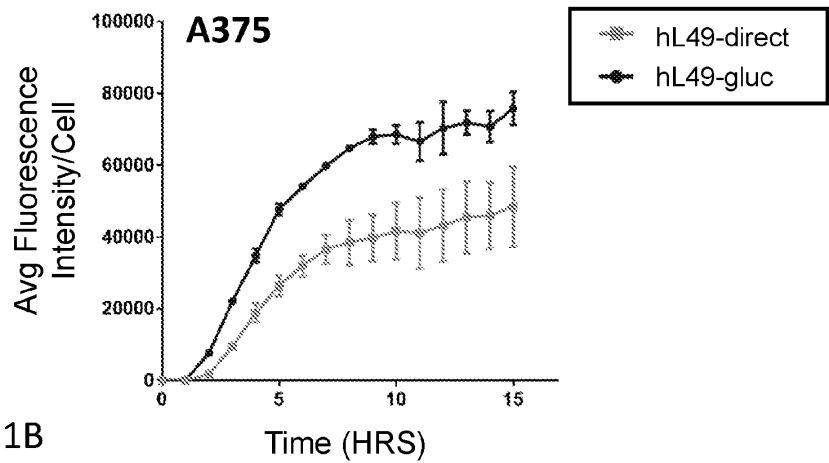


FIG. 31B

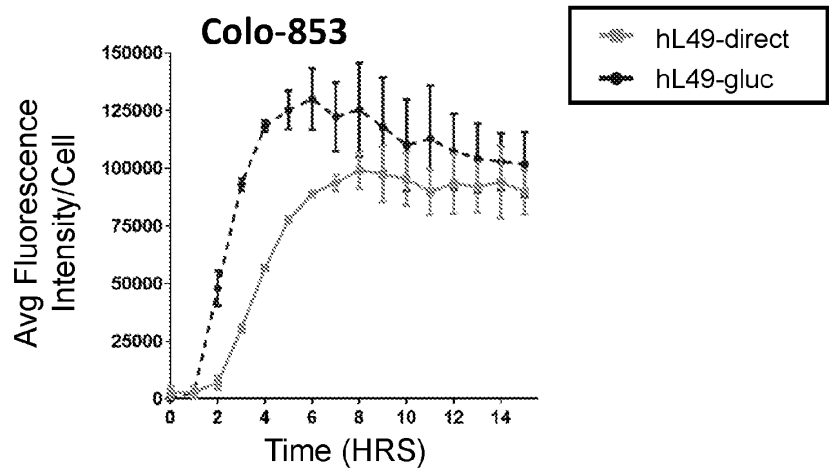


FIG. 32

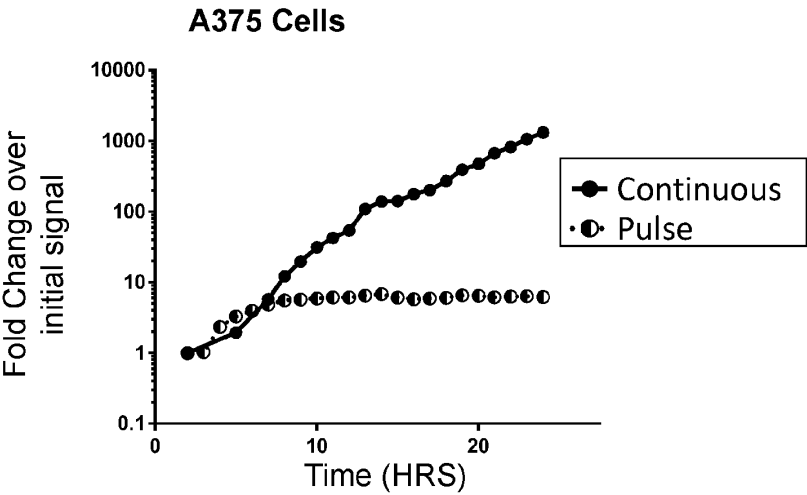


FIG. 33A

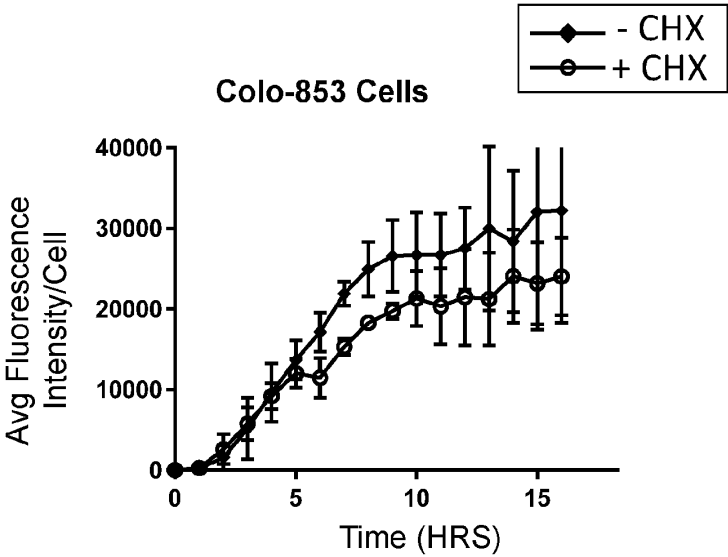


