

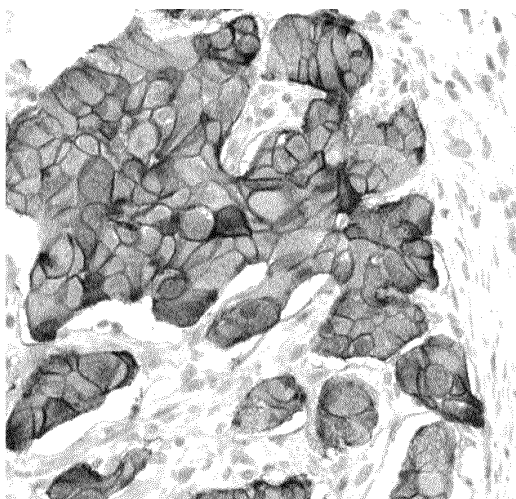


FIG. 1A

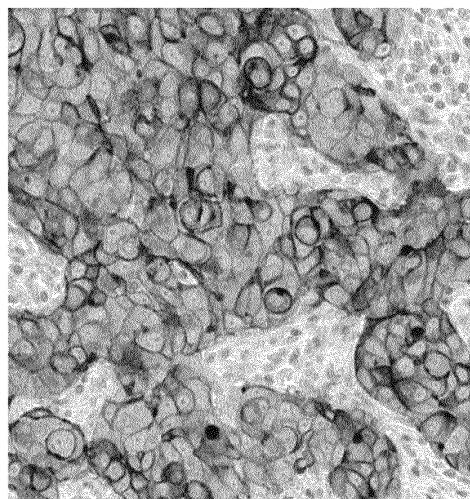


FIG. 1B

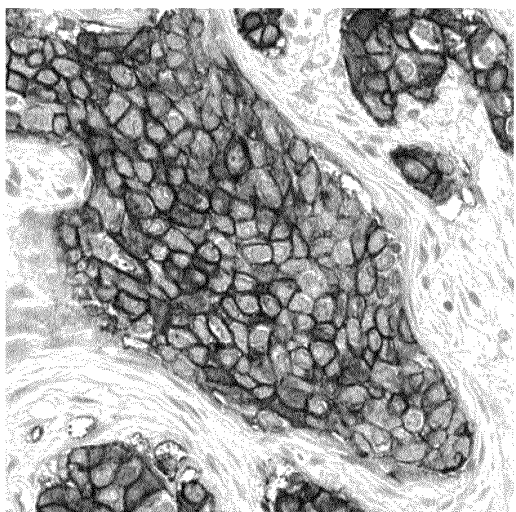


FIG. 1C

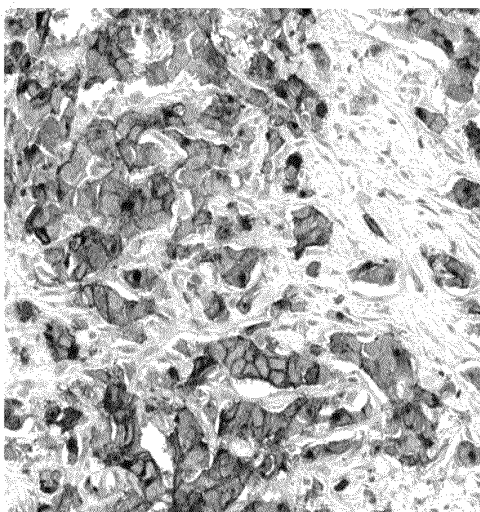


FIG. 1D

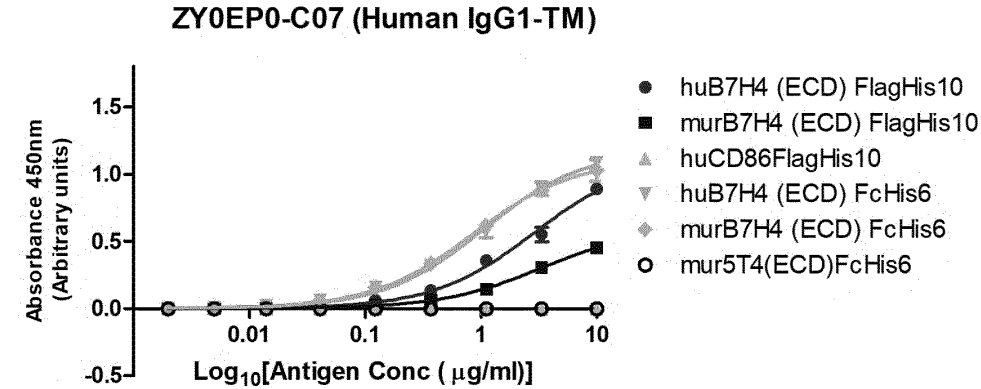


FIG. 2A

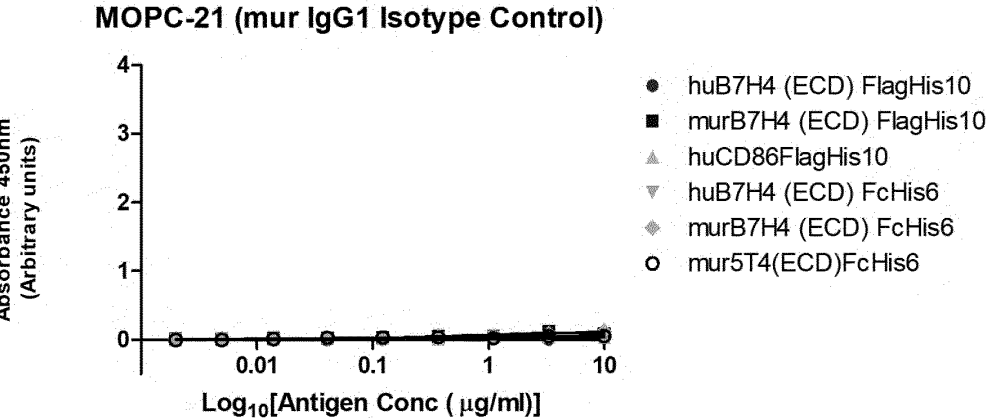


FIG. 2B

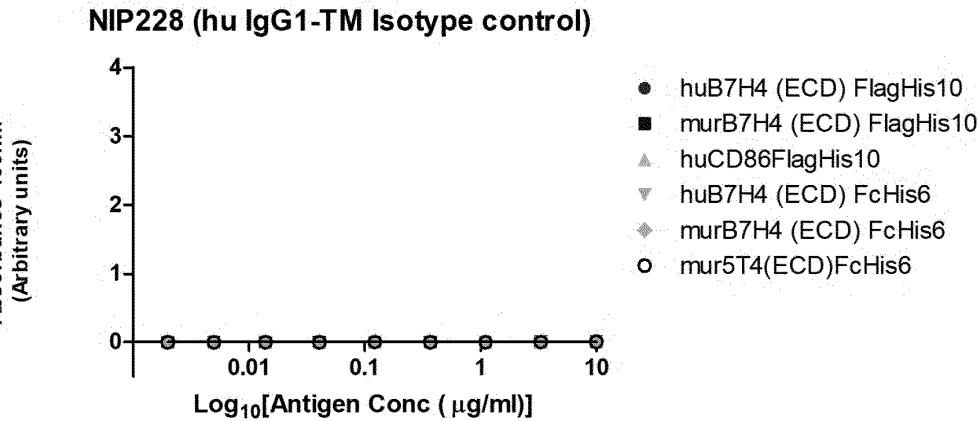


FIG. 2C

ZY0EQD-E02 (Human IgG1-TM)

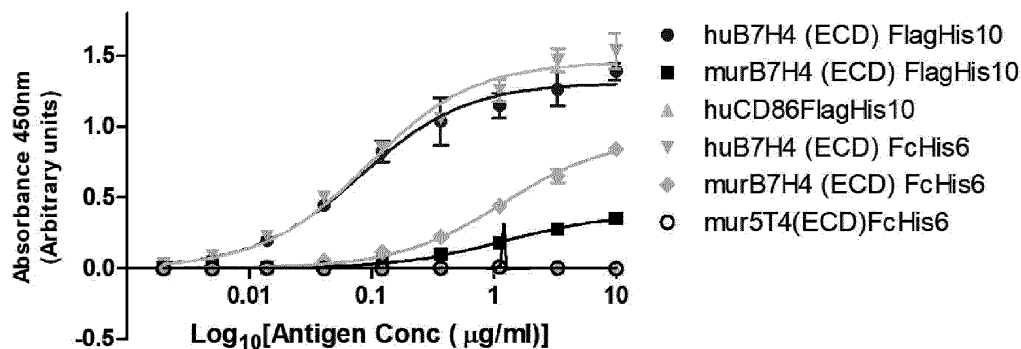


FIG. 2D

ZY0EO5-E07 (Human IgG1-TM)

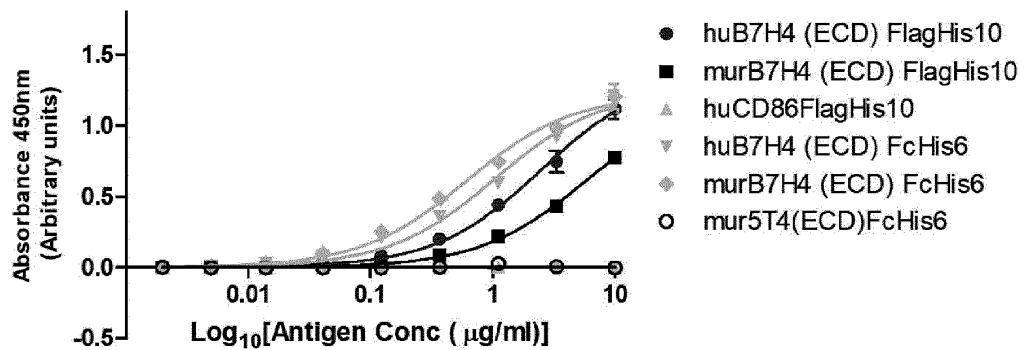


FIG. 2E

ZY0EPQ-E02 (Human IgG1-TM)

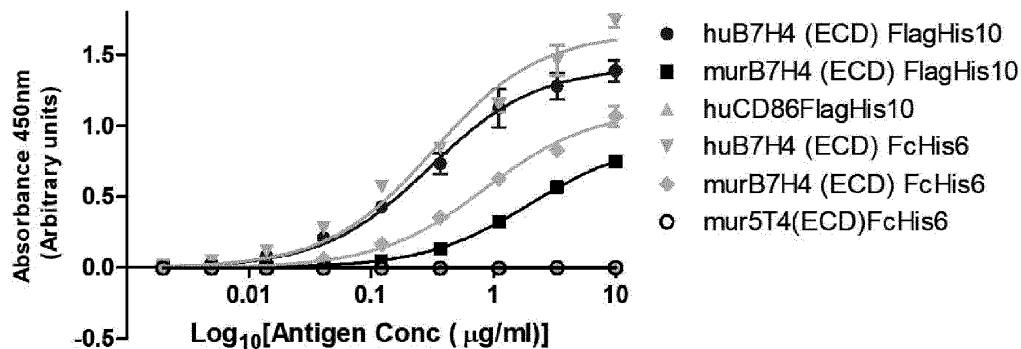


FIG. 2F

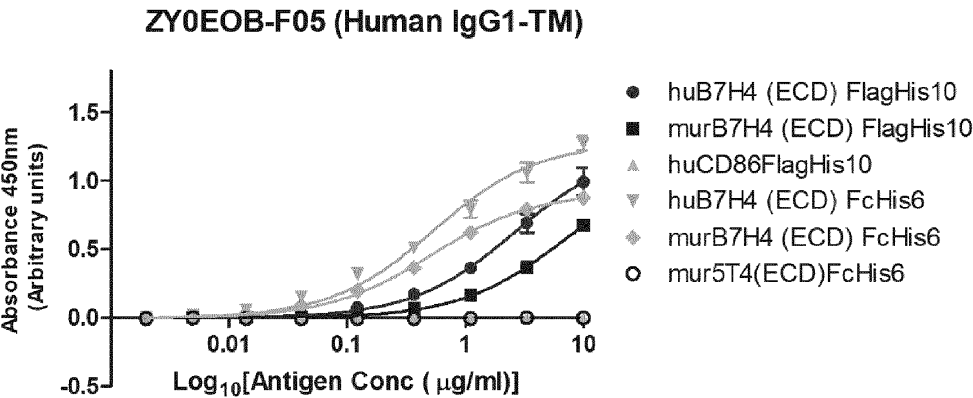


FIG. 2G

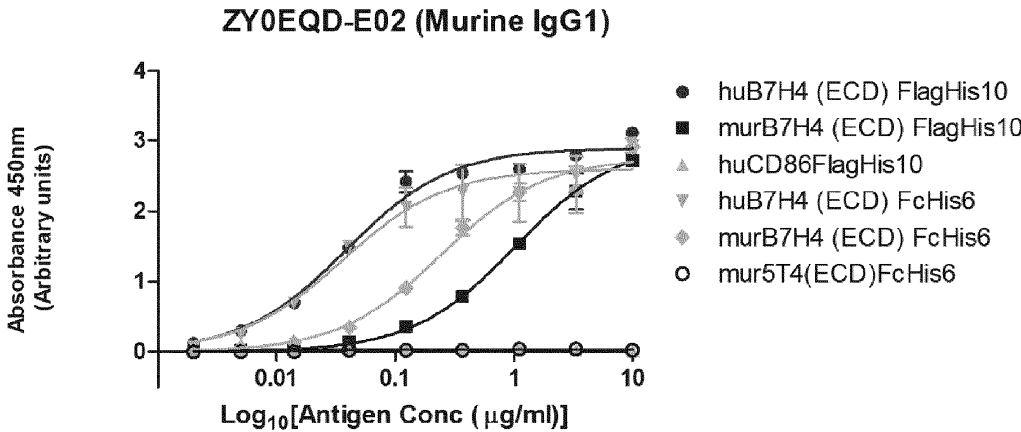


FIG. 2H

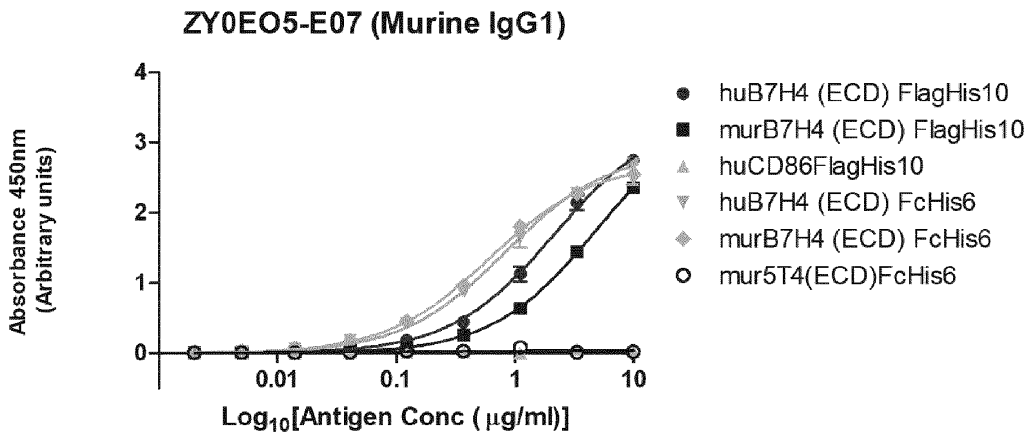


FIG. 2I

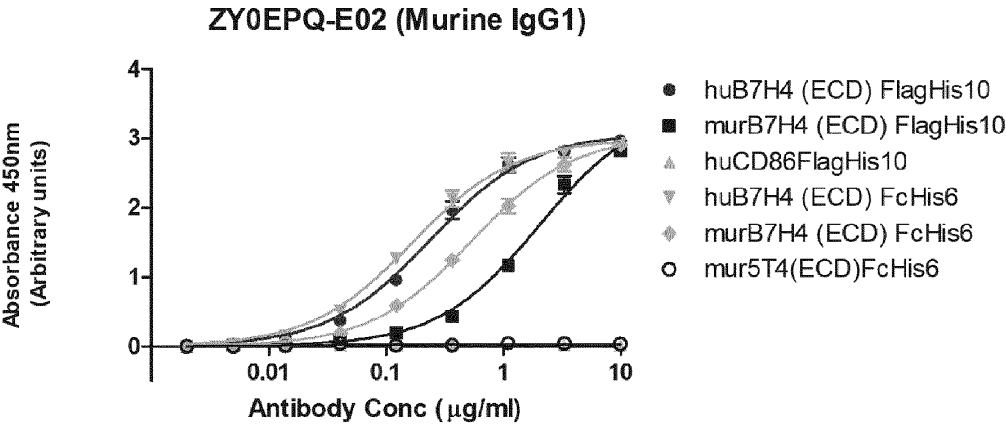


FIG. 2J

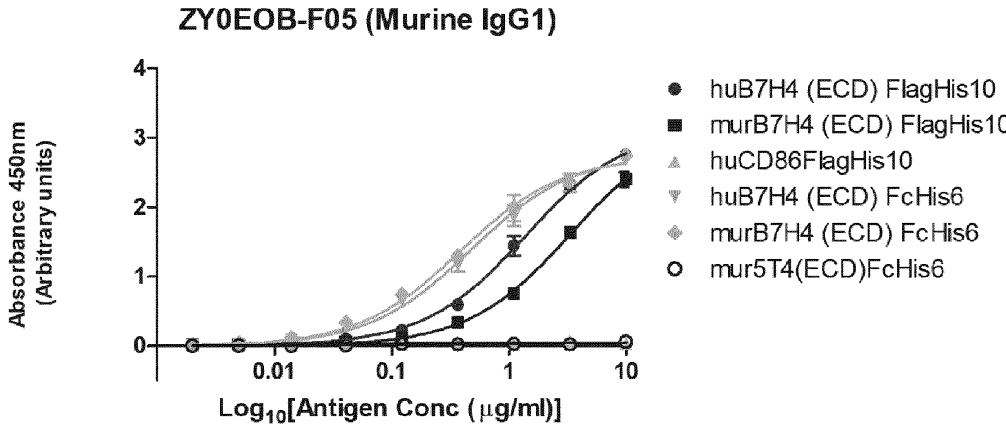


FIG. 2K

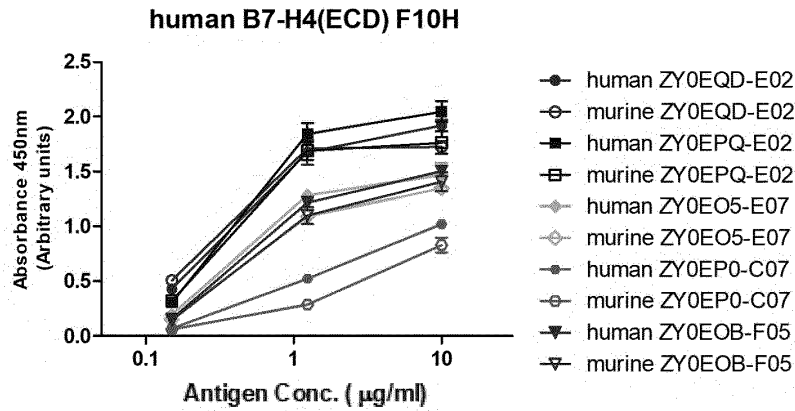


FIG. 3A

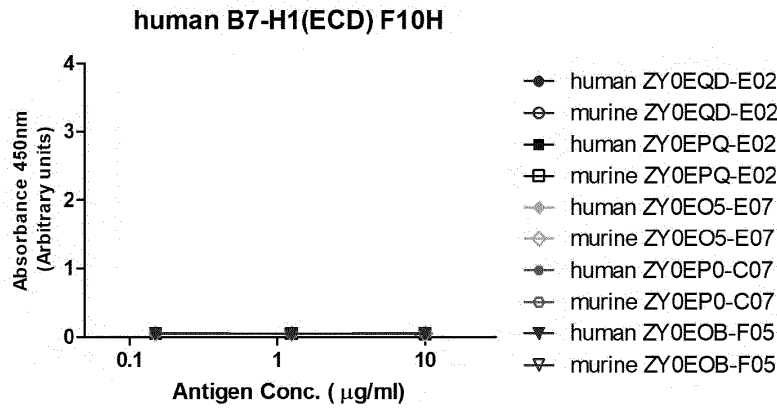


FIG. 3B

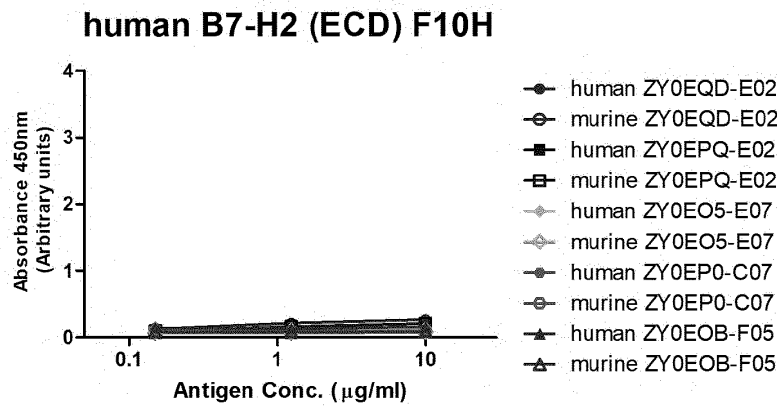


FIG. 3C

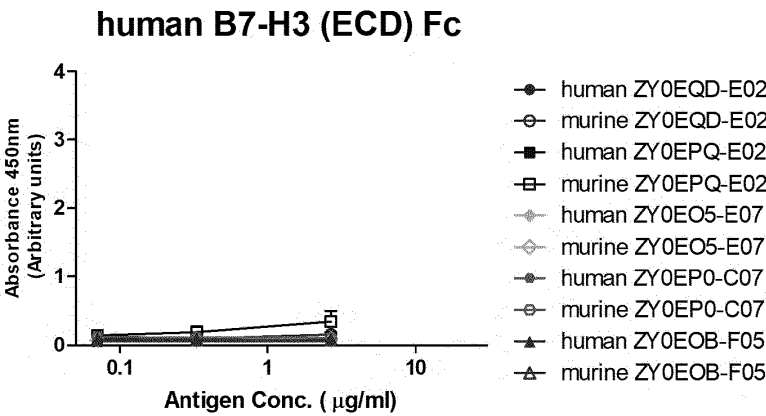


FIG. 3D

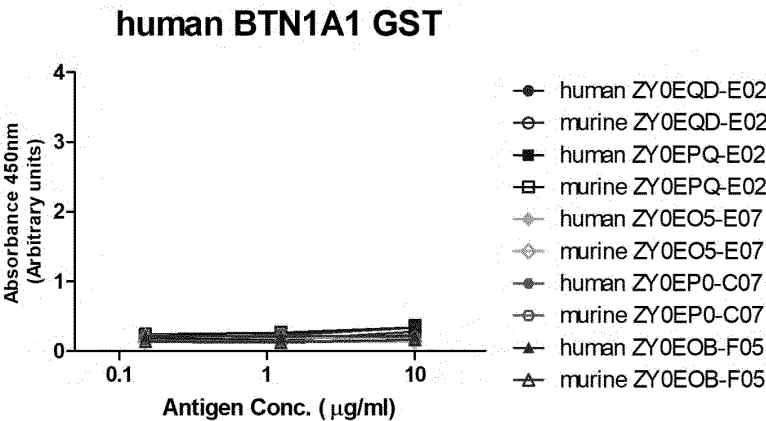


FIG. 3E

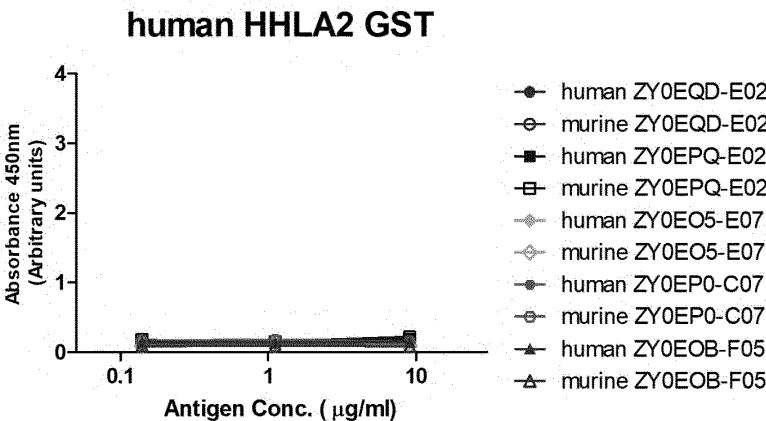


FIG. 3F

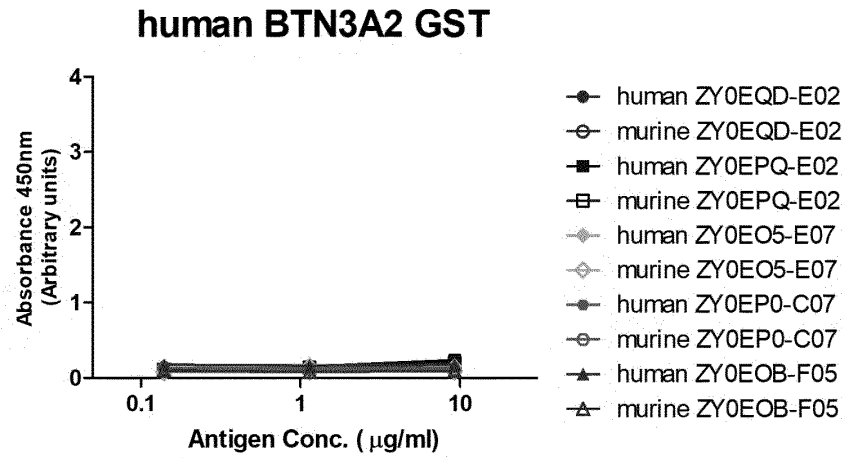


FIG. 3G

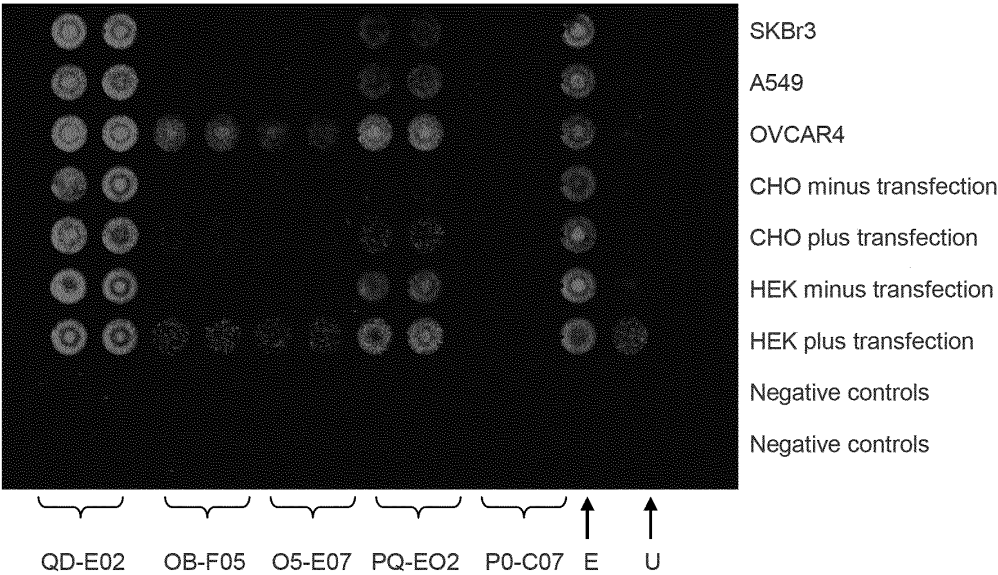


FIG. 4A

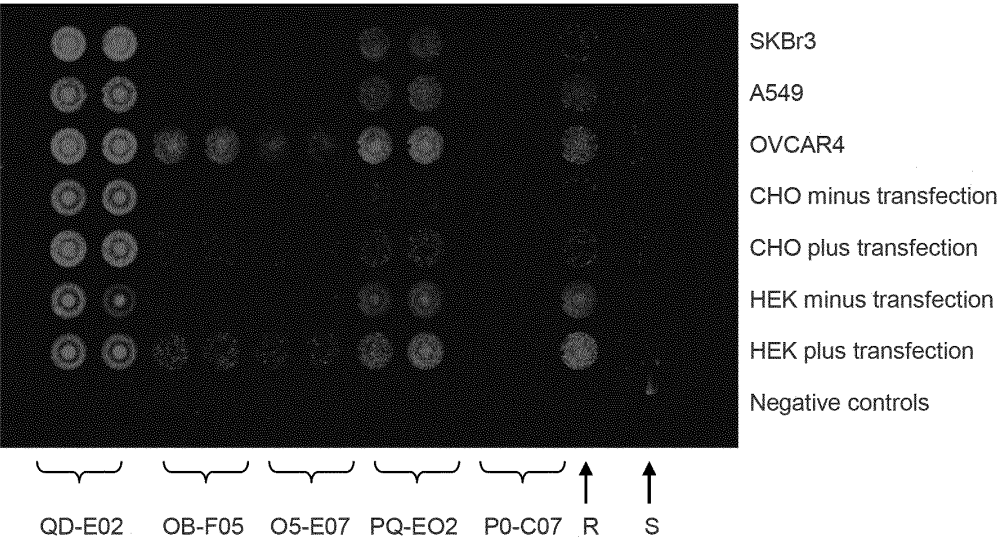


FIG. 4B

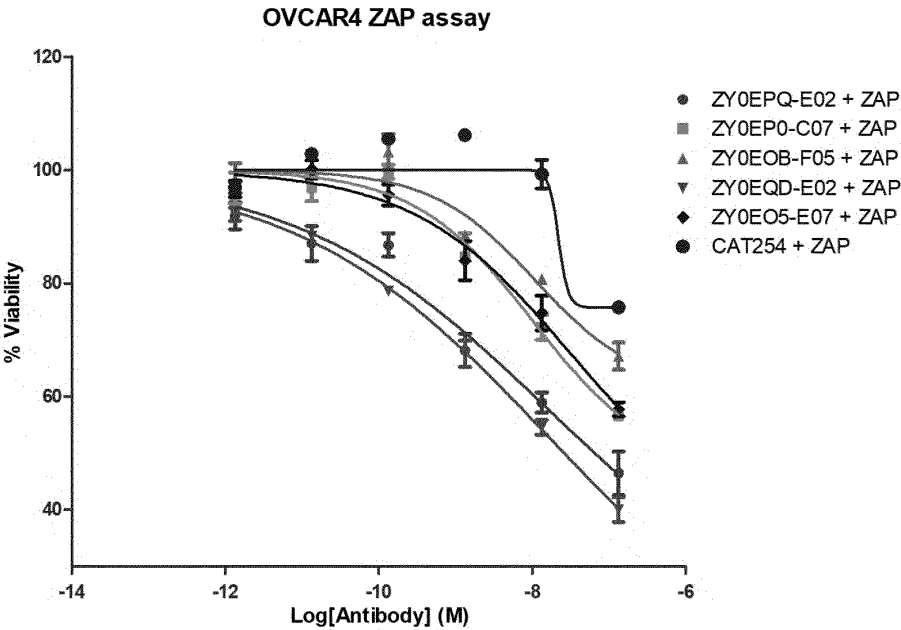


FIG. 5A

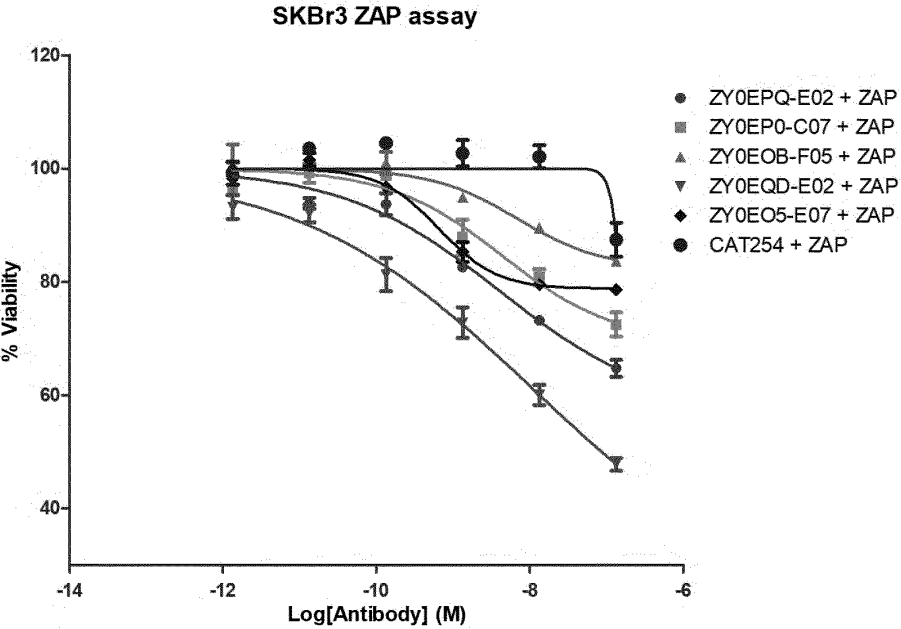


FIG. 5B

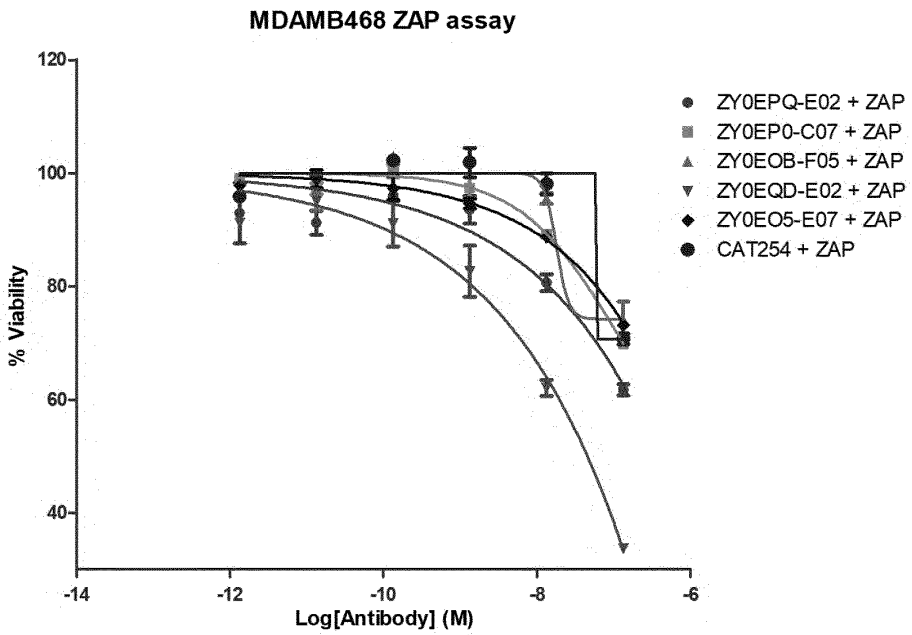


FIG. 5C

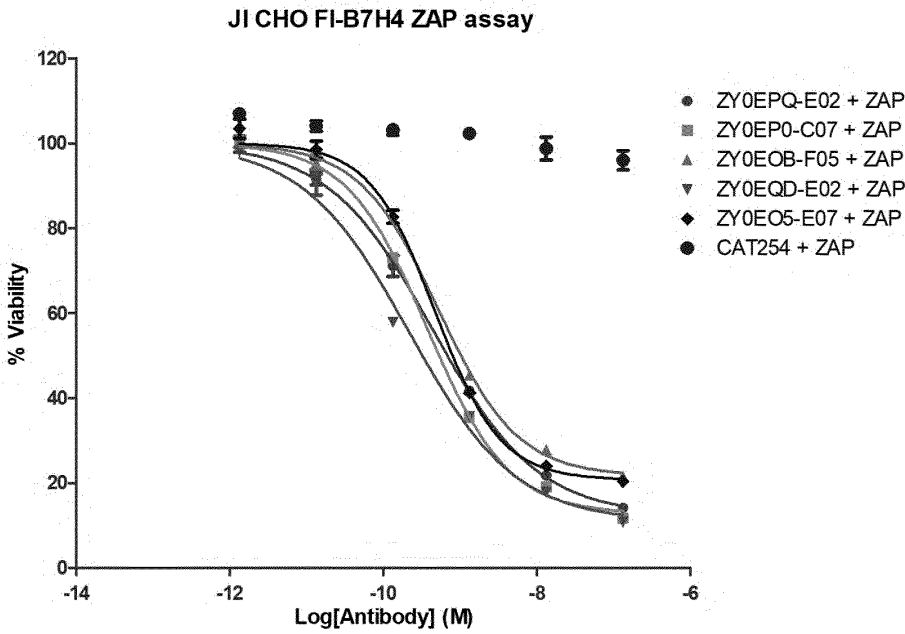


FIG. 5D

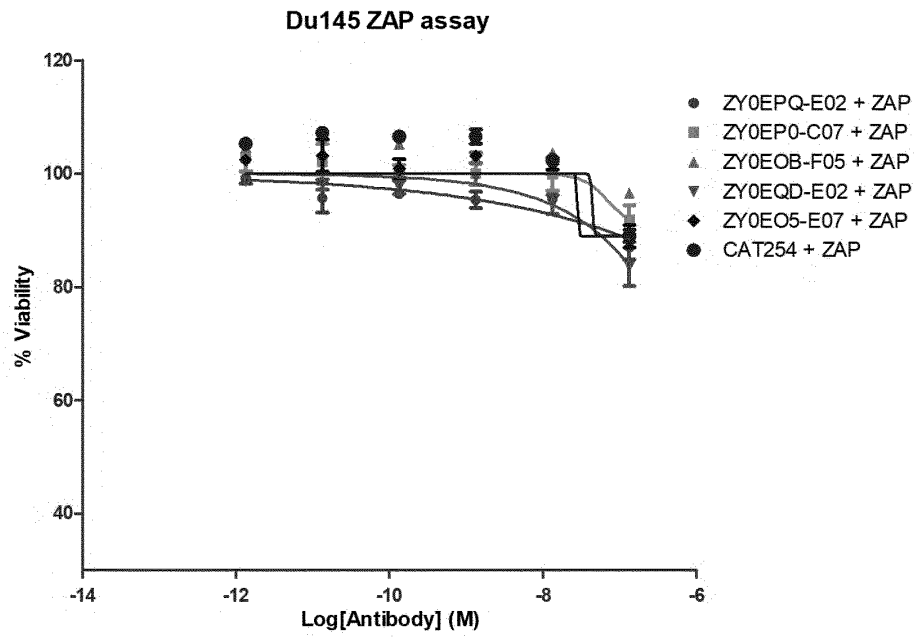


FIG. 5E

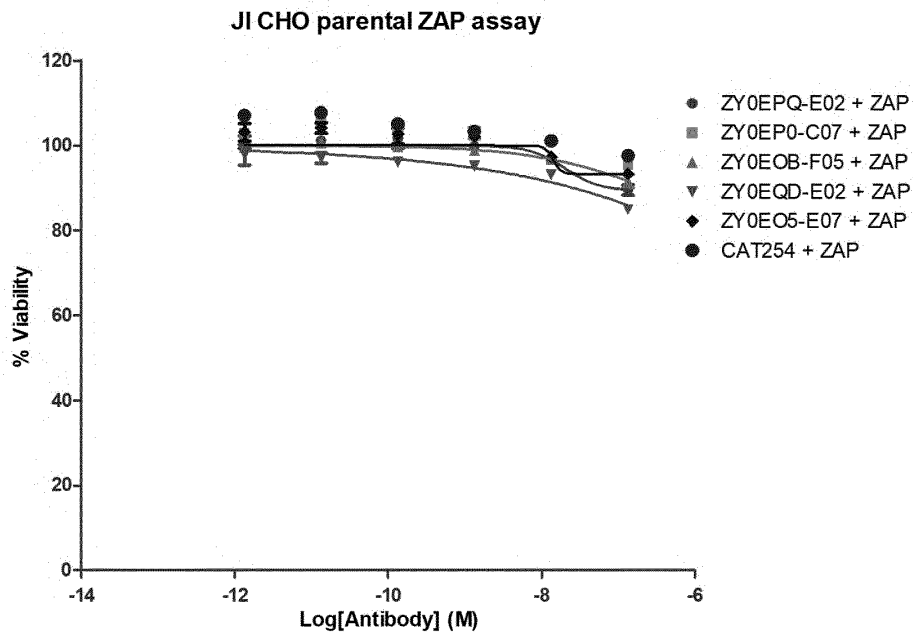


FIG. 5F

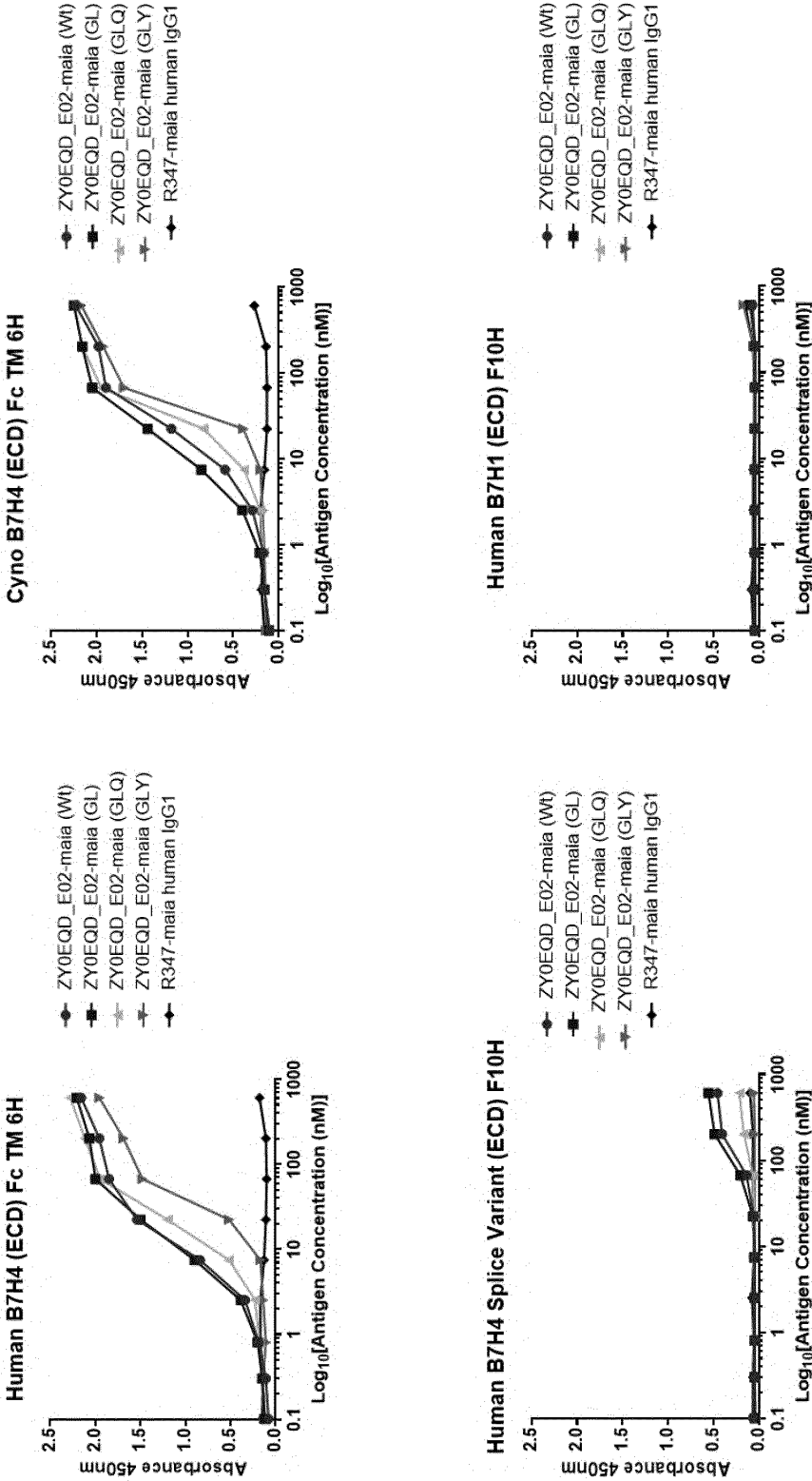


FIG. 6

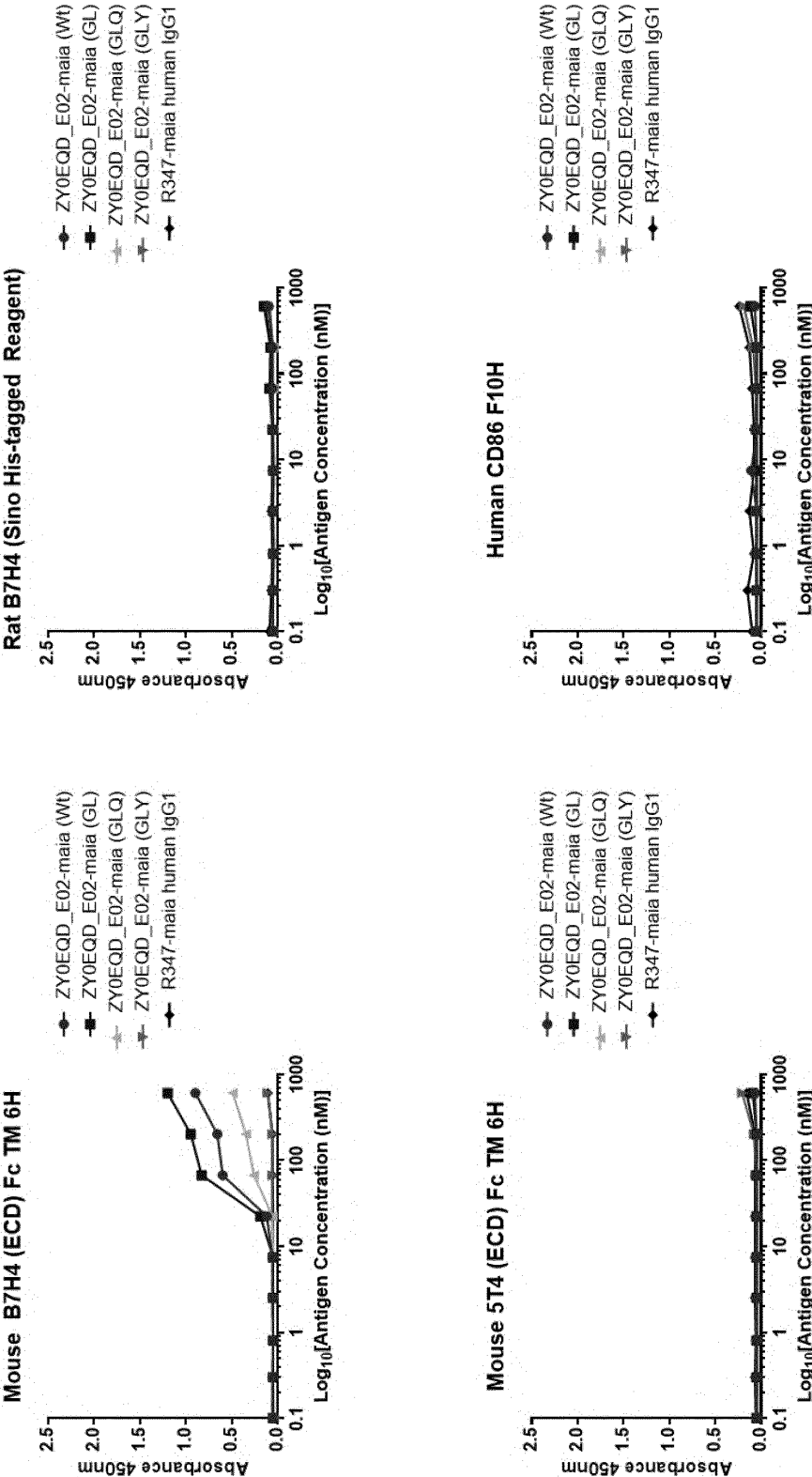
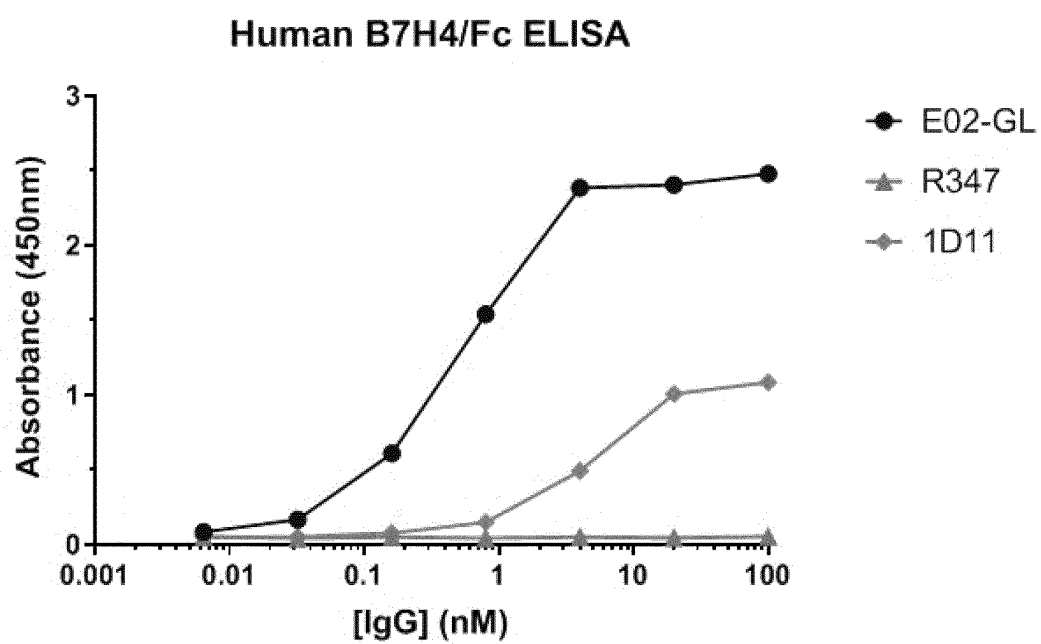


FIG. 6 (continued)