FIG. 33B

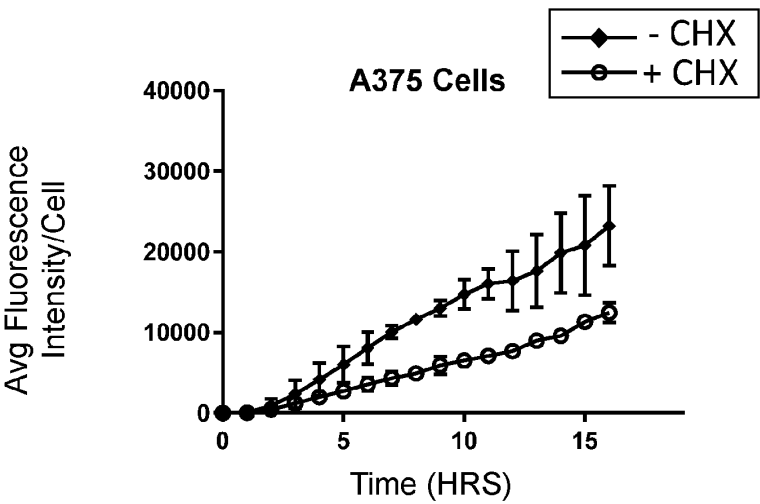


FIG. 34A

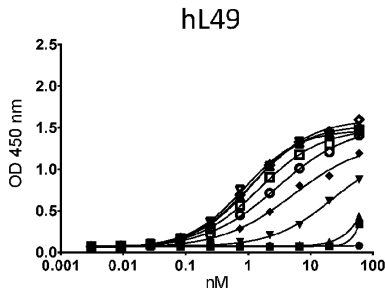


FIG. 34B

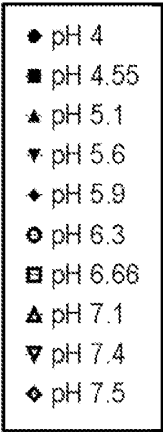
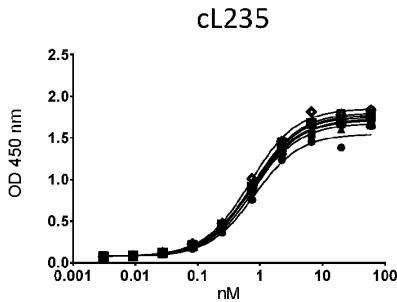