**FIG. 7**

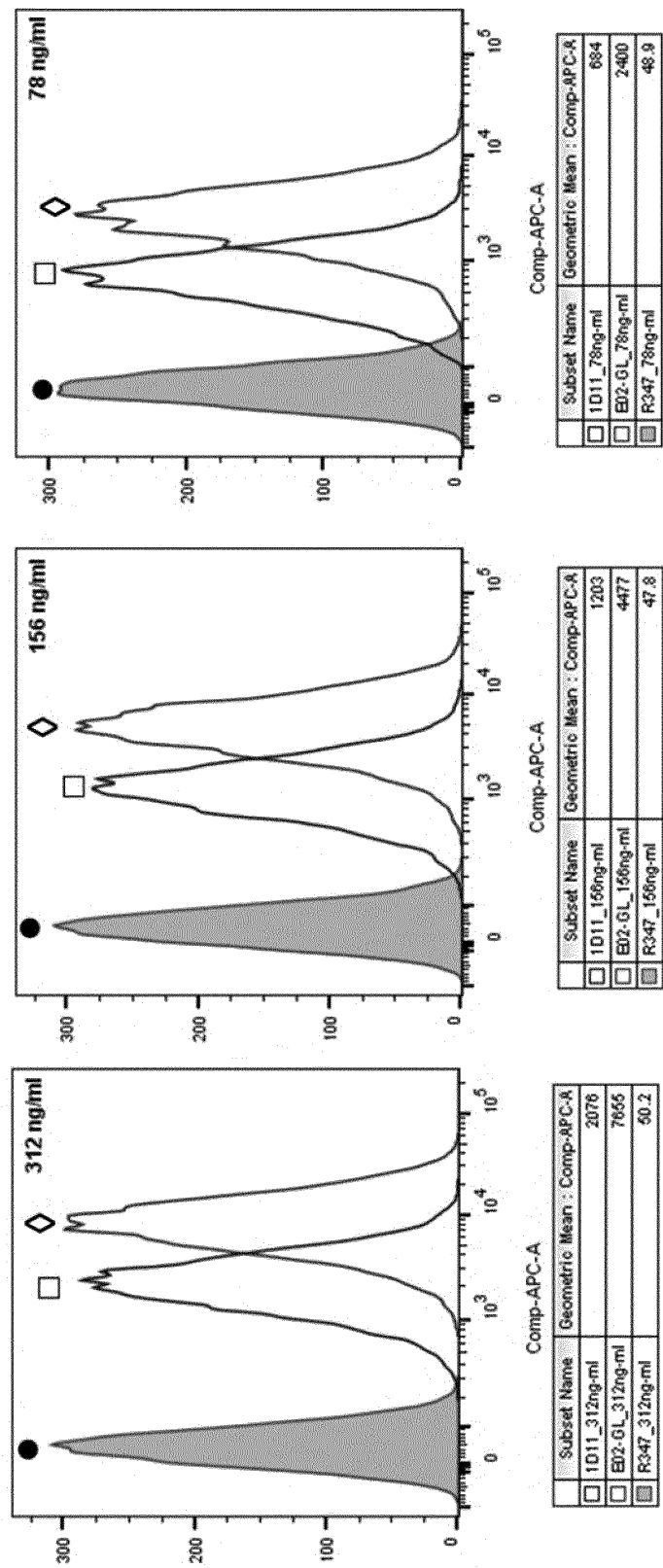


FIG. 8A

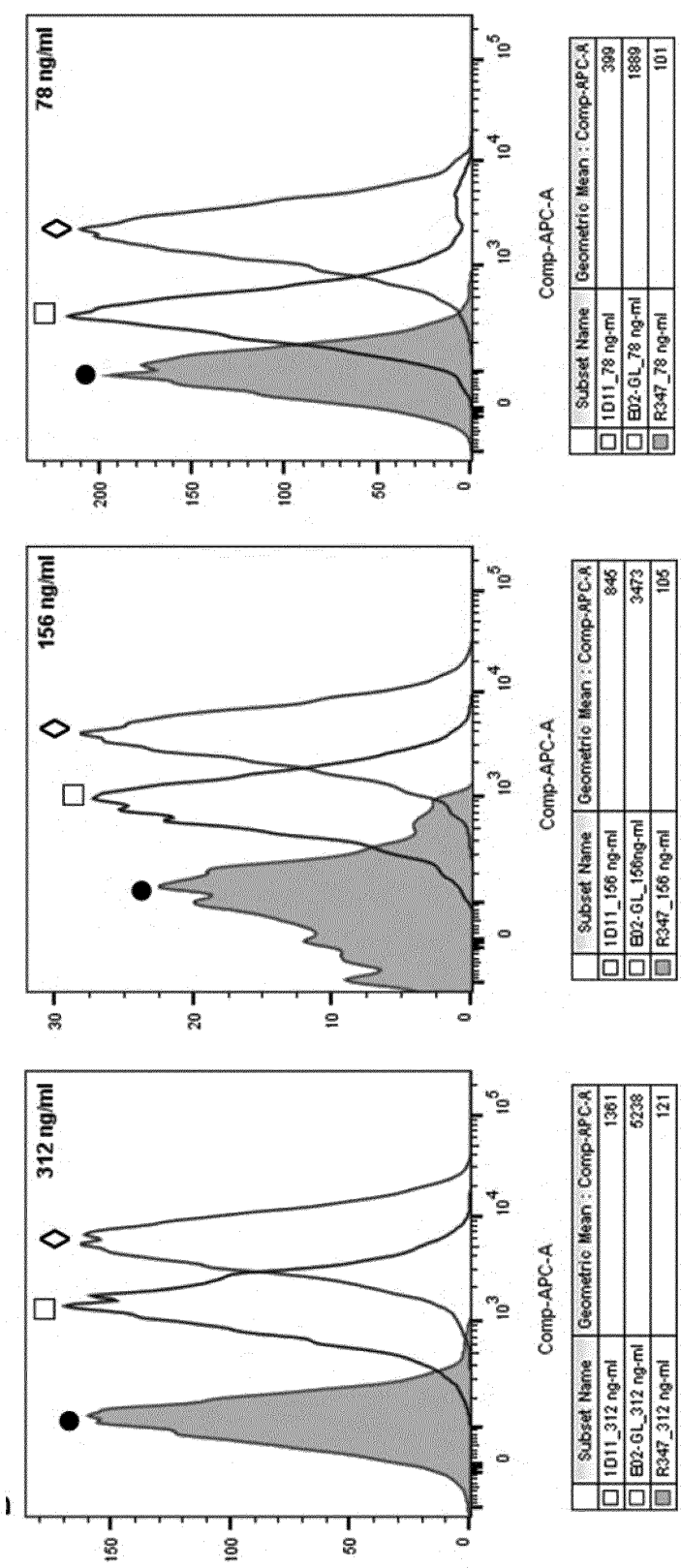


FIG. 8B

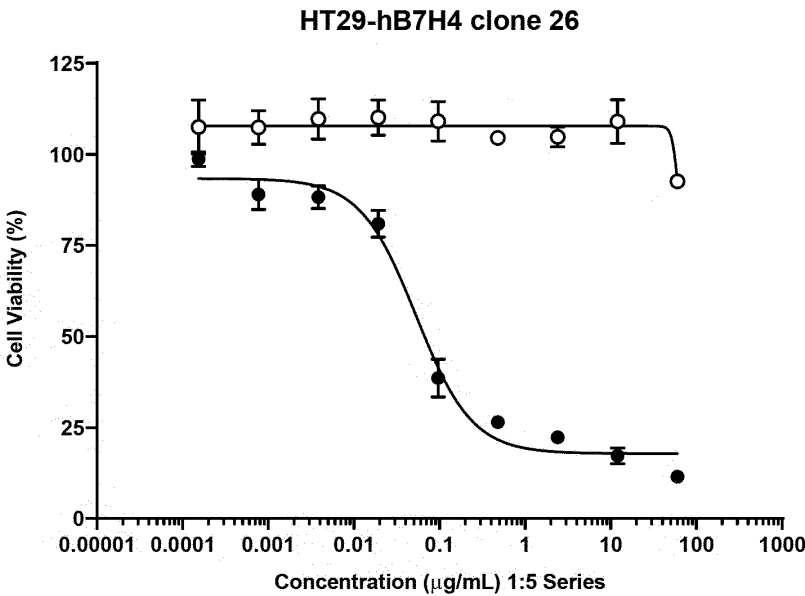


FIG. 9A

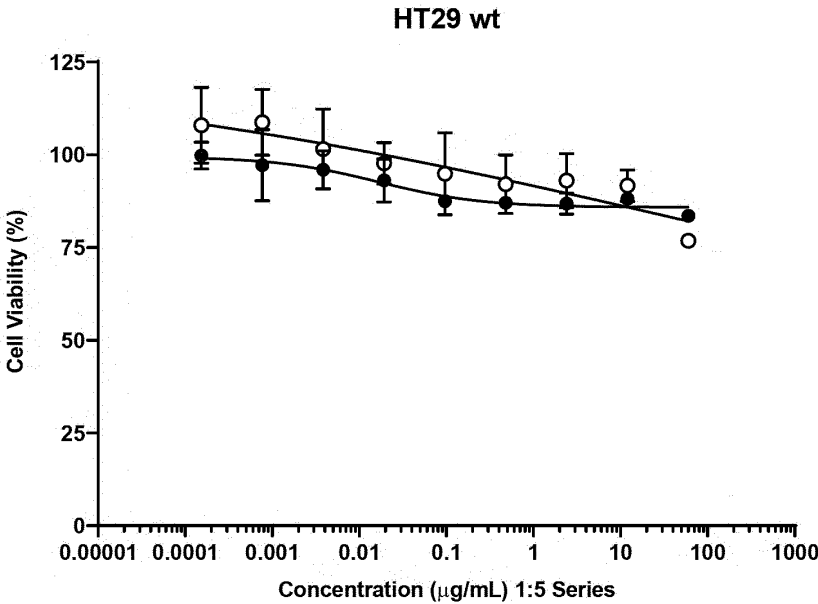


FIG. 9B

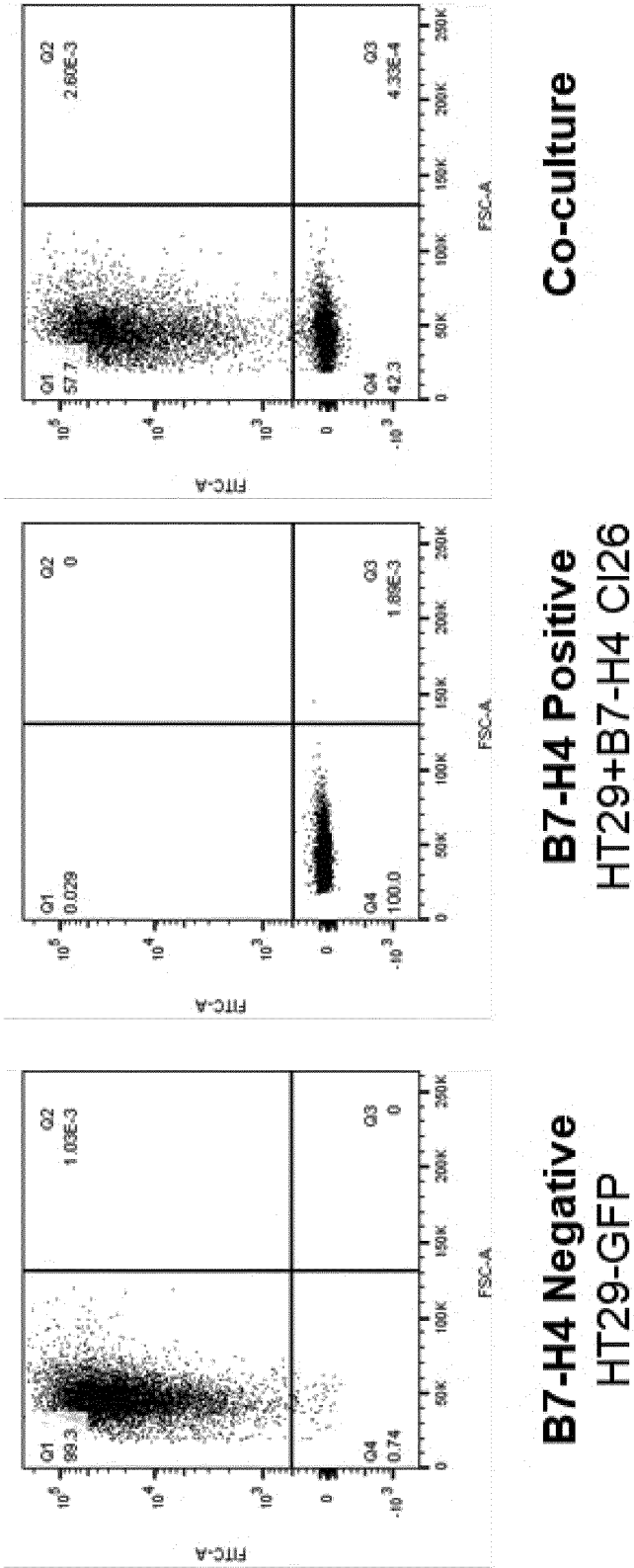


FIG. 10A

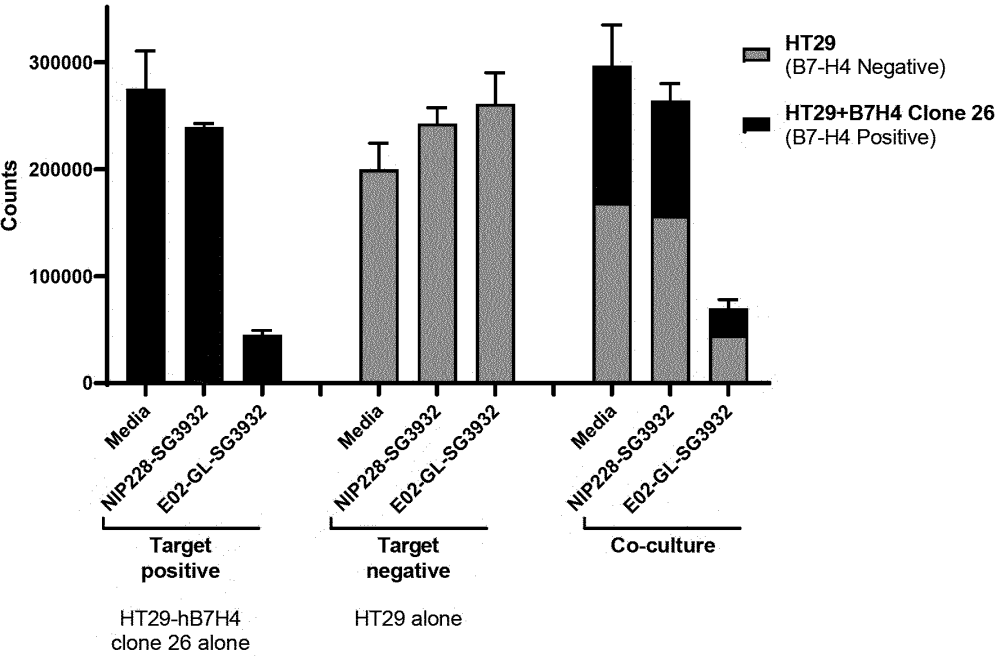
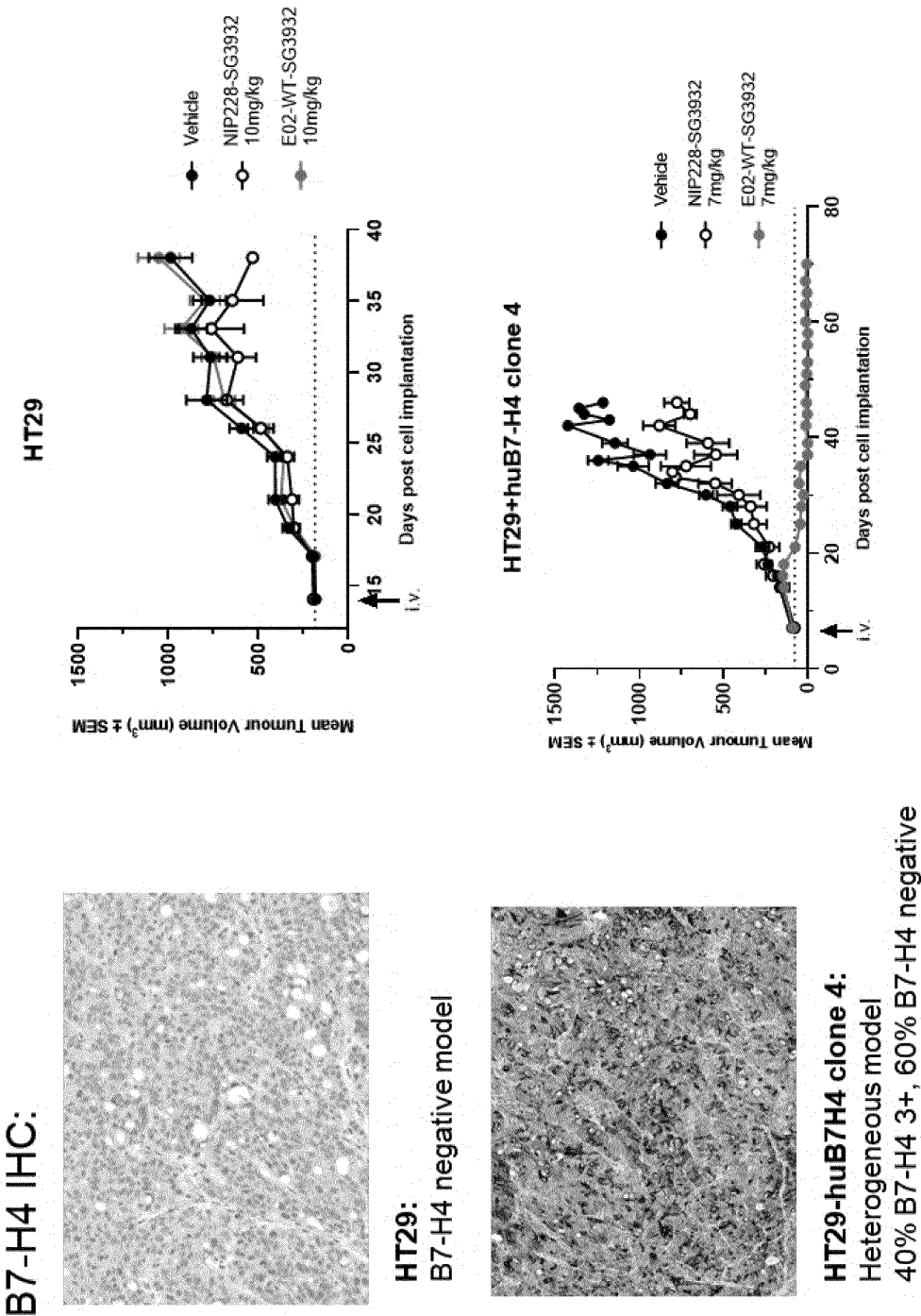


FIG. 10B



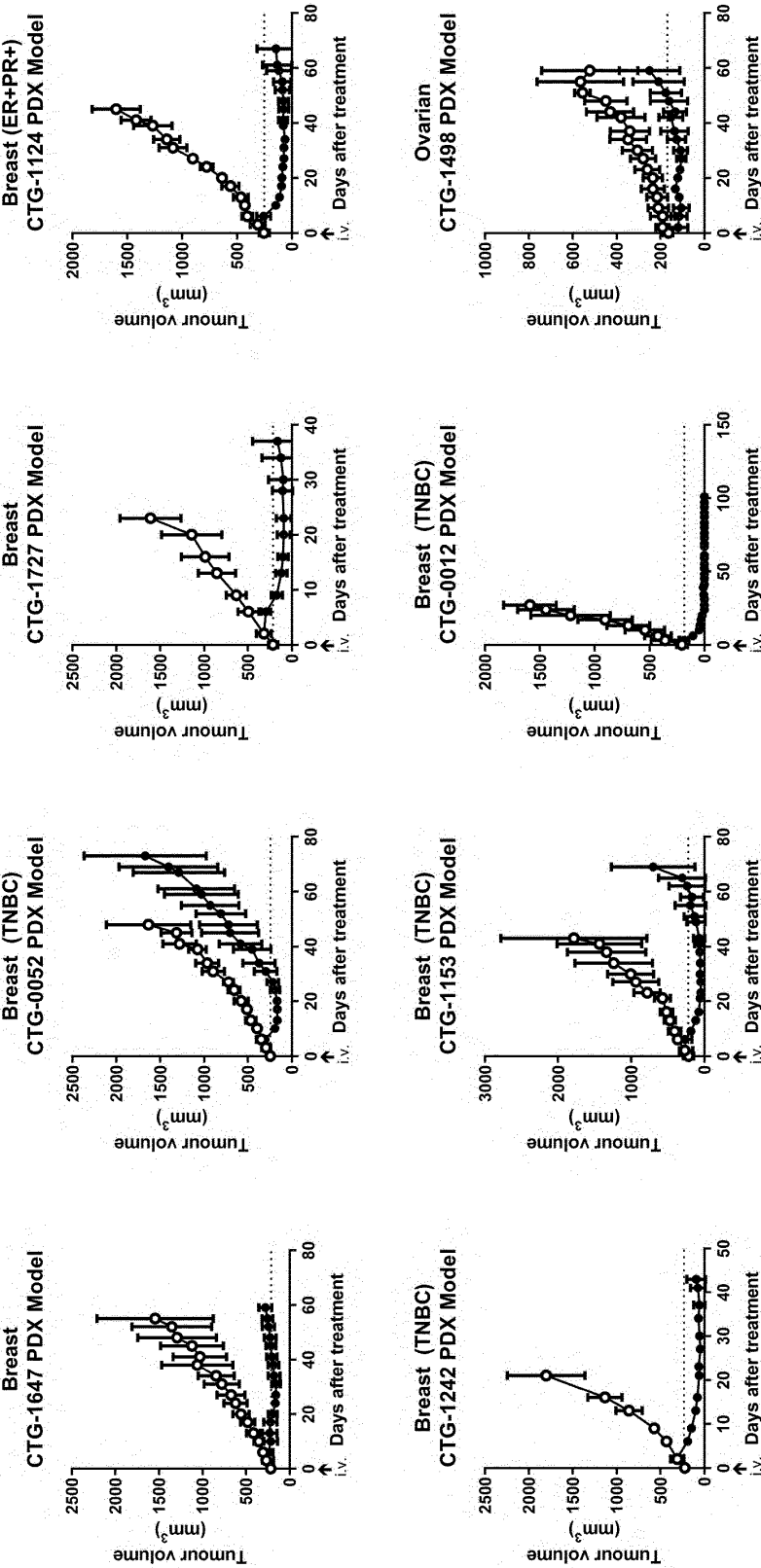


FIG. 12

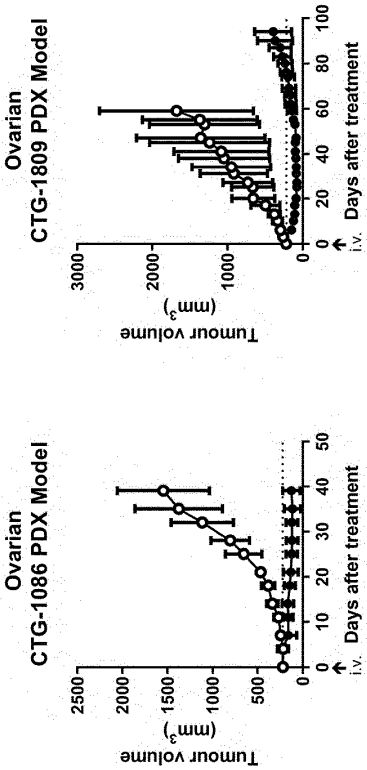


FIG. 12 (Continued)

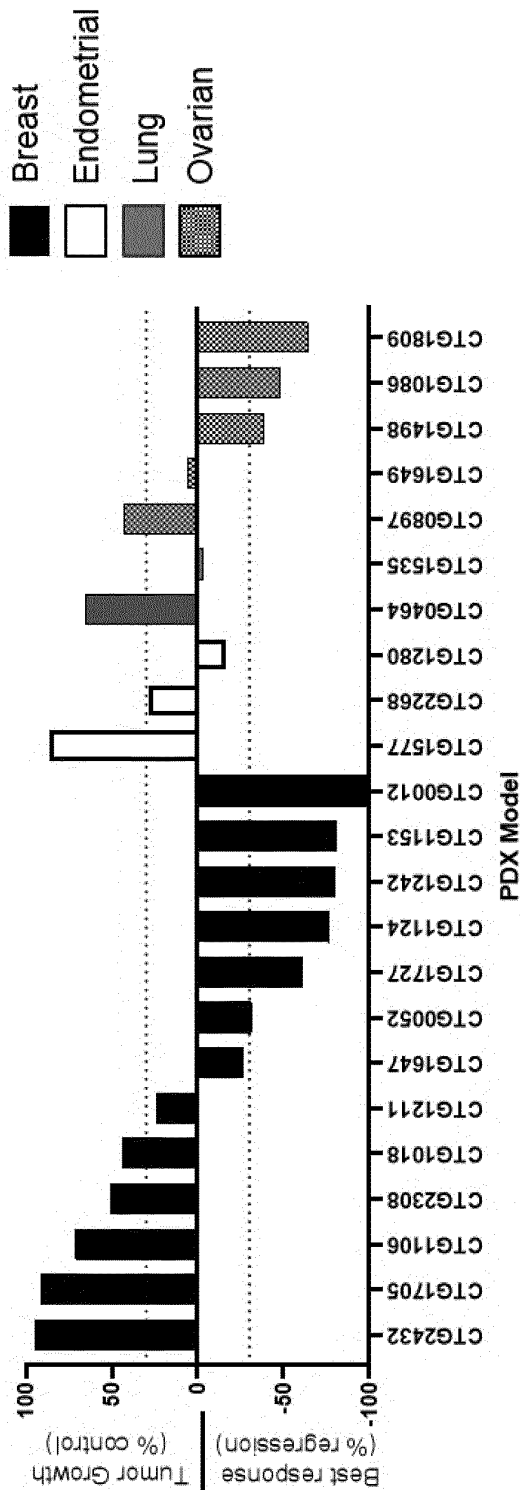


FIG. 13

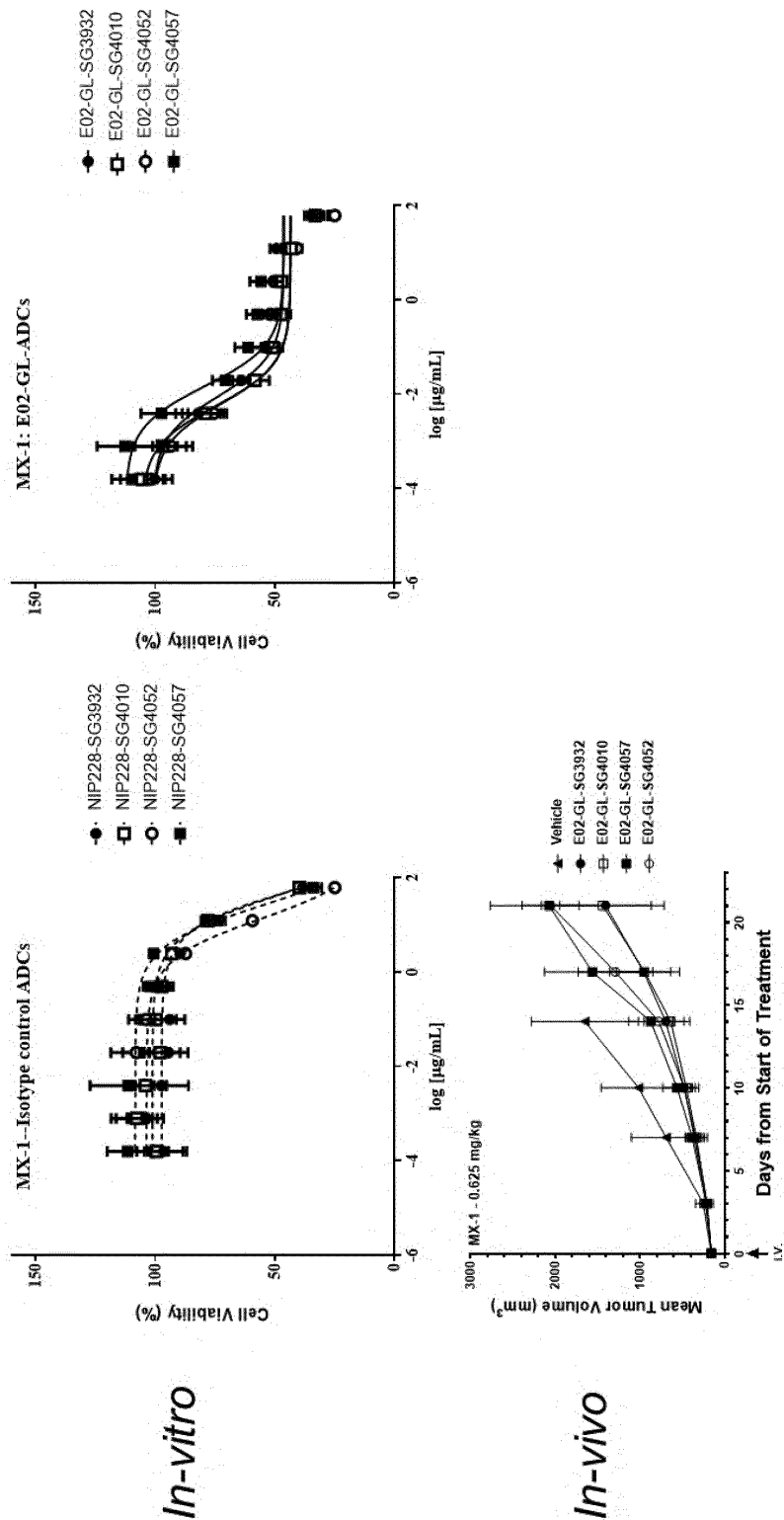


FIG. 14A

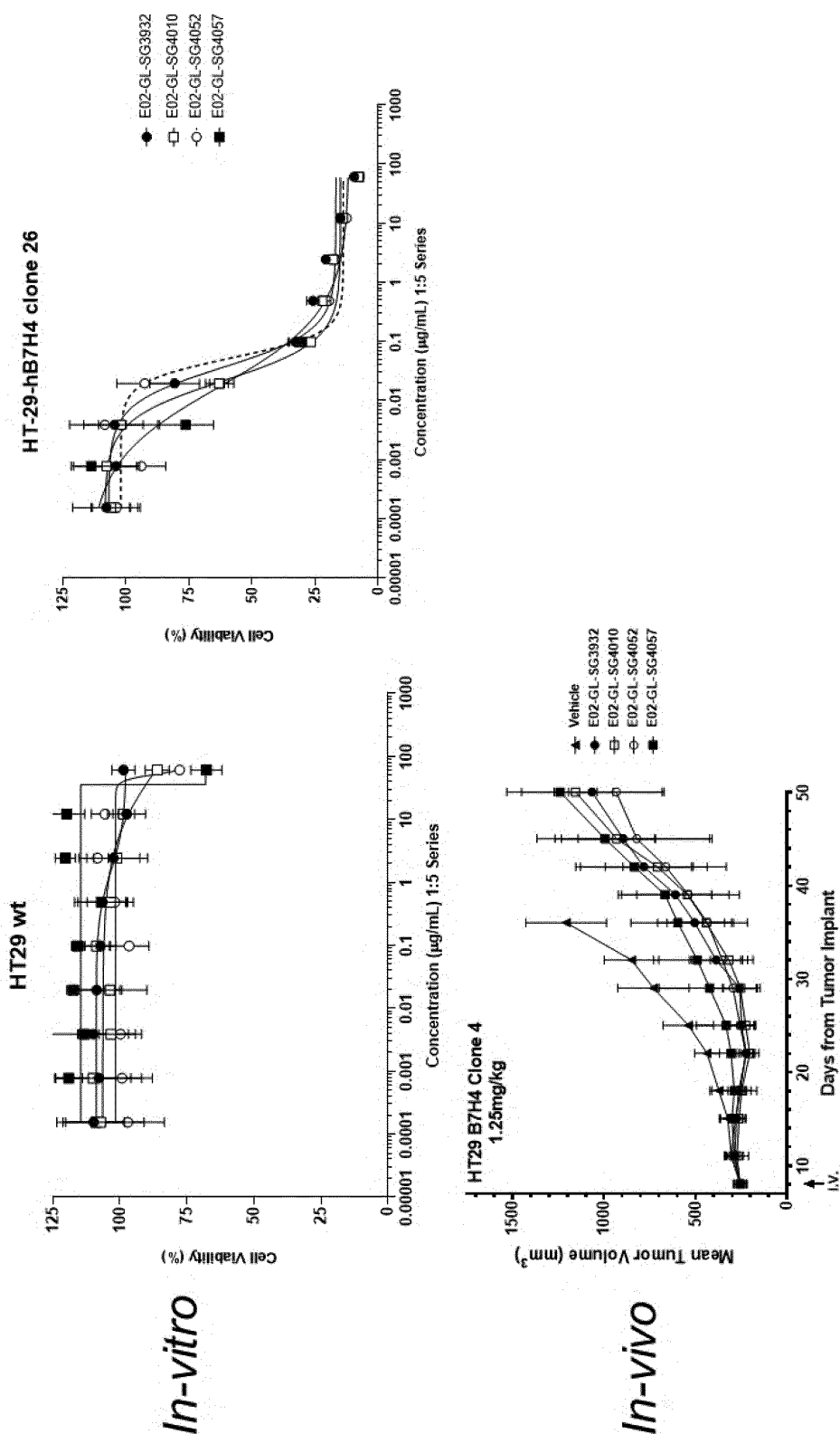


FIG. 14B

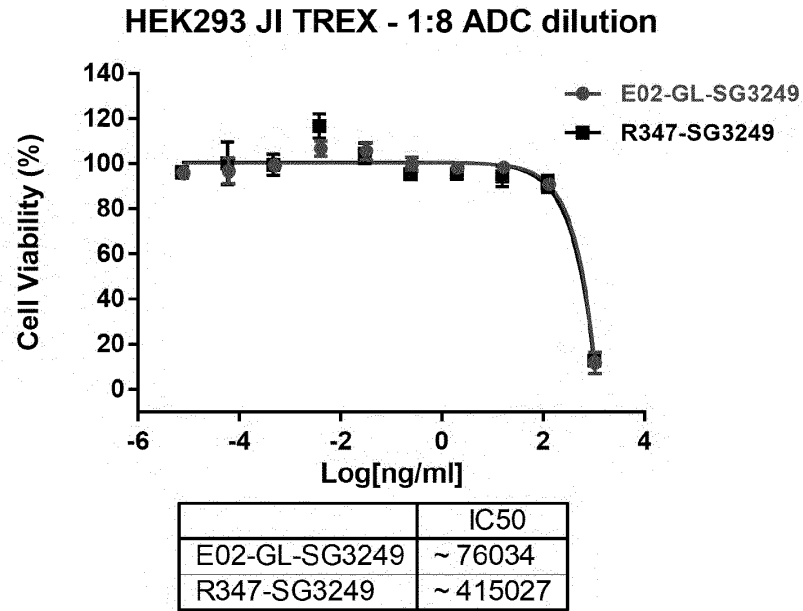


FIG. 15A

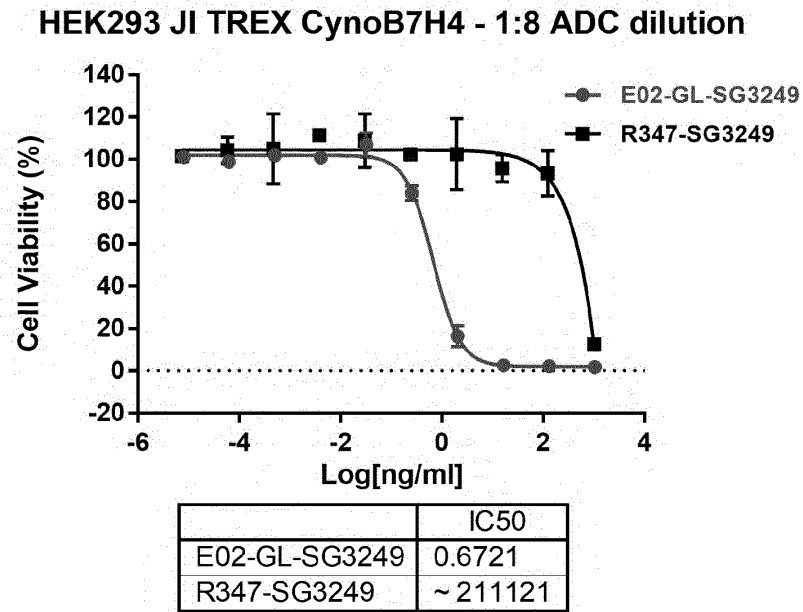


FIG. 15B

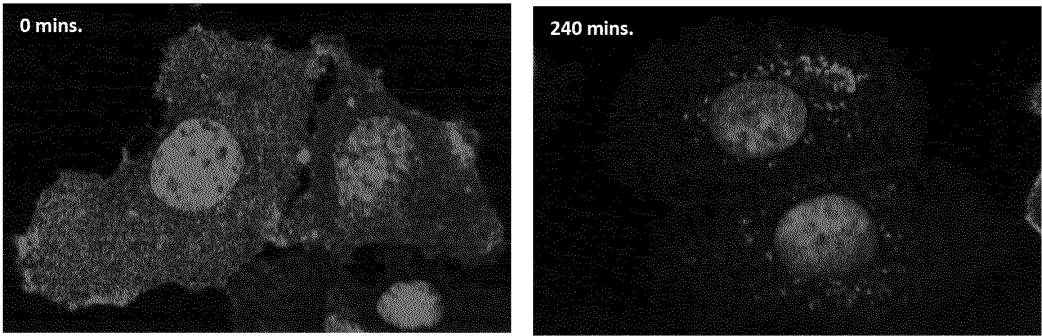


FIG. 16A

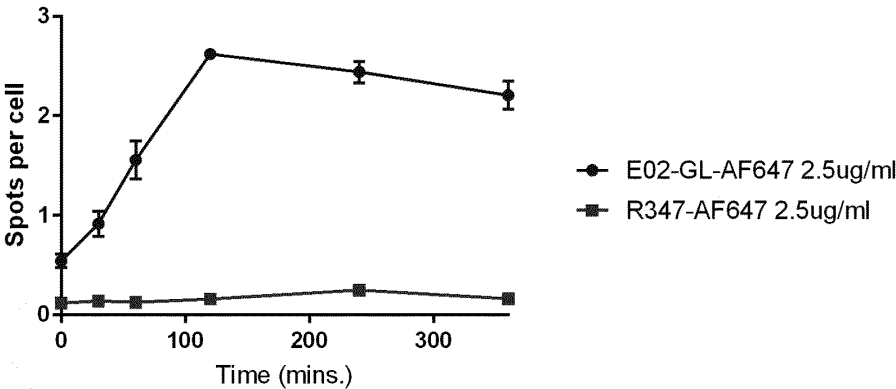


FIG. 16B

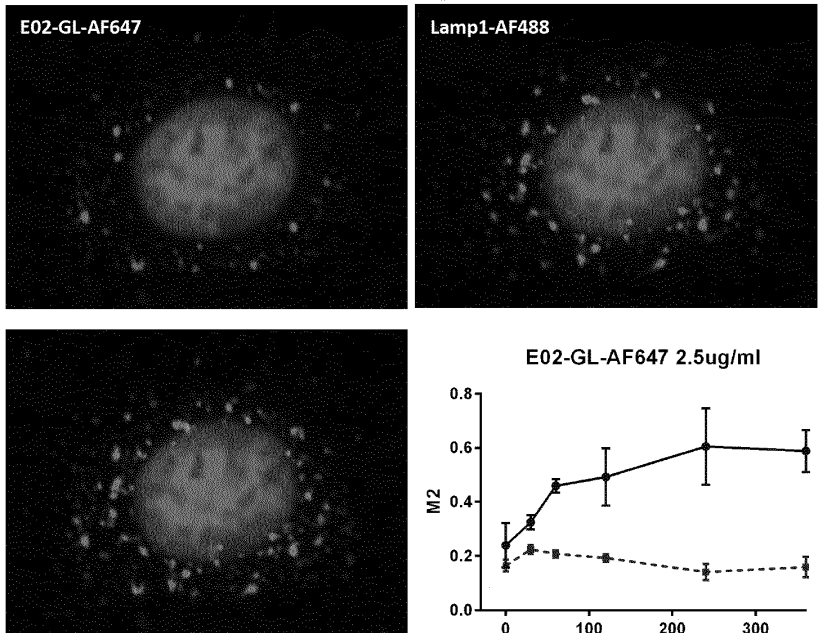


FIG. 16C

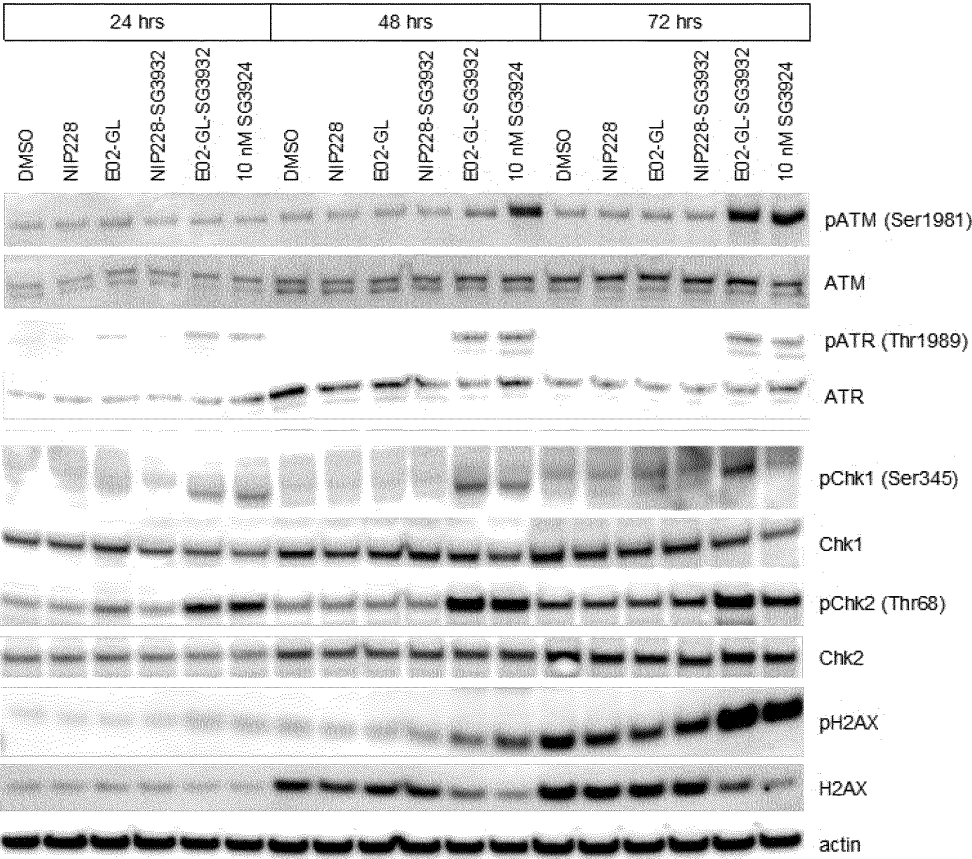


FIG. 17A

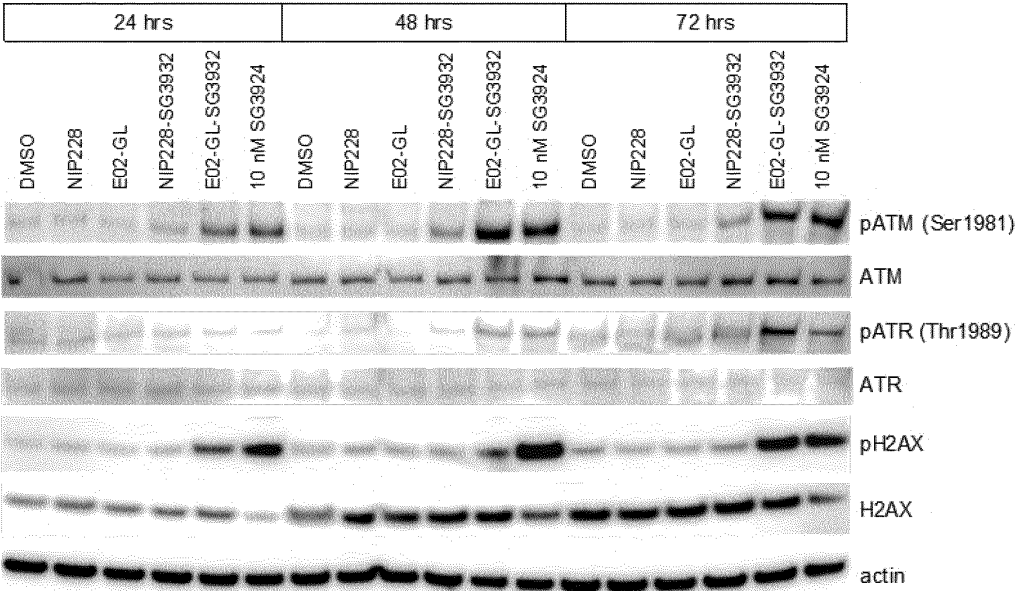


FIG. 17B

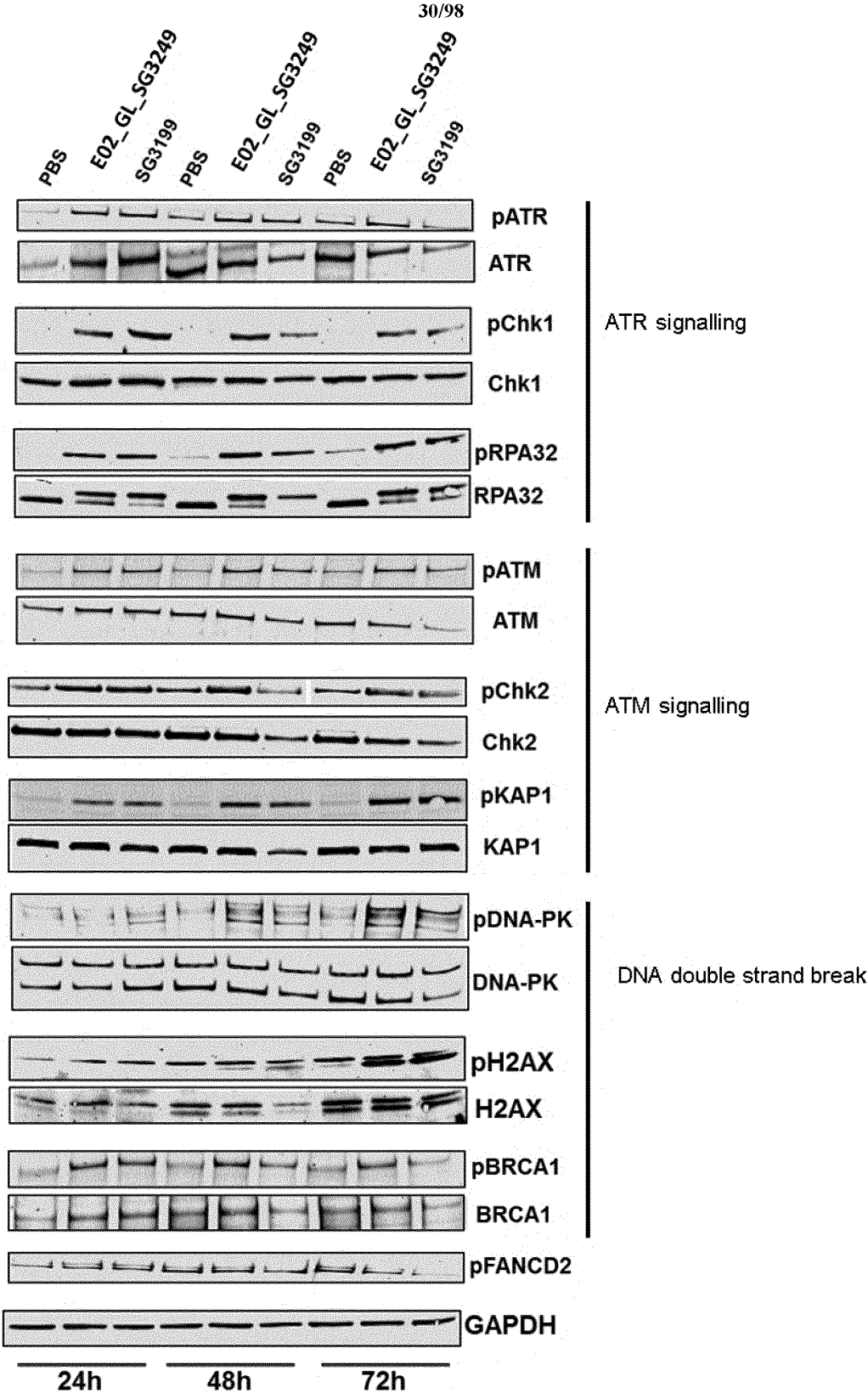


FIG. 17C

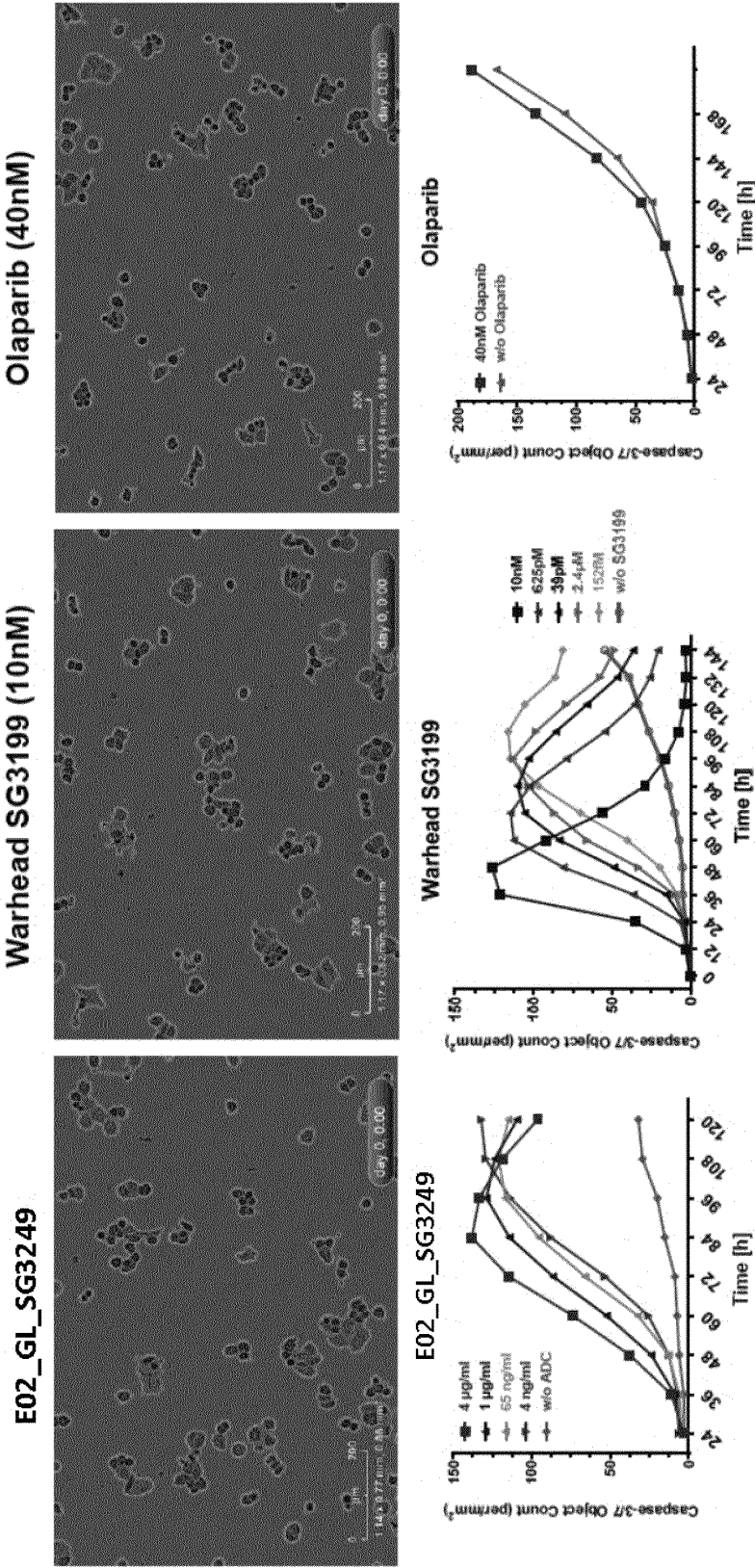


FIG. 18

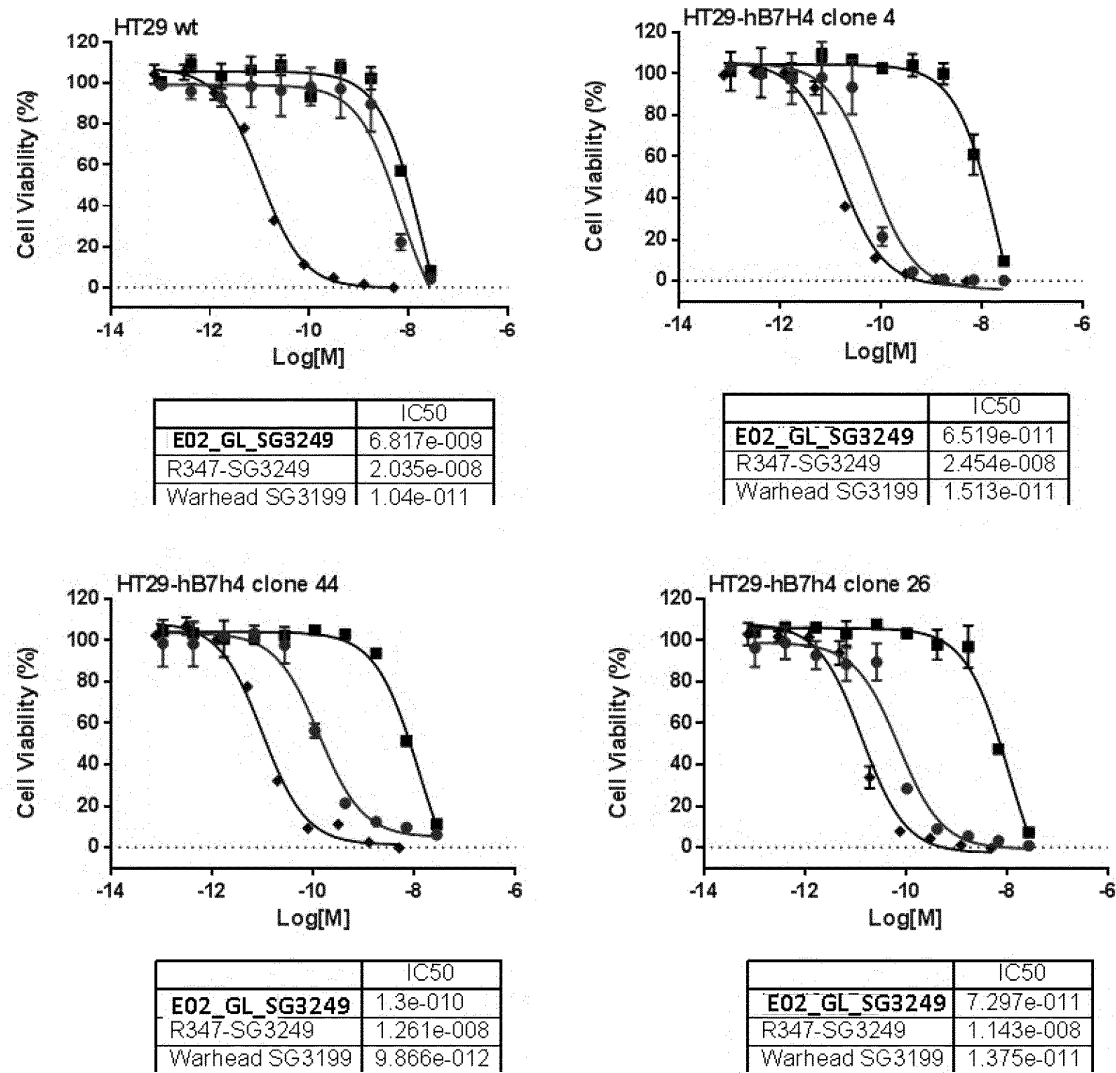


FIG. 19

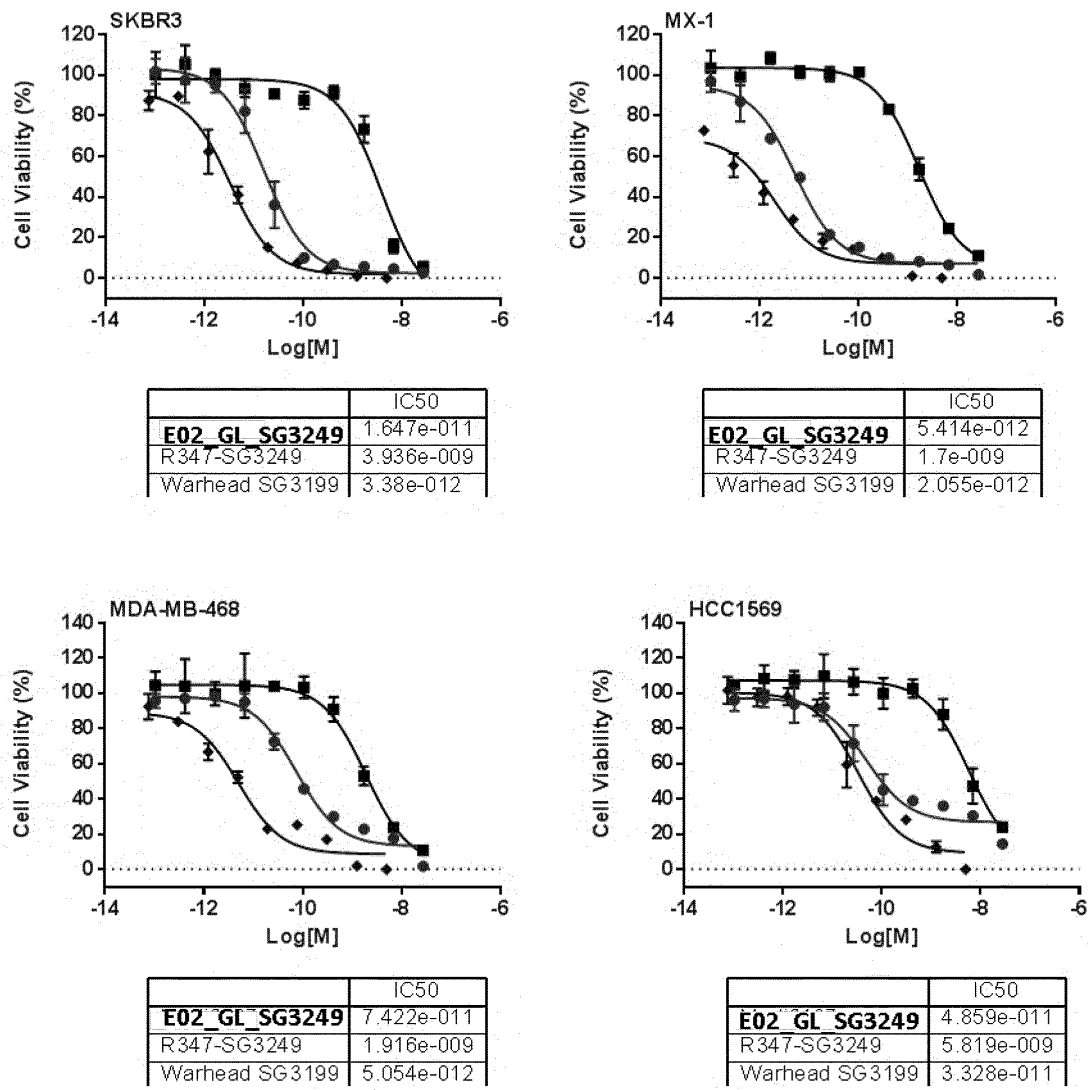


FIG. 19 (continued)

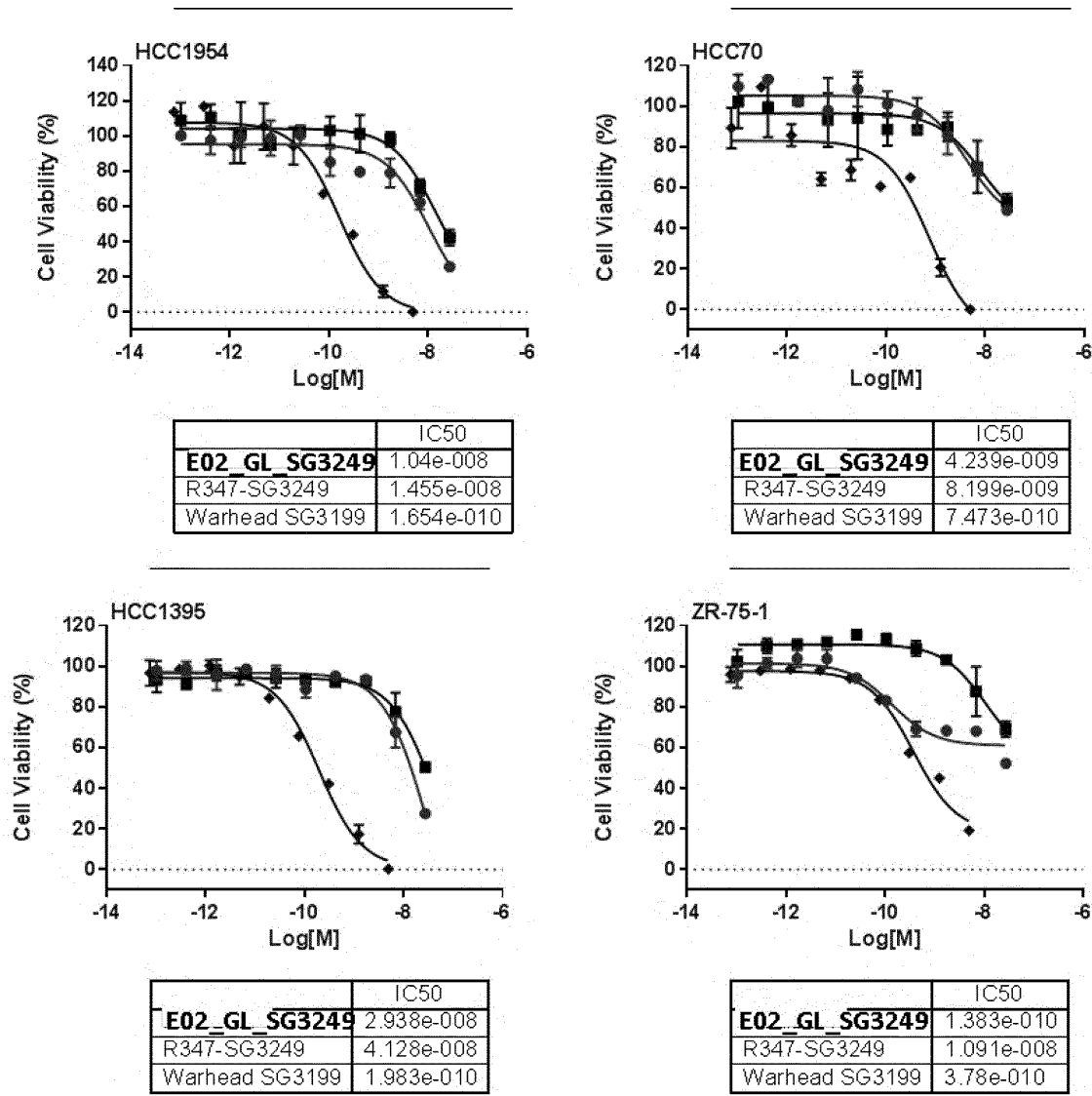
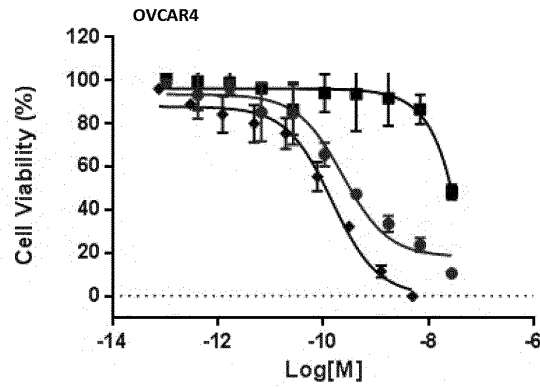
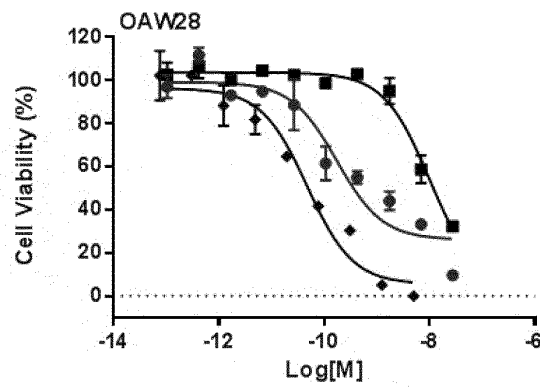


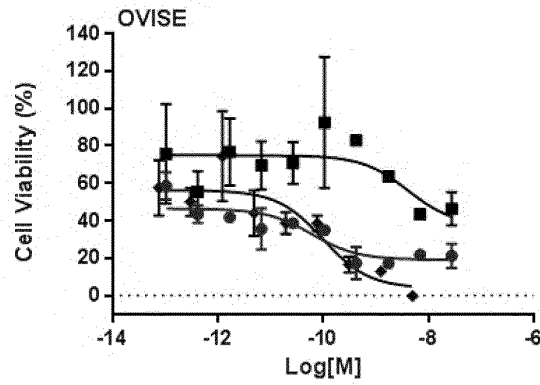
FIG. 19 (continued)