FIG. 34C

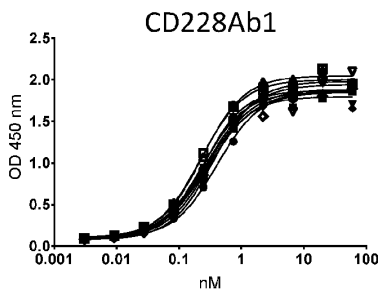


FIG. 34D

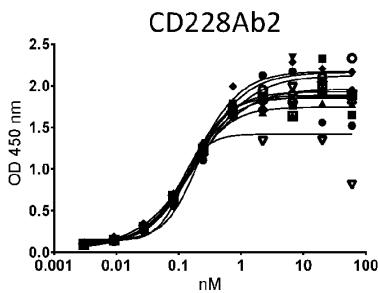


FIG. 34E

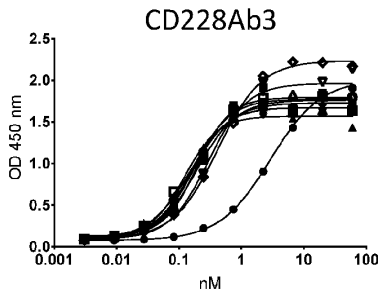


FIG. 34F

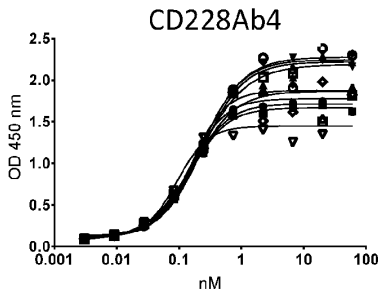


FIG. 35A

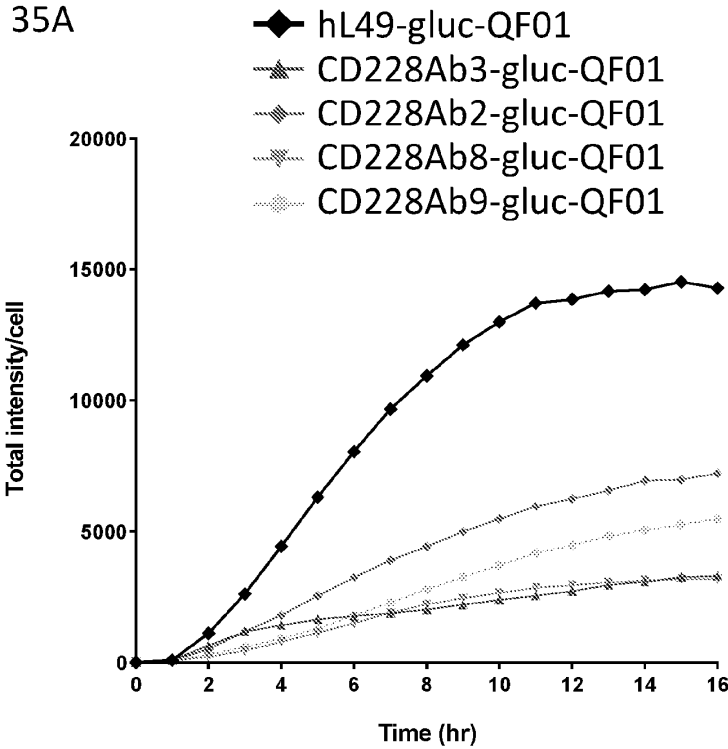


FIG. 35B