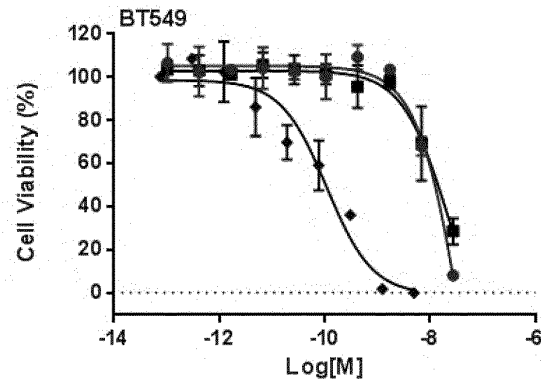
	IC50
E02_GL_SG3249	2.356e-010
R347-SG3249	~ 1.099e-005
Warhead SG3199	1.467e-010



	IC50
E02_GL_SG3249	1.746e-010
R347-SG3249	9.912e-009
Warhead SG3199	4.762e-011



	IC50
E02_GL_SG3249	6.177e-011
R347-SG3249	4.078e-009
Warhead SG3199	1.001e-010



	IC50
E02_GL_SG3249	4.757e-008
R347-SG3249	2.18e-008
Warhead SG3199	1.103e-010

FIG. 19 (continued)

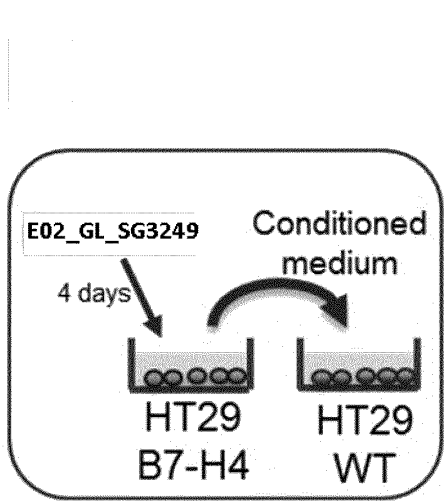


FIG. 20A

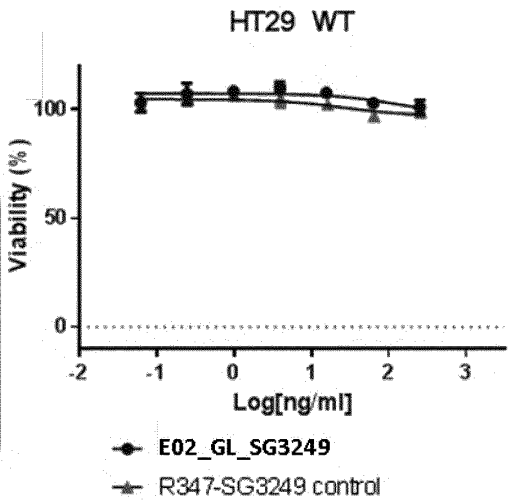


FIG. 20B

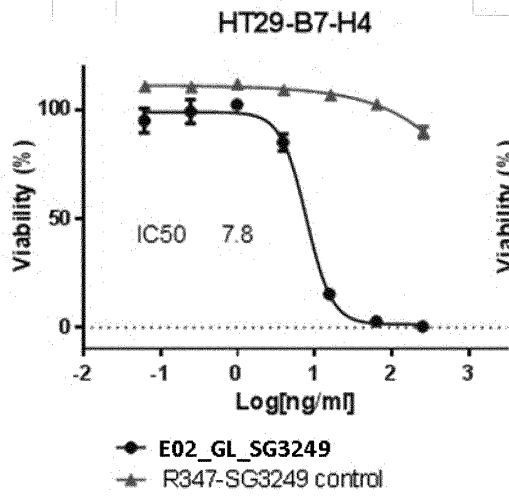


FIG. 20C

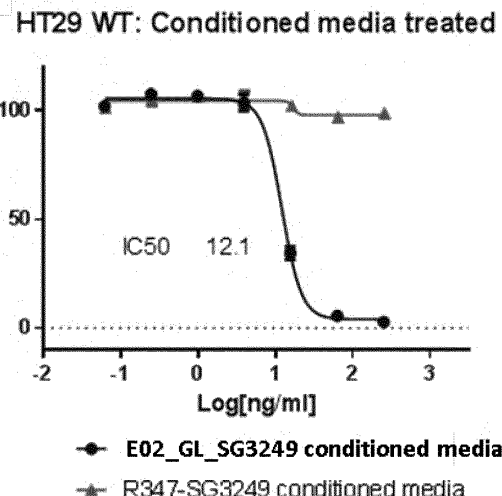


FIG. 20D

FIG. 21A

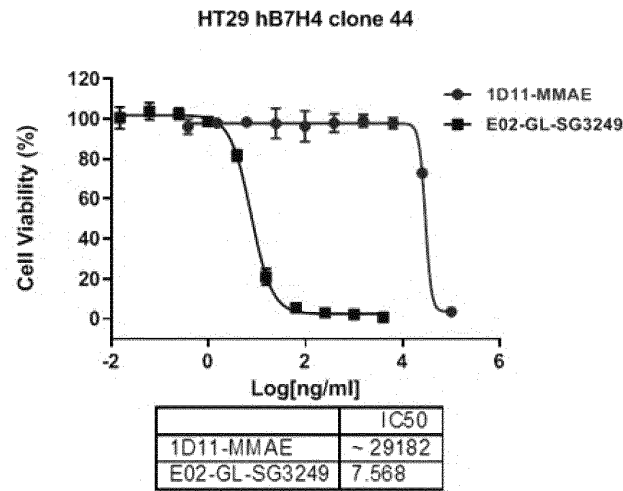


FIG. 21B

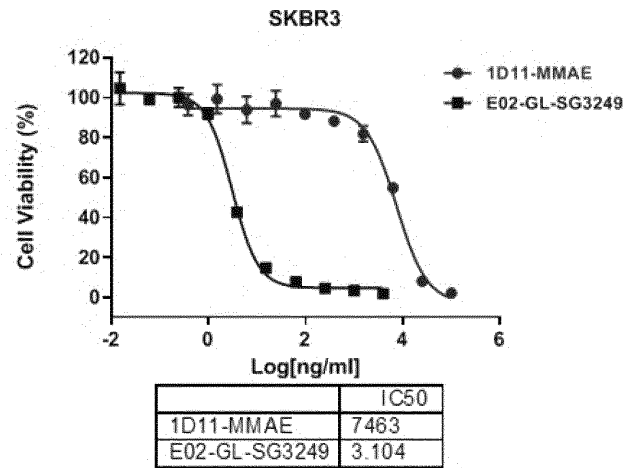
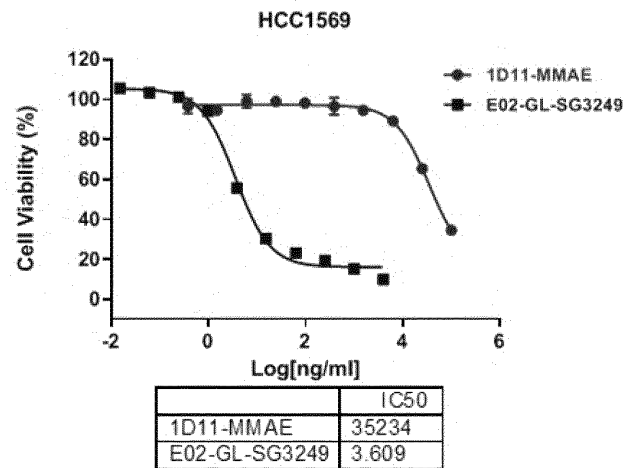


FIG. 21C



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FIG. 22A

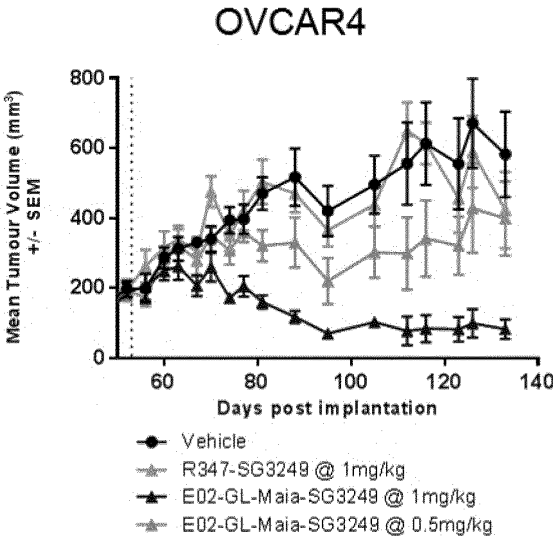


FIG. 22B

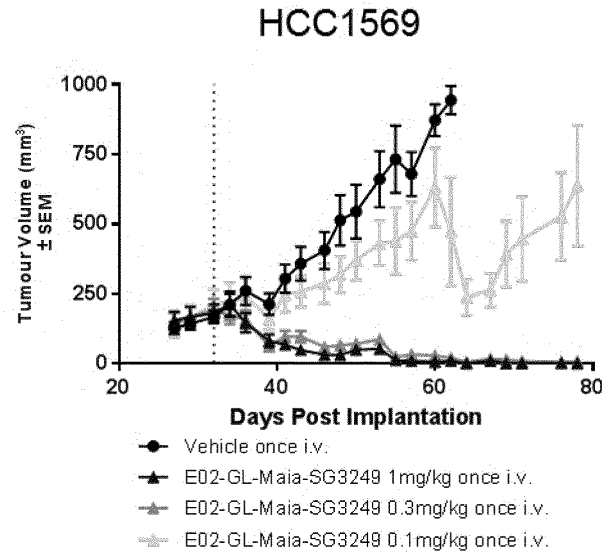
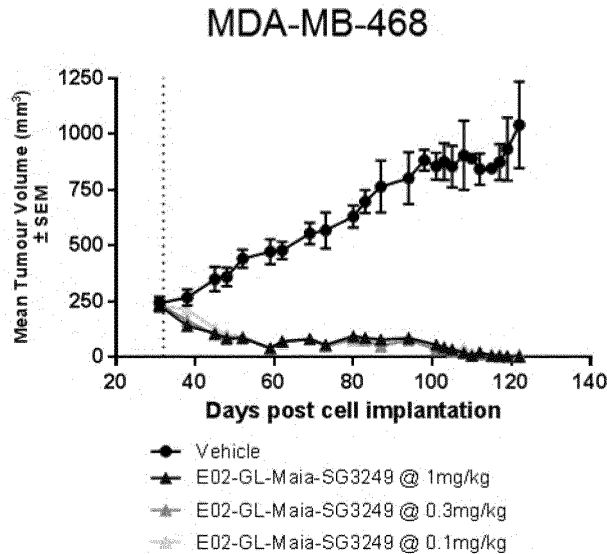


FIG. 22C



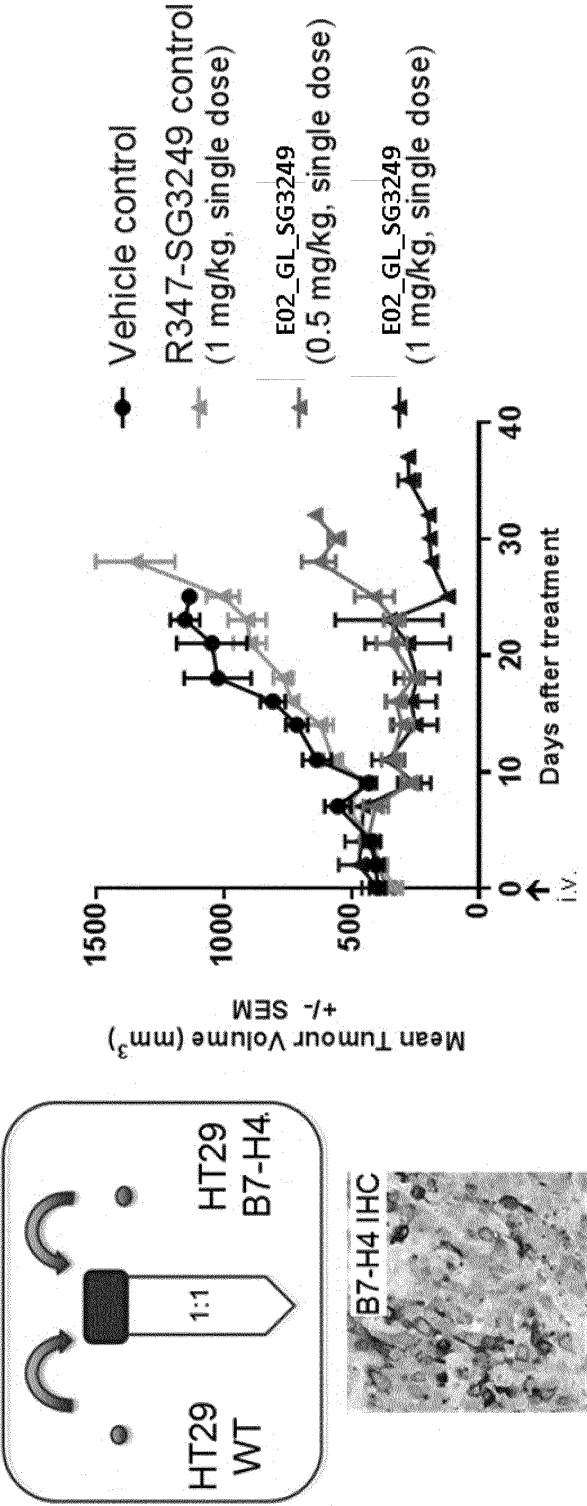


FIG. 23

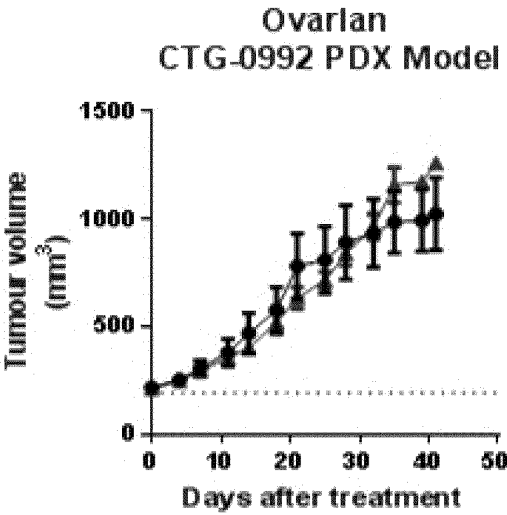


FIG. 24A

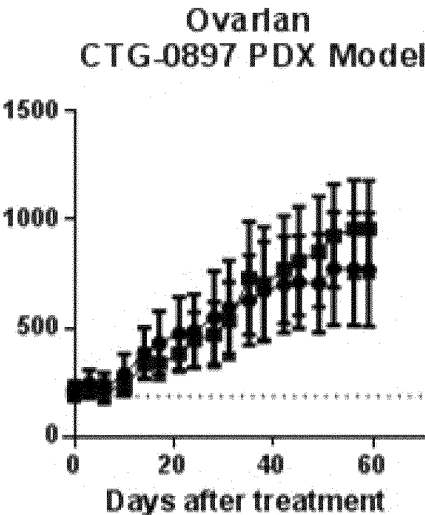


FIG. 24B

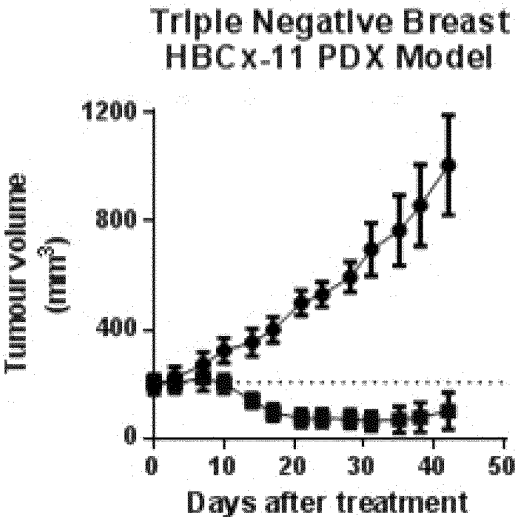


FIG. 24C

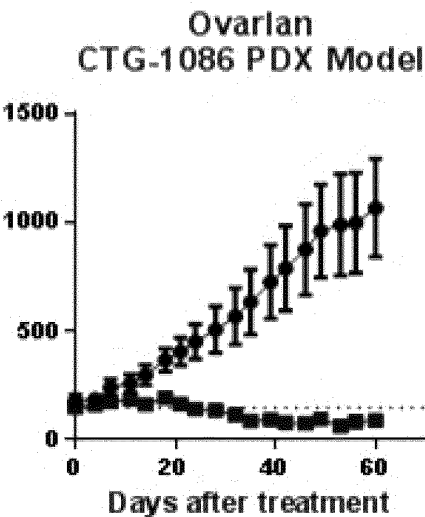


FIG. 24D

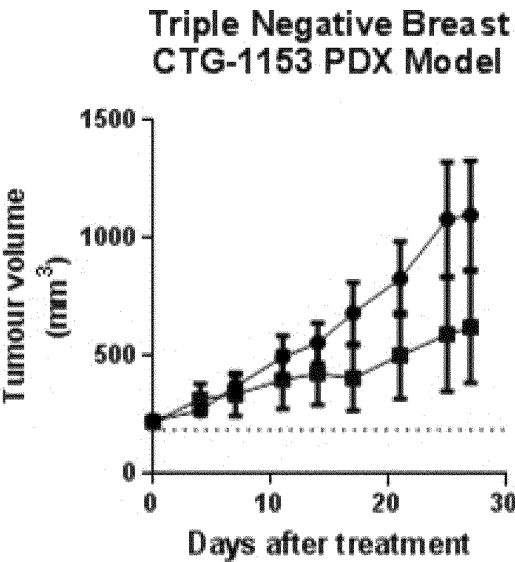


FIG. 24E

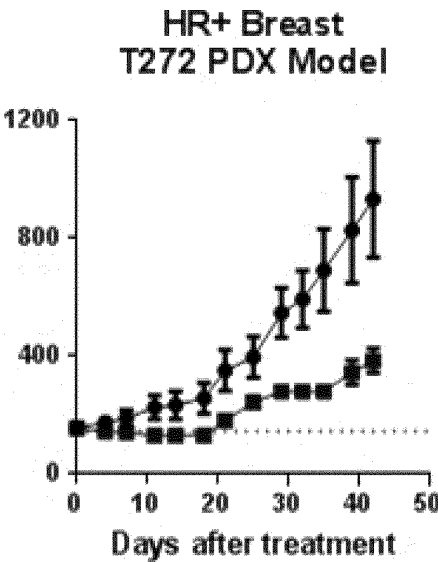


FIG. 24F

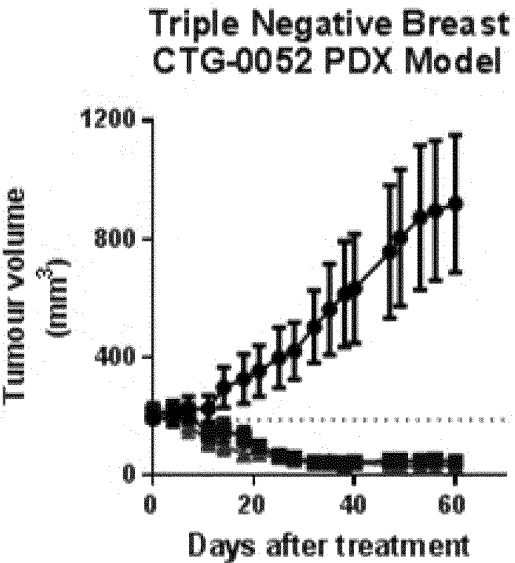


FIG. 24G

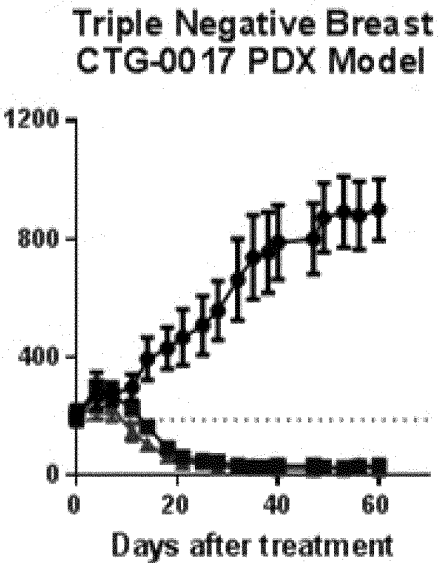


FIG. 24H

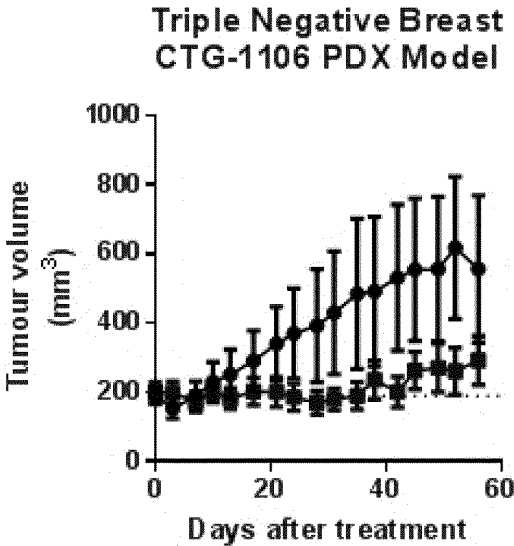


FIG. 24I

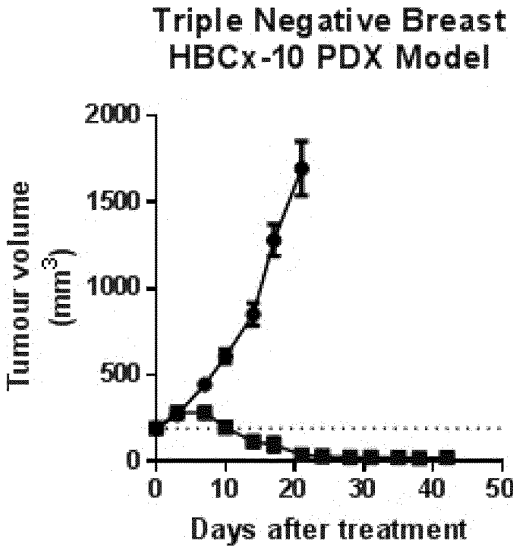


FIG. 24J

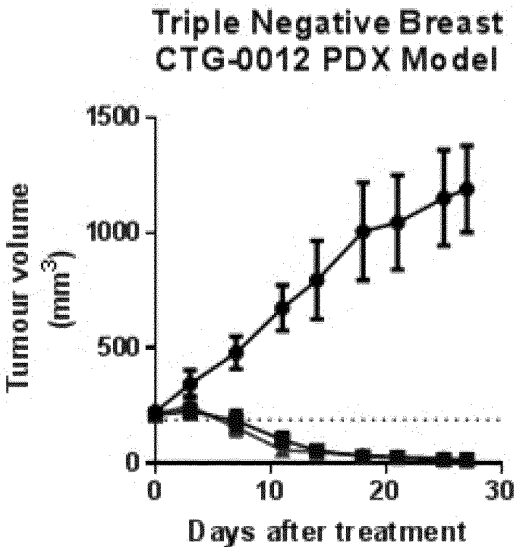


FIG. 24K

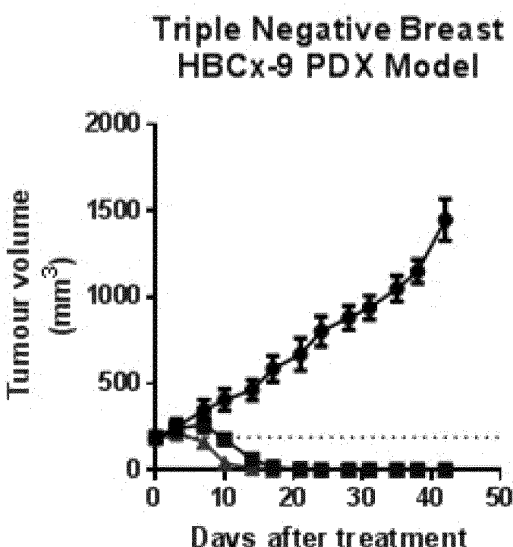


FIG. 24L

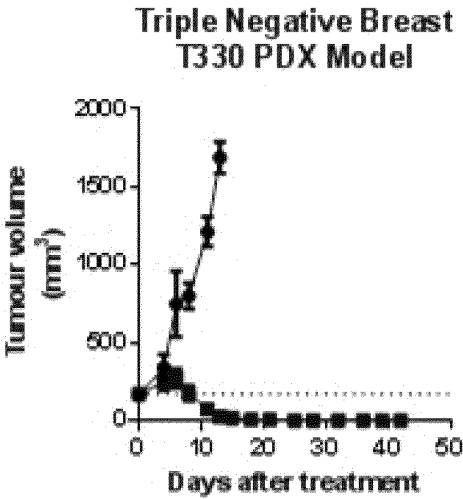


FIG. 24M

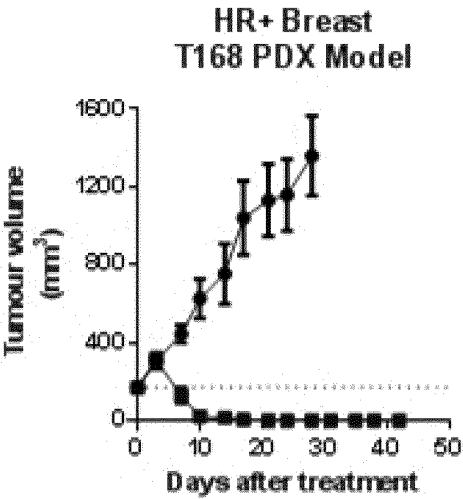


FIG. 24N

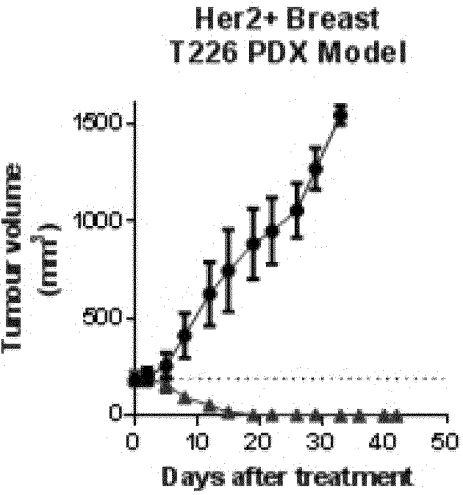


FIG. 24O

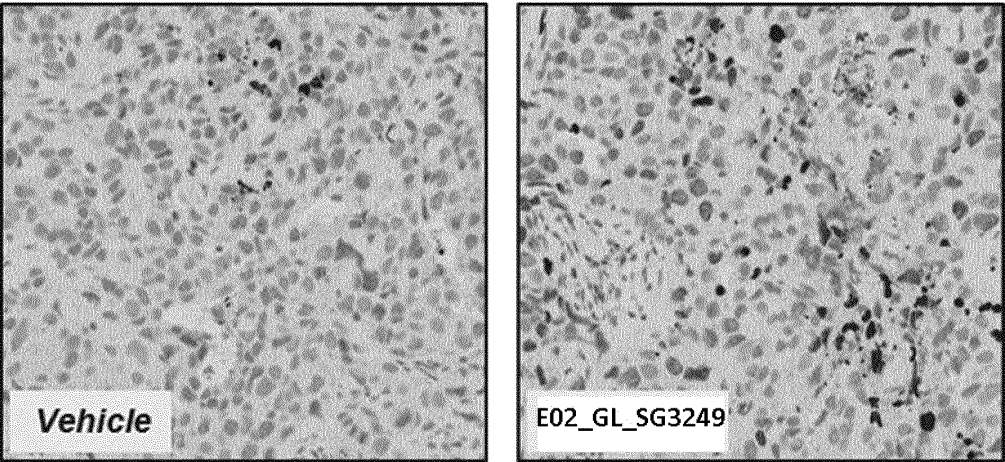


FIG. 25A

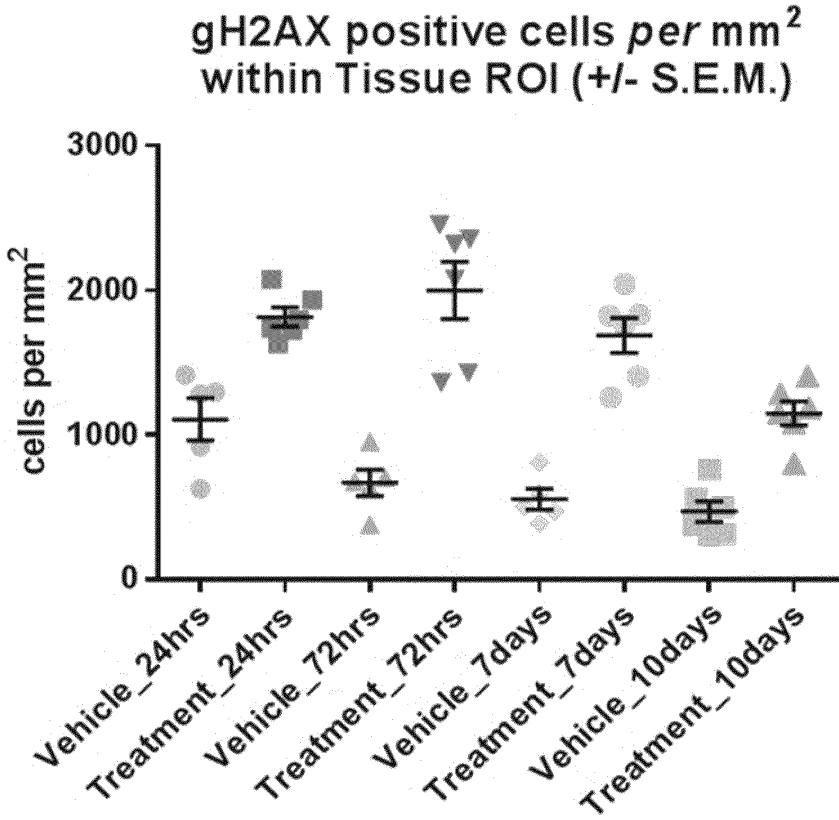


FIG. 25B

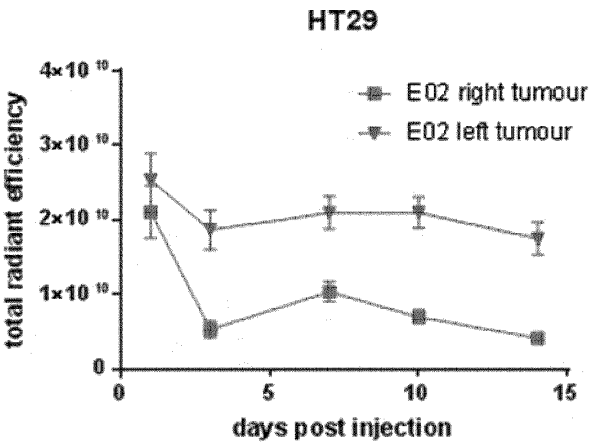


FIG. 26A

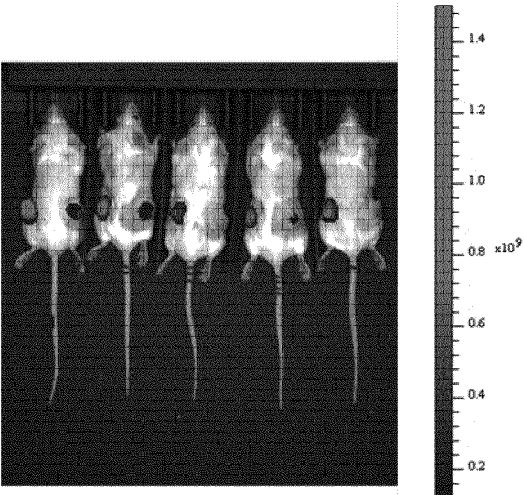


FIG. 26B

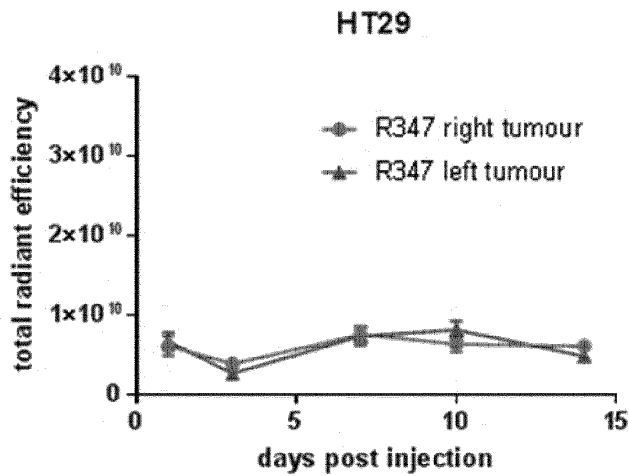


FIG. 26C

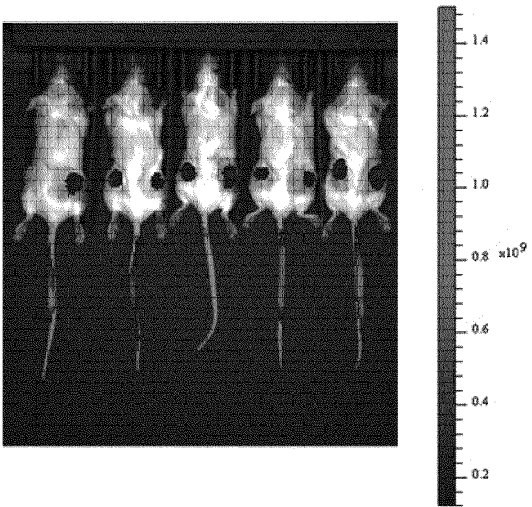


FIG. 26D

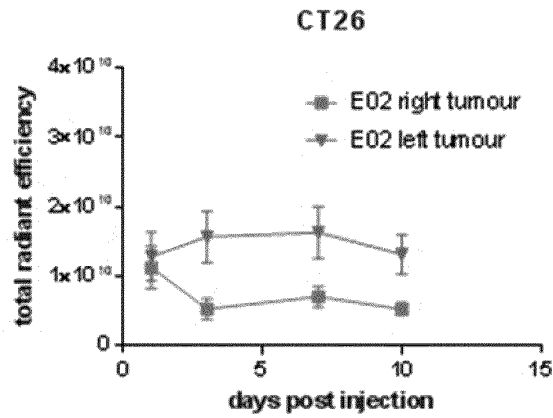


FIG. 27A

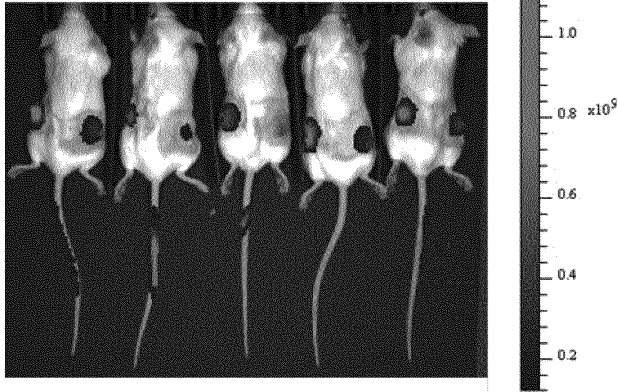


FIG. 27B

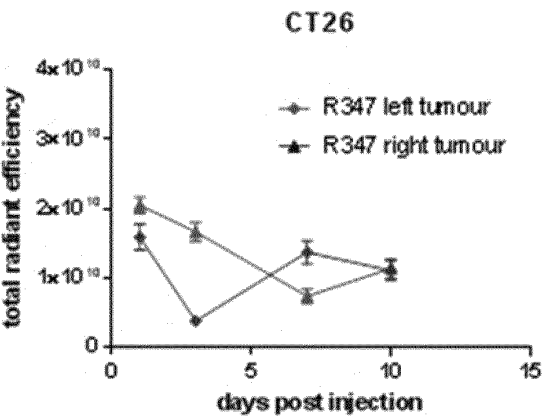


FIG. 27C

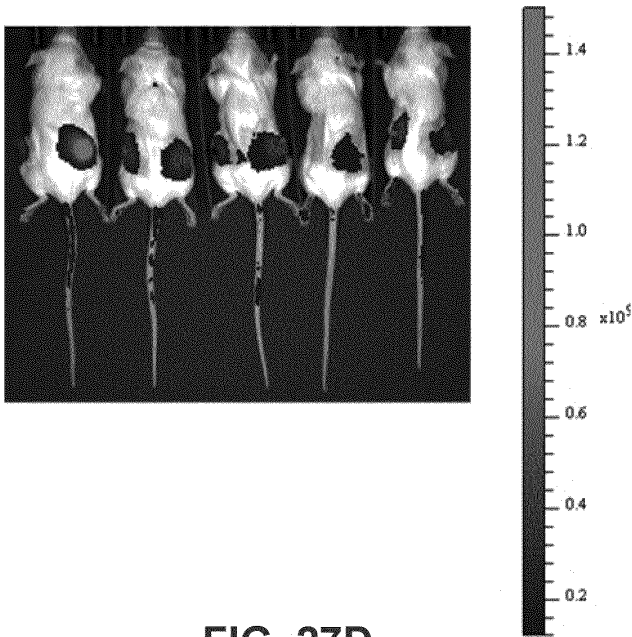


FIG. 27D

Clone ID	Heavy FW1	Heavy CDR1	Heavy FW2
ZY0EPQ-E02	QVQLQQWGAGLLKPSETLSLTCAYVGGSF	GYWN...	WIRQPPGKLEWIG
ZY0EQD-E02	QVQLQQWGAGLLKPSETLSLTCVYGGSF	GYWN...	WIRQPPGKLEWIG
ZY0EP0-C07	QVQLVESGGVLVKPGGSLRSCAASGFTLS	DYMS...	WIRQAPGMLEWWS
ZY0EOB-F05	QVQLQESGPGLVKPSQTLSTCTVSDGIS	SGGYWWS...	WIRQHPGKLEWIG
ZY0EO5-E07	QVQLQESGPGLVKPSQTLSTCTVSGGIS	SGGYWWS...	WIRQHPGKLEWIG

Heavy CDR2	Heavy FW3	Heavy CDR3	Heavy FW4
EIN.....HSGSTNYNPSLKS	RVTLVDTSKNQFSLKLSV..TAADTAVYYCAR	NLYNWNL.....DS	WGQGTLLTVSS
EIN.....HSGSTSYNPSLKS	RTISIDTSKNQFSLKLSV..TAADTAVYYCAR	VLYNWNV.....DS	WGQGTLLTVSS
YISS.....SGSTIYYTDSVKG	RFTISRDSAKNSLYLQMNSL..RAEDTAVYYCAR	DGVGF.....DY	WGQGTLLTVSS
NIY.....YSGSTYYNPSLKS	RVTISVDTSKNQFSLKLSV..TAADTAVYYCAT	EKALATVTPSGYENYYTV.....DV	WGQGTLLTVSS
NIY.....YSGSTYYNPSLKS	RVTISVDTSKNQFSLKLSV..TAADTAVYYCAR	EKALASVTPSGYENYYV.....DV	WGQGTLLTVSS

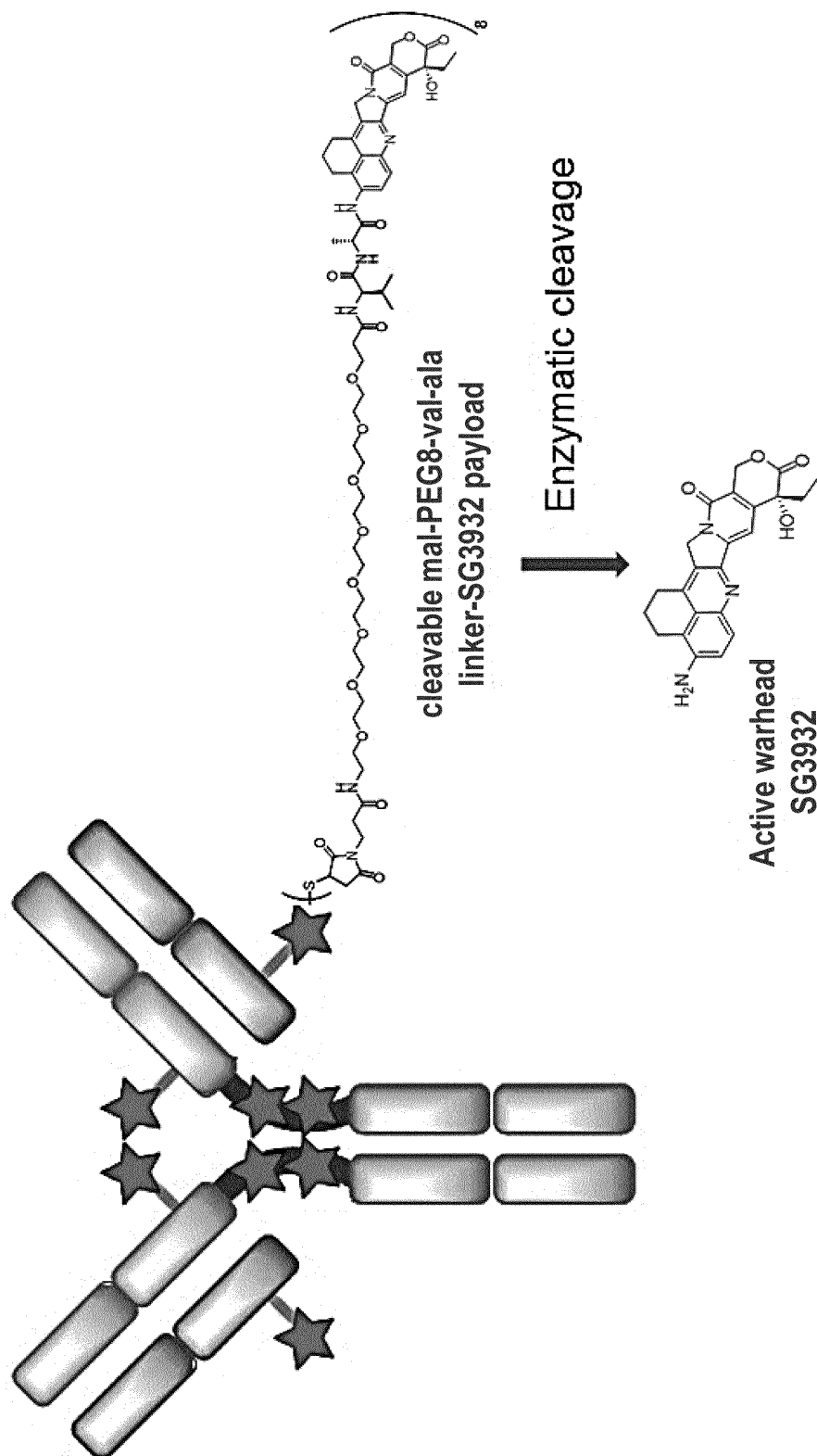
FIG. 28A

Clone ID	Light FW1	Light CDR1	Light FW2
ZY0EQD-E02	DIQMTQSPSSLSASVGDRVITTC	RASQ.....DIRNDVG	WYQQKPGKAPKRLIY
ZY0EPQ-E02	DIQMTQSPSSLSASVGDRVITTC	RASQ.....GIRNDLG	WYQQKPGKAPKRLIY
ZY0EP0-C07	EIVLTQSPGTLSPFGERATLSC	RASQ.....VSSSYLA	WYQQKPGQSPRLLIY
ZY0EO5-E07	DIQLTQSPSFLSASVGGRVTTC	WASQ.....GIAGYLA	WYQQKPGKAPKLLIY
ZY0EOB-F05	DIQLTQSPSFLSASVGDRVITTC	WASQ.....GISSYLA	WYQQKPGKAPKLLIY