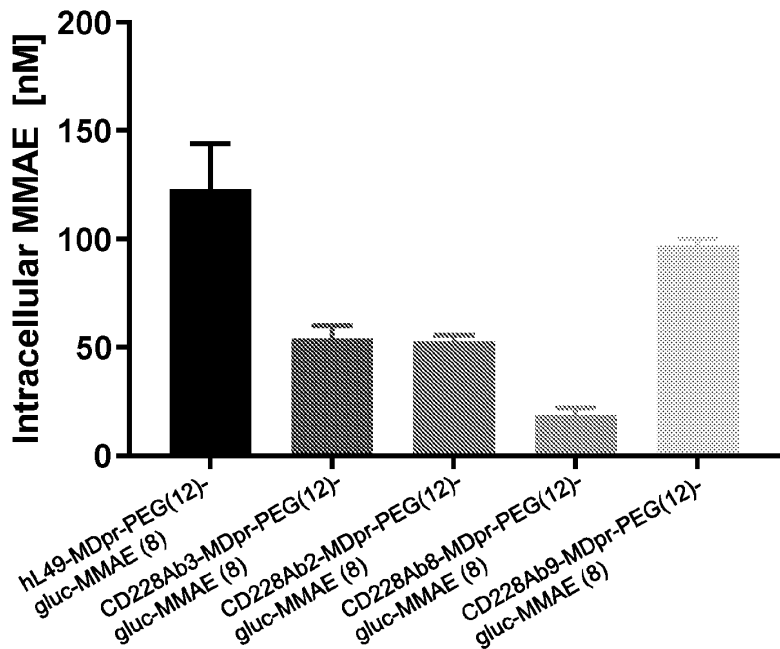


FIG. 36A

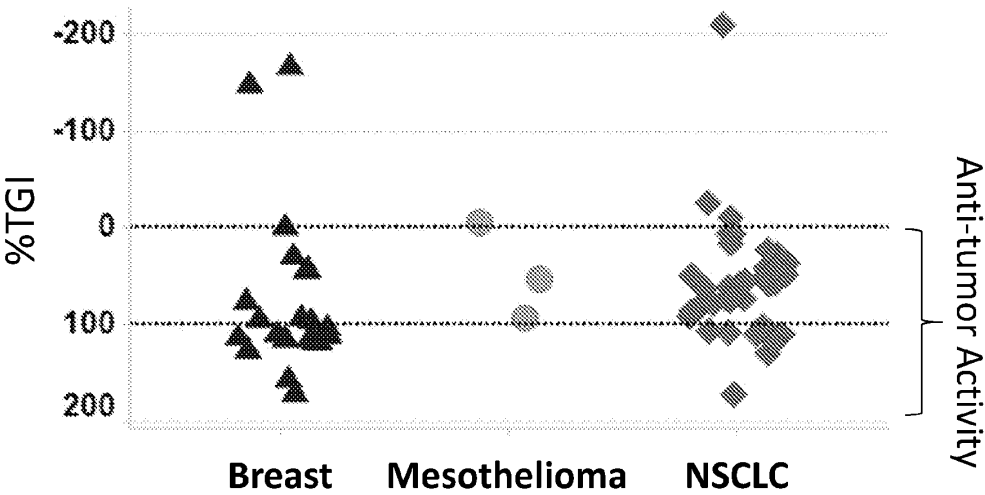
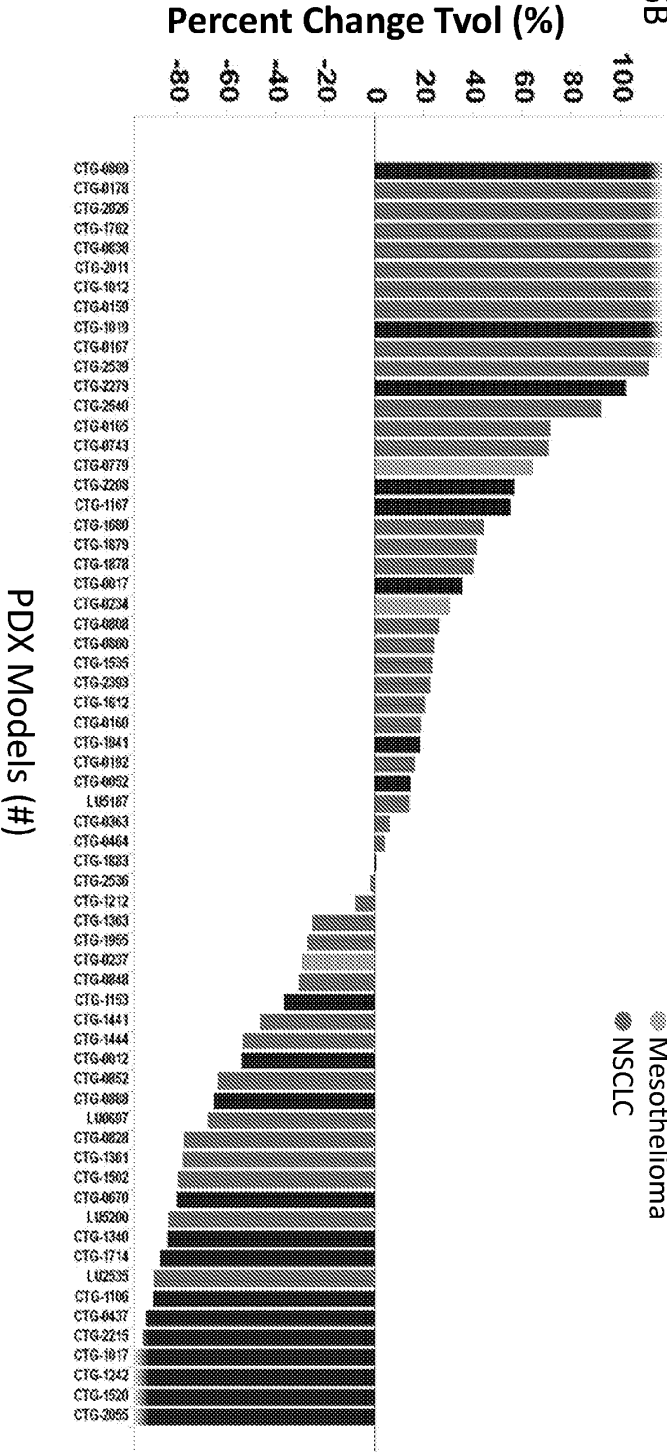


FIG. 36B

● Breast
● Mesothelioma
● NSCLC



RESIST criteria	Overall (n=64)	TNBC (n=22)	NSCLC (n=49)
ORR (<30%)	36%	59%	26%
SD (<20%)	20%	14%	23%
PD (>20%)	44%	27%	51%