Light CDR2	Light FW3	Light CDR3	Light FW4
AA.....SRLQS	GVPSRFSGSGG..TEFTLTISLQPEDFATYYC	LQHNSYP.....RT	FGQGTKVEI...K
VA.....SSLQS	GVPSRFSGSGG..TEFTLTISLQPEDFATYYC	LQHNSYP.....RT	FGQGTKVEI...K
AA.....SSRAT	GIPDRFSGSGG..TDFLTISRLEPEDFAVYYC	QQYGS SPL.....YT	FGQGTKLEI...K
AA.....STLQS	GVPSRFSGSGG..TEFTLTISLQPEDFATYYC	QHLNSYP.....LT	FGGGTKVEI...K
AA.....STLQS	GVPSRFSGSGG..TEFTLTISLQPEDFATYYC	QHLNSYP.....LT	FGGGTKVEI...K

FIG. 28B

E02-GL-SG3932: B7-H4 targeting TOP1i-ADC



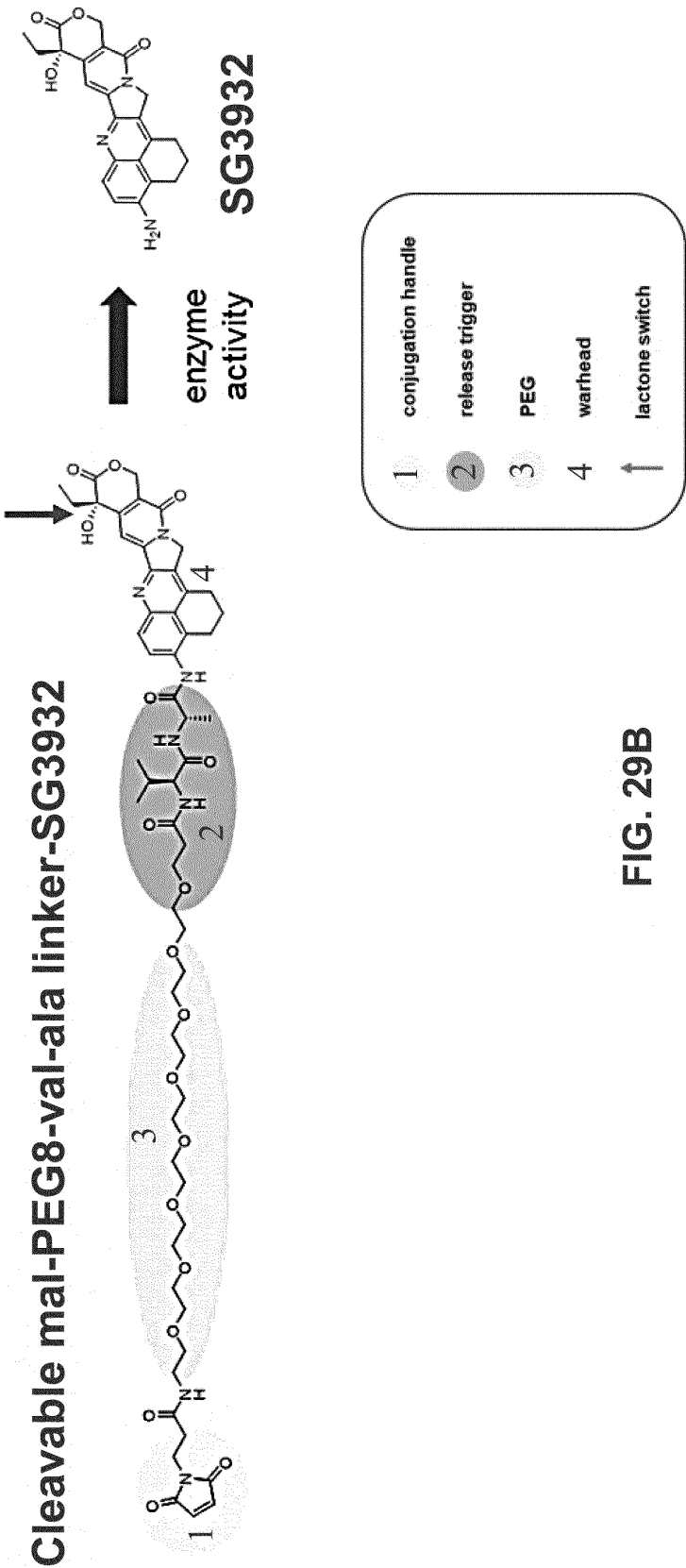


FIG. 29B

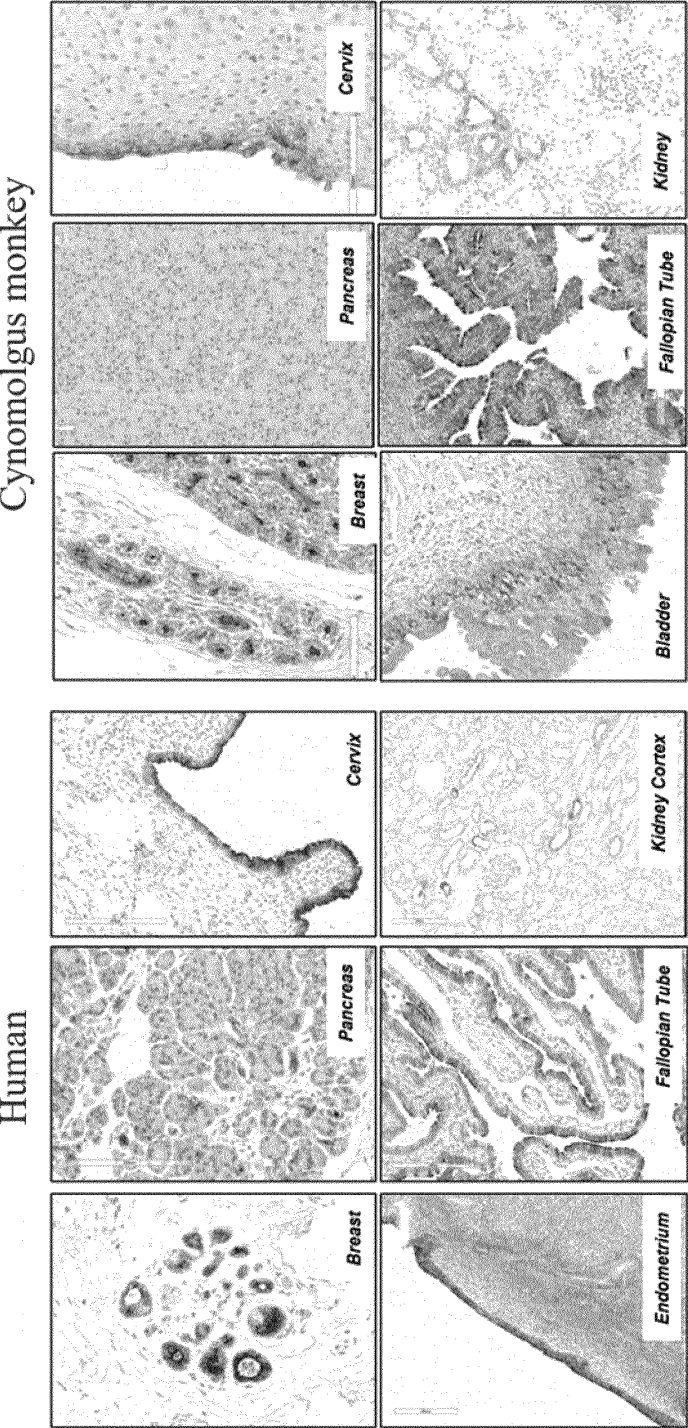
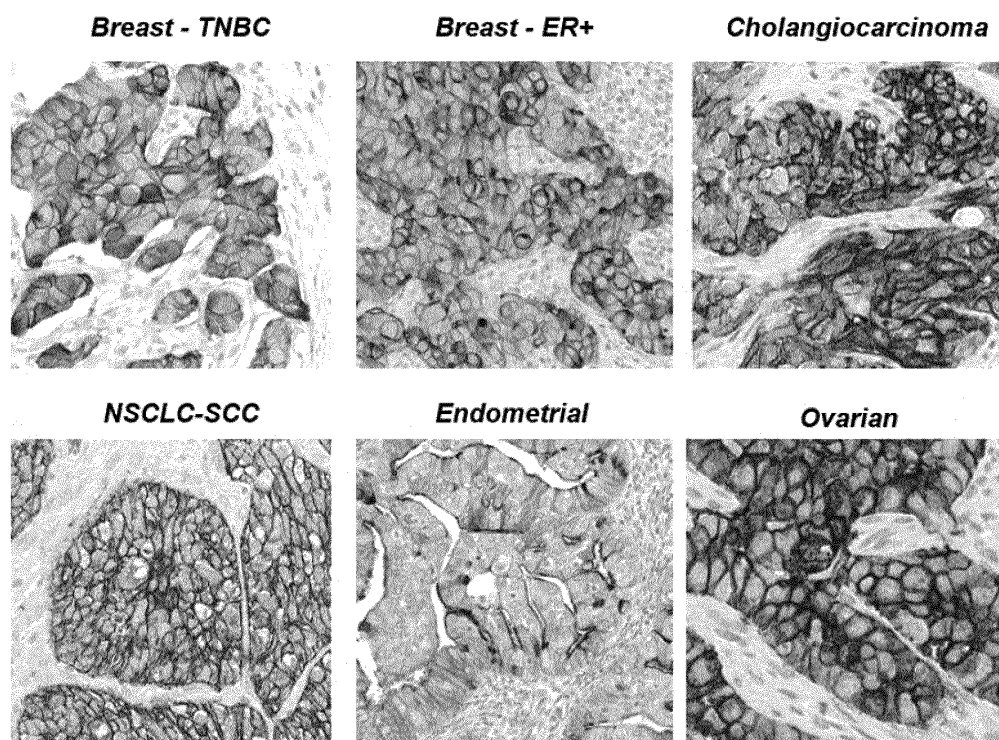


FIG. 30



ER: estrogen receptor; NSCLC-SCC: Non-small cell lung cancer, squamous cell carcinoma; TNBC: triple-negative breast cancer.

FIG. 31

Global Protein alignment. Reference molecule: hB7-H4 (VTCN1), Region 1 to 282
Sequences: 5. Scoring matrix: BLOSUM 62

Sequence View: Similarity Format, Color behind non-matches

hB7-H4 (VTCN1)	1	maslgqlfwsliisliilagaia	liigfgisgrhsitvttvasagnigedgilsc	tfepdiklsdiviqwlkegvlglv
cyB7-H4 (VTCN1)	1	maslgqlfwsliisliilagaia	liigfgisgrhsitvttvasagnigedgilsc	tfepdiklsdiviqwlkegvlglv
rhB7-H4 (VTCN1)	1	maslgqlfwsliisliilagaia	liigfgisgrhsitvttvasagnigedgilsc	tfepdiklsdiviqwlkegvlglv
mB7-H4 (VTCN1)	1	maslgqlfwsliisliilagaia	liigfgisgrhsitvttvasagnigedgilsc	tfepdiklsdiviqwlkegvlglv
rB7-H4 (VTCN1)	1	maslgqlfwsliisliilagaia	liigfgisgrhsitvttvasagnigedgilsc	tfepdiklsdiviqwlkegvlglv
hB7-H4 (VTCN1)	81	hefkegkdelseqdemfrgtavfadqv	vgnasrlrknvqltdagtykcyiitsk	gkgnanleyktgafsmpevnnvdy
cyB7-H4 (VTCN1)	81	hefkegkdelseqdemfrgtavfadqv	vgnasrlrknvqltdagtykcyiitsk	gkgnanleyktgafsmpevnnvdy
rhB7-H4 (VTCN1)	81	hefkegkdelseqdemfrgtavfadqv	vgnasrlrknvqltdagtykcyiitsk	gkgnanleyktgafsmpevnnvdy
mB7-H4 (VTCN1)	81	hefkegkdelseqdemfrgtavfadqv	vgnasrlrknvqltdagtykcyiitsk	gkgnanleyktgafsmpevnnvdy
rB7-H4 (VTCN1)	81	hefkegkdelseqdemfrgtavfadqv	vgnasrlrknvqltdagtykcyiitsk	gkgnanleyktgafsmpevnnvdy
hB7-H4 (VTCN1)	161	assetlrceaprwfpqptvvwasqv	dqganfsevsntsfelnsenvtmkvsv	lynvntntyscmiendiakatgdikv
cyB7-H4 (VTCN1)	161	assetlrceaprwfpqptvvwasqv	dqganfsevsntsfelnsenvtmkvsv	lynvntntyscmiendiakatgdikv
rhB7-H4 (VTCN1)	161	assetlrceaprwfpqptvvwasqv	dqganfsevsntsfelnsenvtmkvsv	lynvntntyscmiendiakatgdikv
mB7-H4 (VTCN1)	161	assetlrceaprwfpqptvvwasqv	dqganfsevsntsfelnsenvtmkvsv	lynvntntyscmiendiakatgdikv
rB7-H4 (VTCN1)	161	assetlrceaprwfpqptvvwasqv	dqganfsevsntsfelnsenvtmkvsv	lynvntntyscmiendiakatgdikv
hB7-H4 (VTCN1)	241	teselkrrshlqllnskaslcv	ssffaiswallplspylmlk	
cyB7-H4 (VTCN1)	241	teselkrrshlqllnskaslcv	ssffaiswallplspylmlk	
rhB7-H4 (VTCN1)	241	teselkrrshlqllnskaslcv	ssffaiswallplspylmlk	
mB7-H4 (VTCN1)	241	teselkrrshlqllnskaslcv	ssffaiswallplspylmlk	
rB7-H4 (VTCN1)	241	teselkrrshlqllnskaslcv	ssffaiswallplspylmlk	

ECD in boxes. h: human; cy: cynomolgus monkey; rh: rhesus monkey; m: mouse; r: rat.

FIG. 32

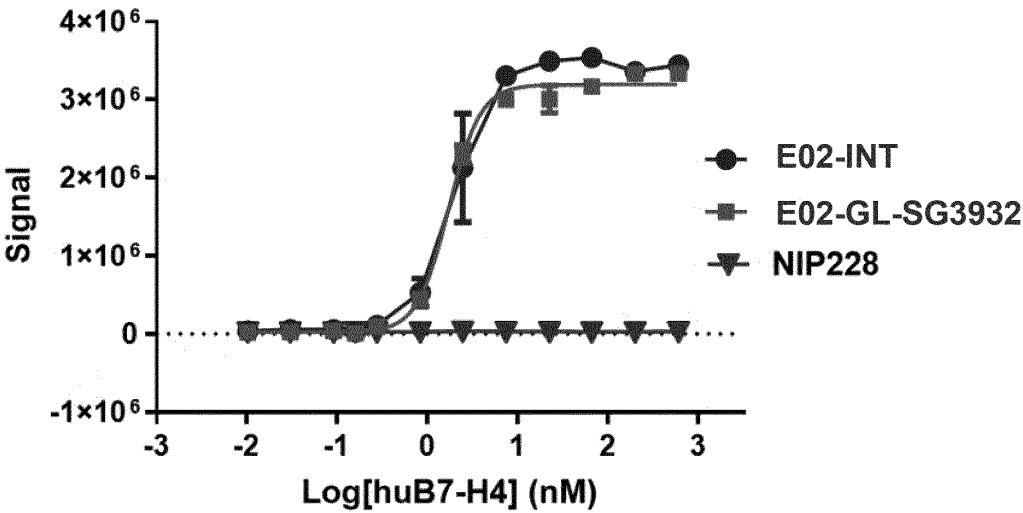


FIG. 33

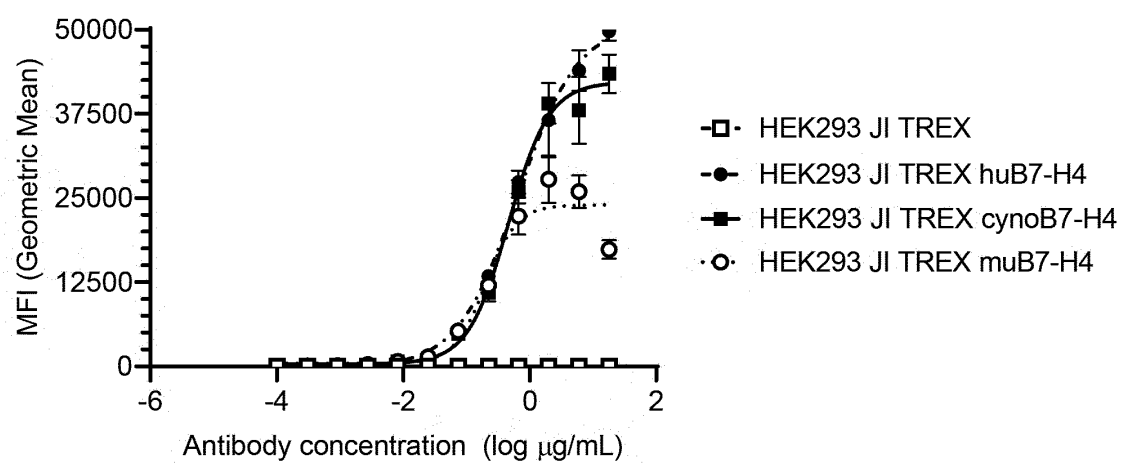


FIG. 34

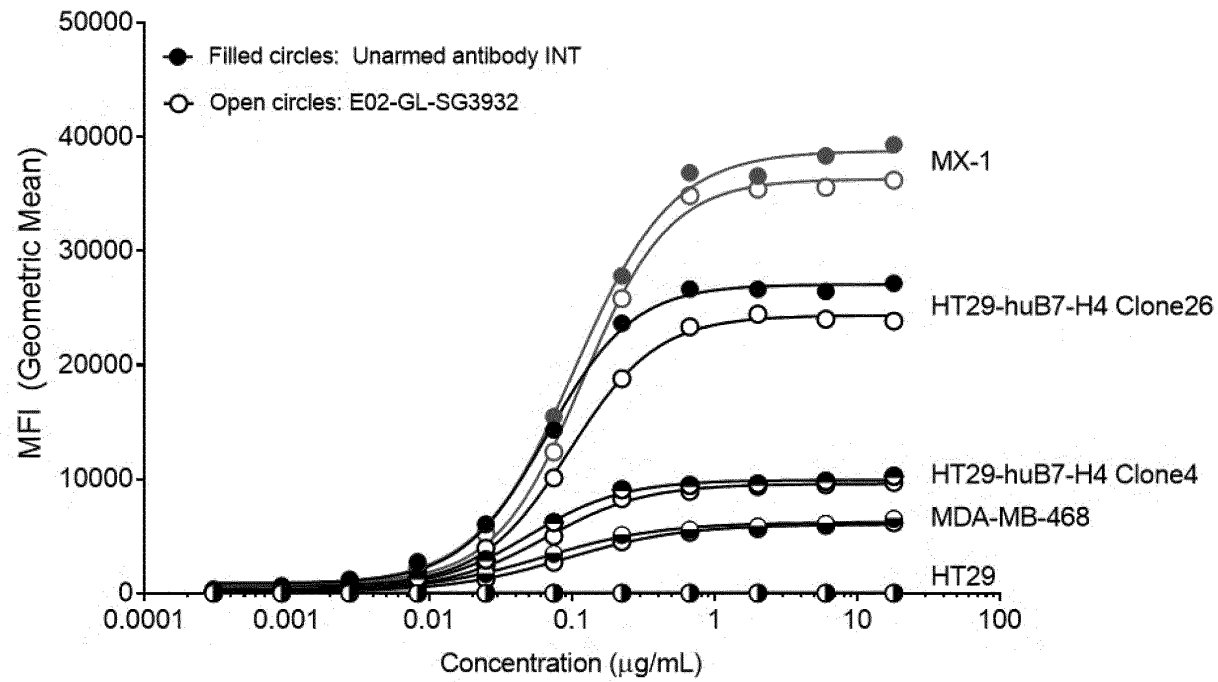


FIG. 35

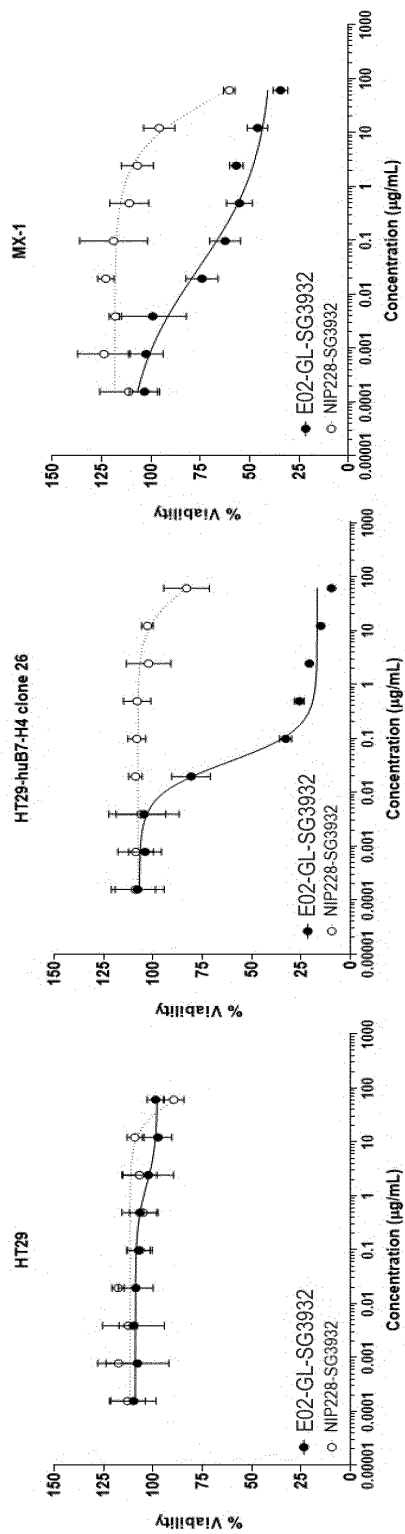


FIG. 36A

FIG. 36B

FIG. 36C

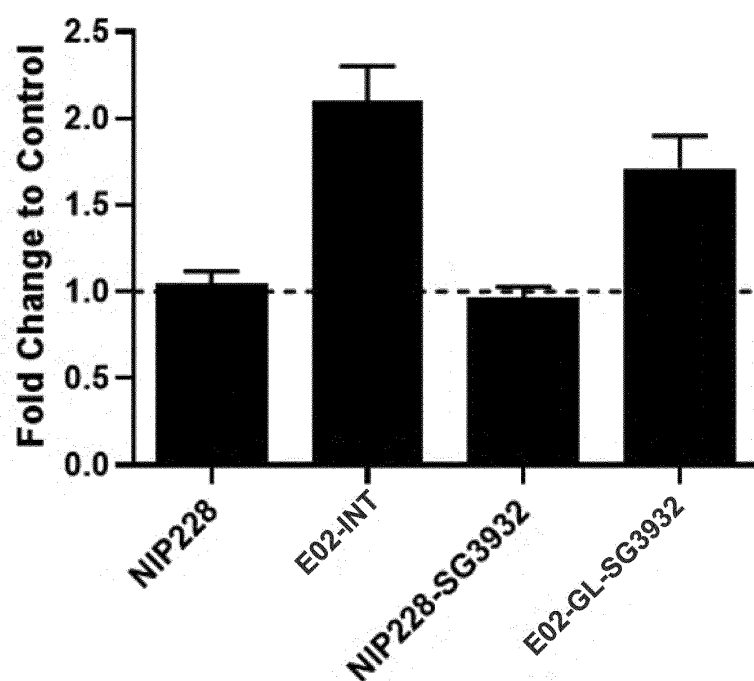


FIG. 37

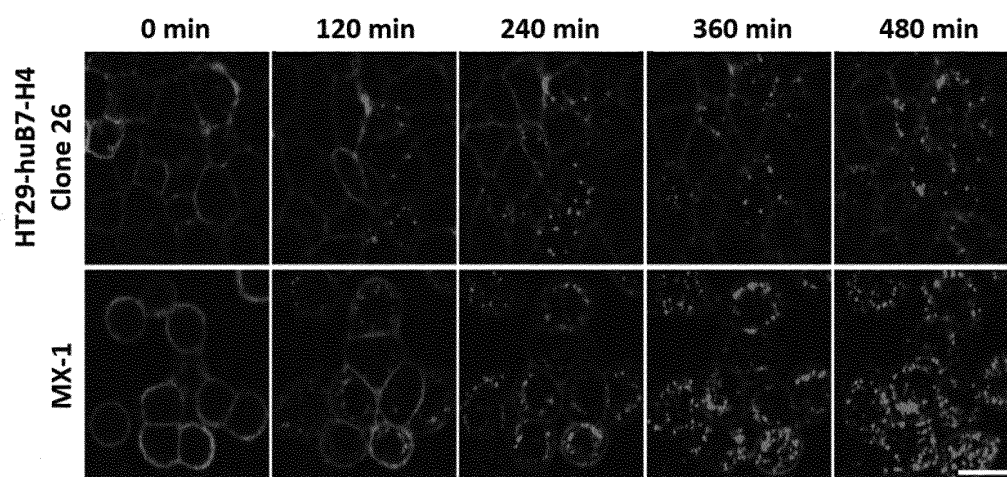


FIG. 38

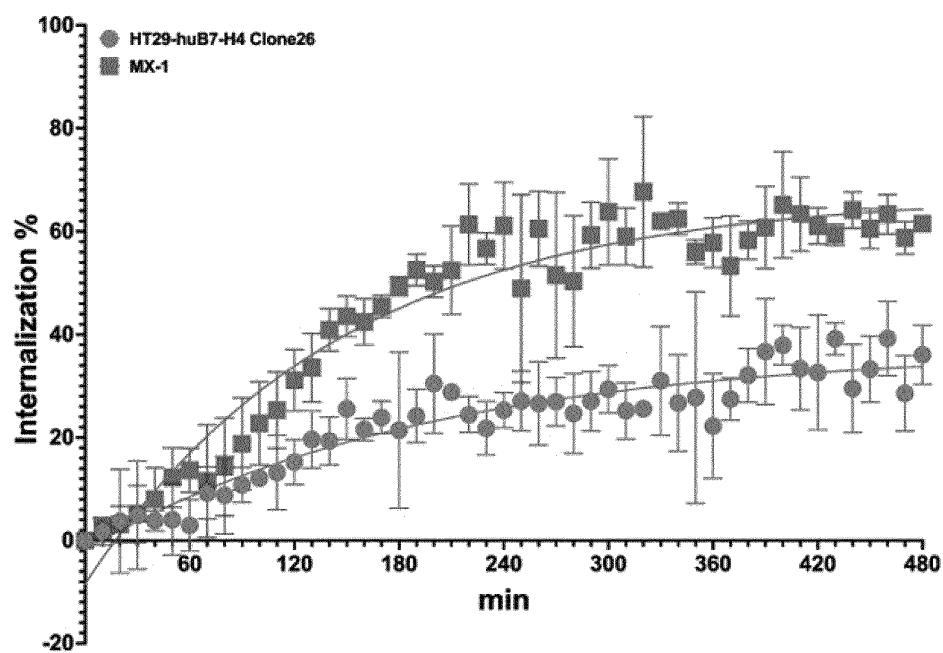


FIG. 39A

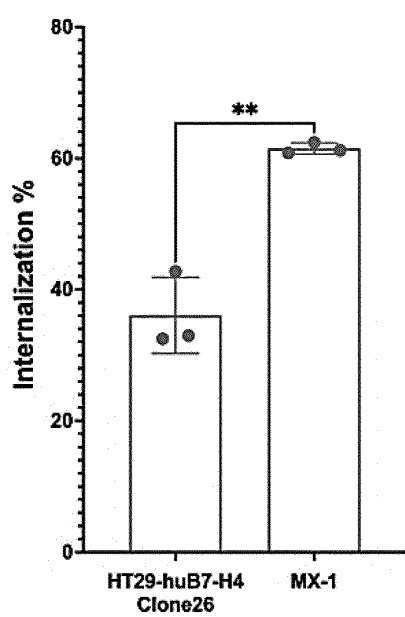


FIG. 39B

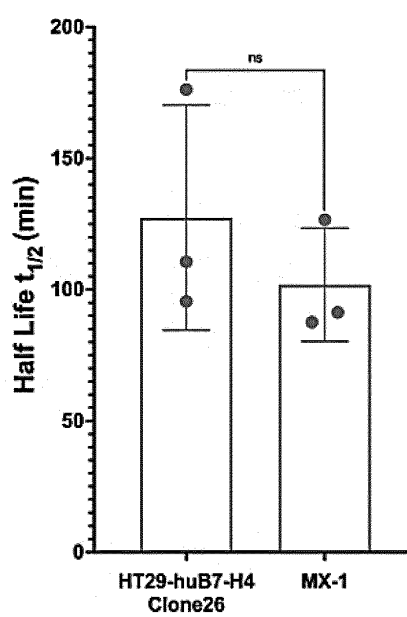


FIG. 39C

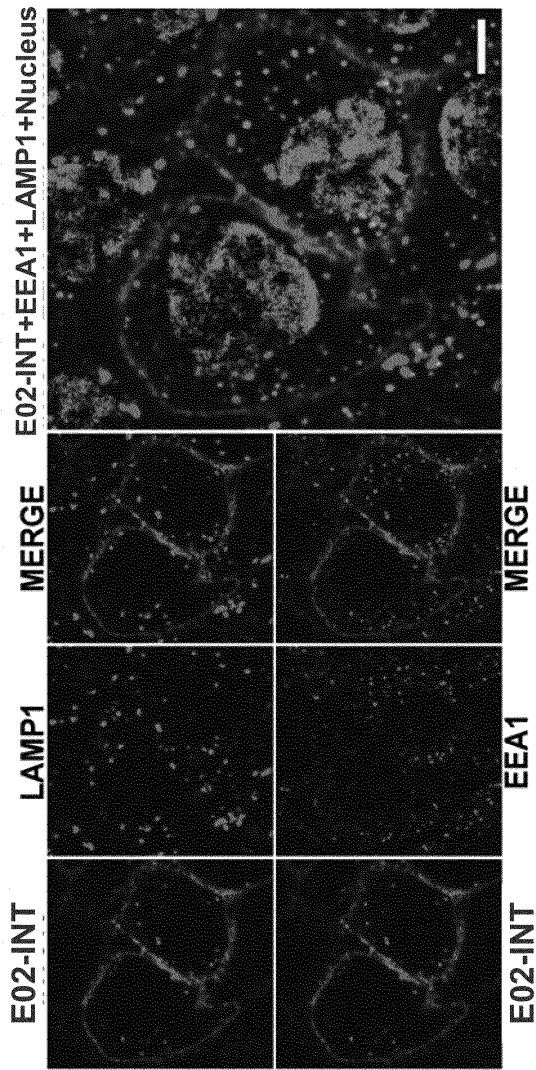


FIG. 40A

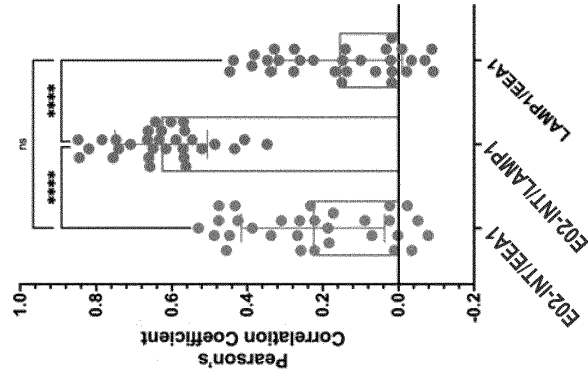


FIG. 40B

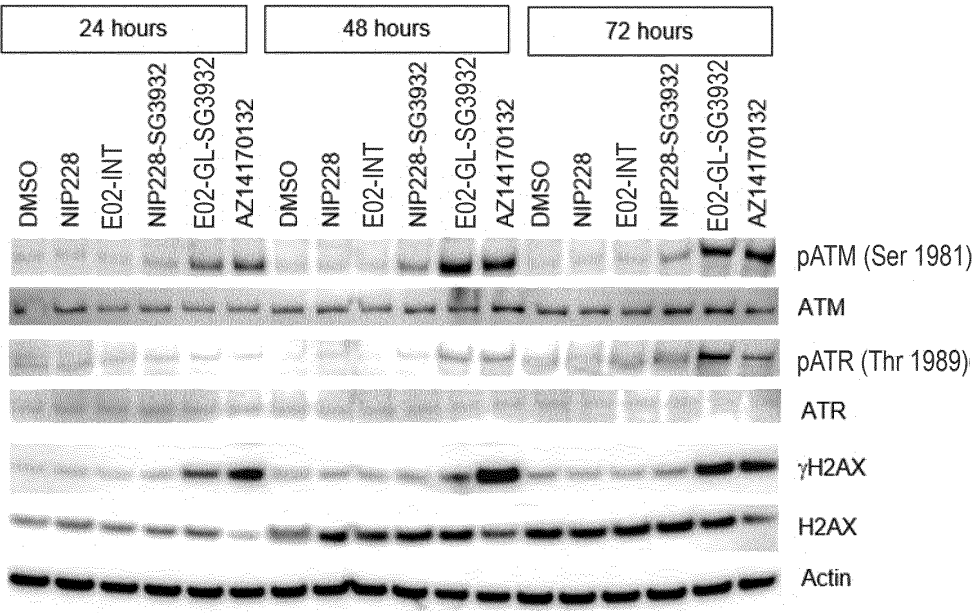


FIG. 41

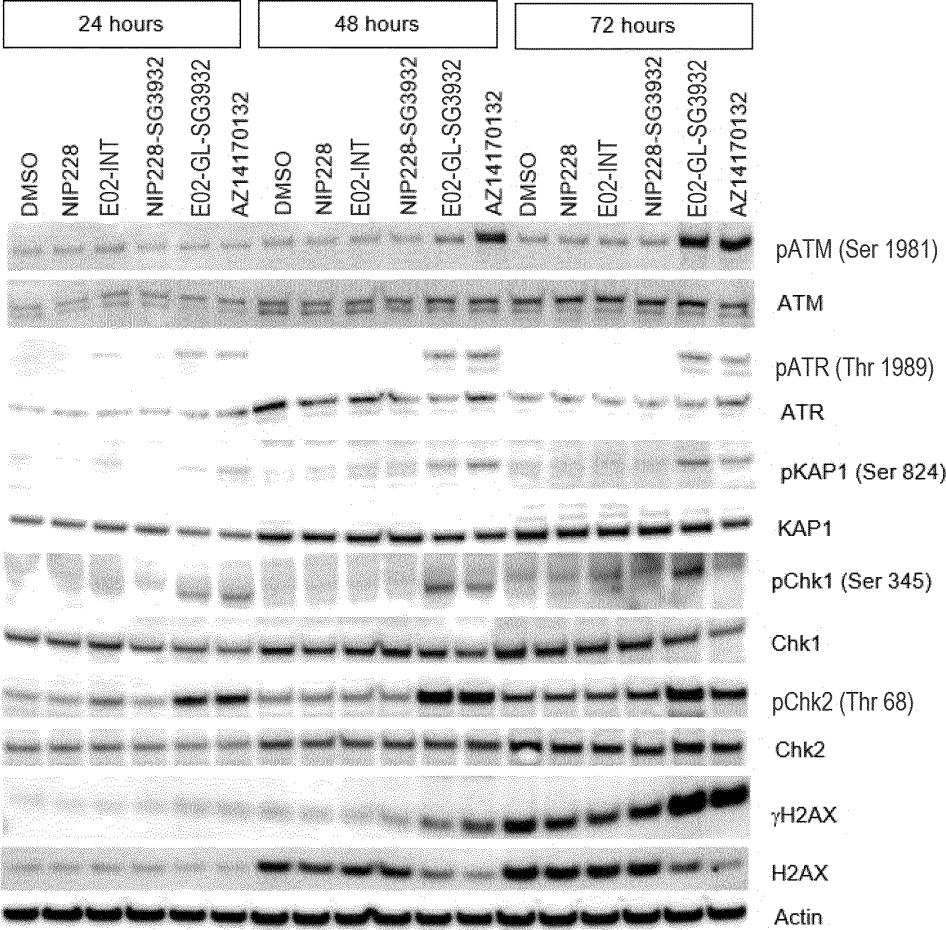


FIG. 42

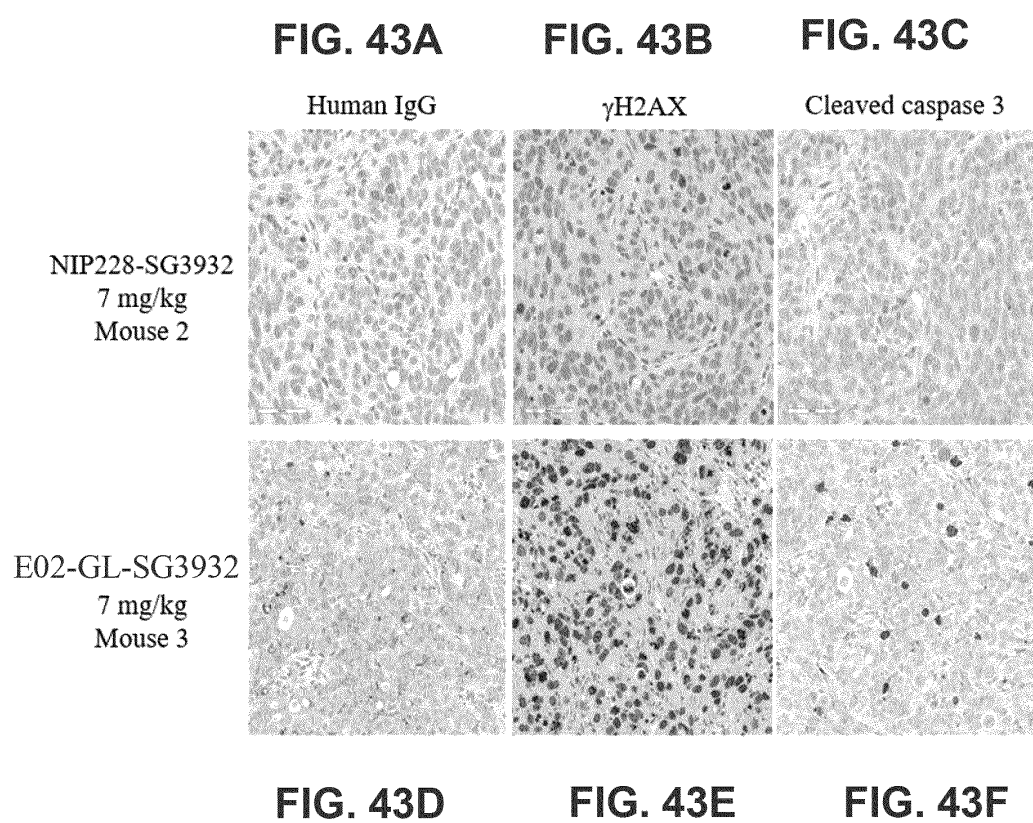


FIG. 44A

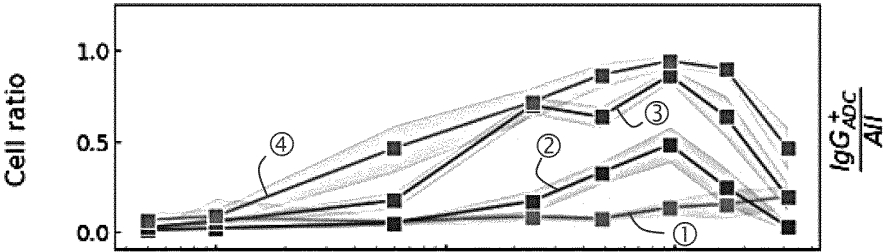


FIG. 44B

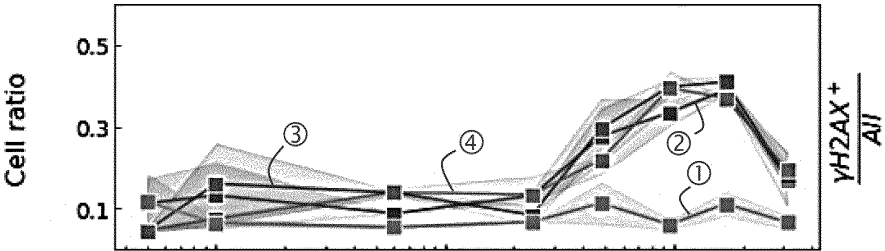


FIG. 44C

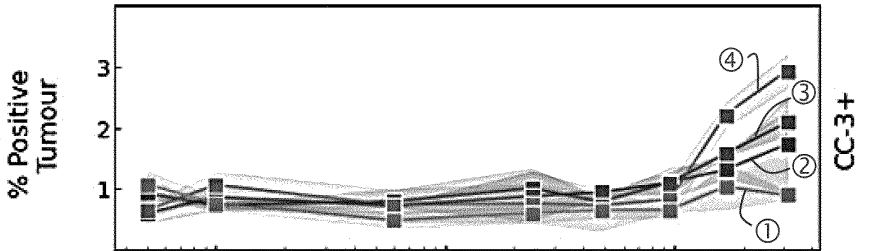
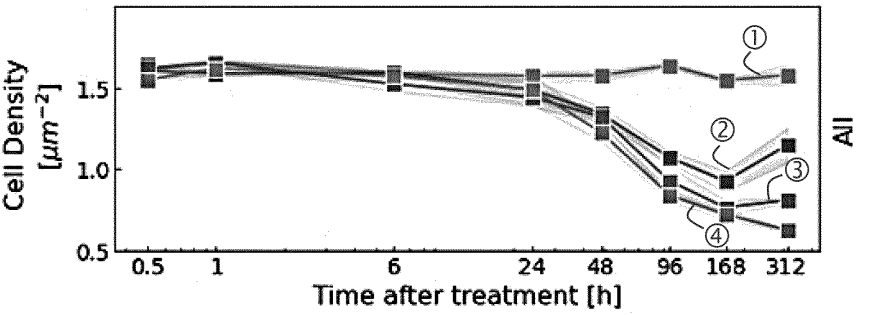


FIG. 44D



- ① — NIP228-SG3932 7mg/kg
- ② — E02-GL-SG3932 1.25mg/kg
- ③ — E02-GL-SG3932 3.5mg/kg
- ④ — E02-GL-SG3932 7mg/kg

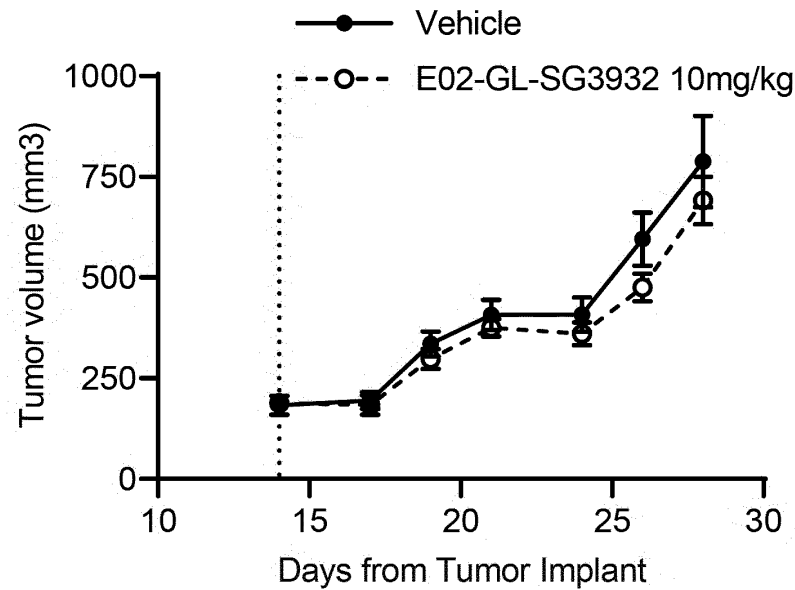


FIG. 45A

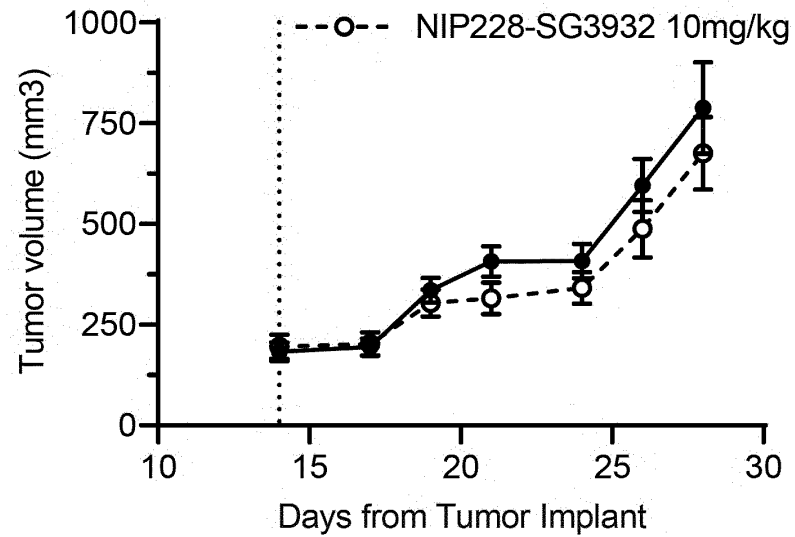


FIG. 45B

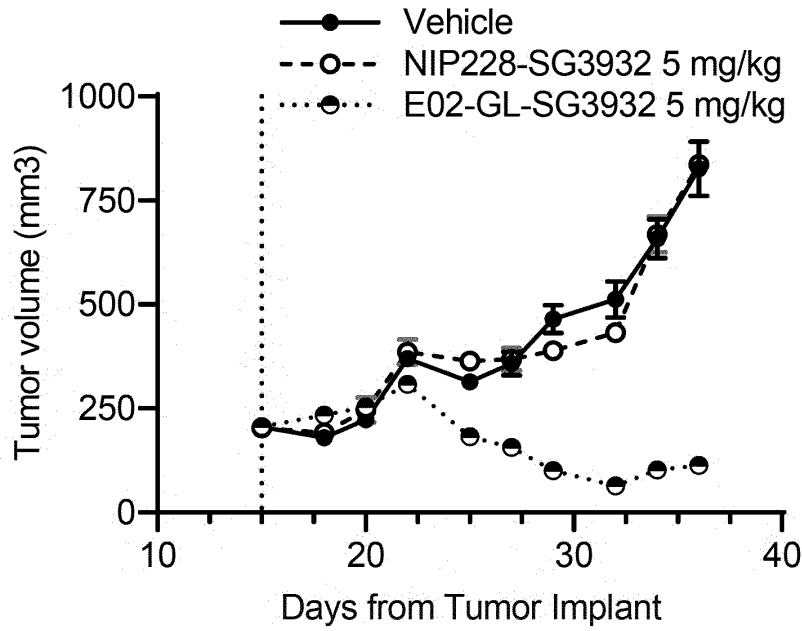


FIG. 46A

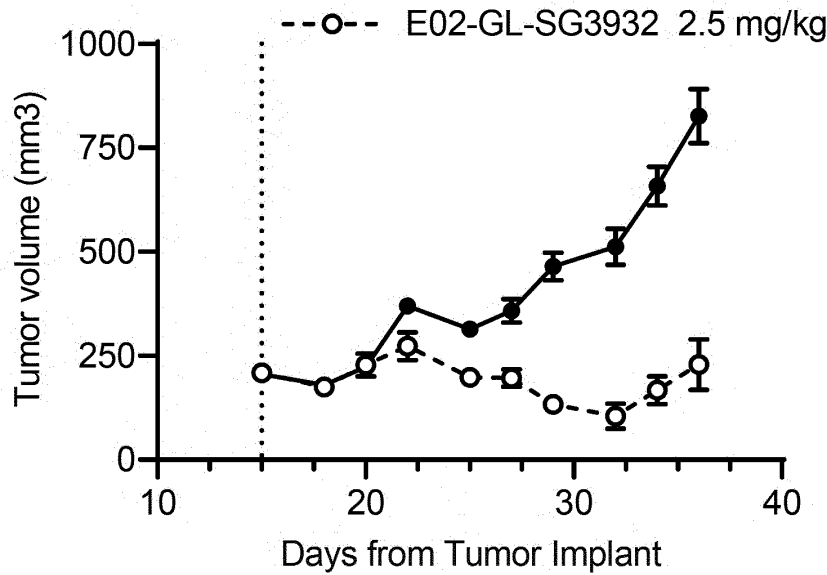
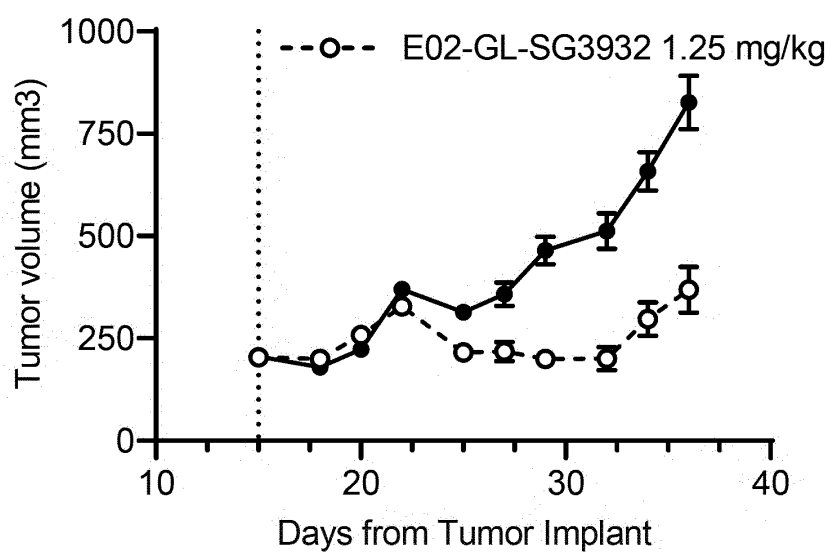


FIG. 46B

**FIG. 46C**

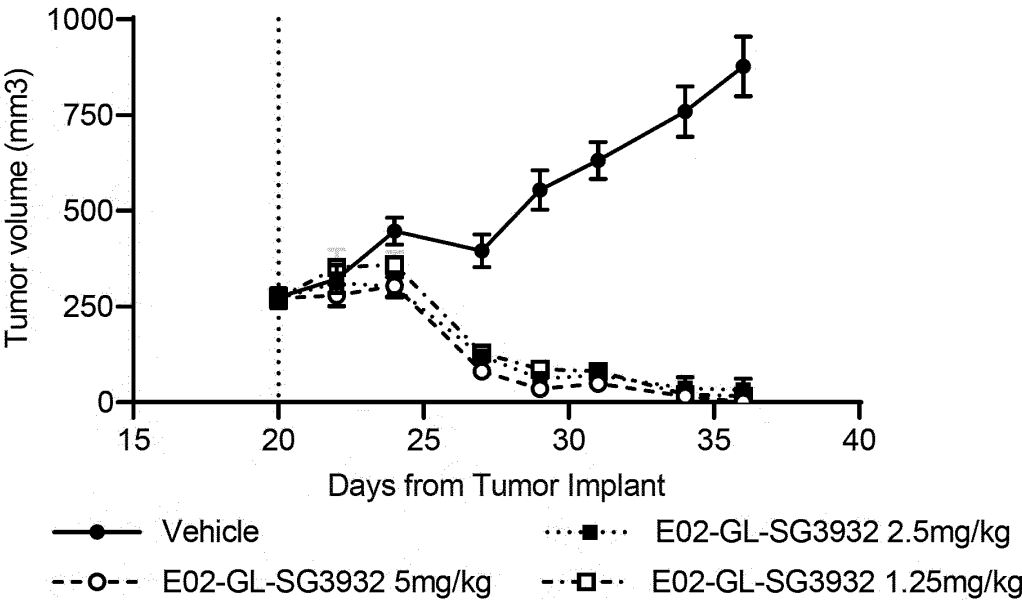


FIG. 47A

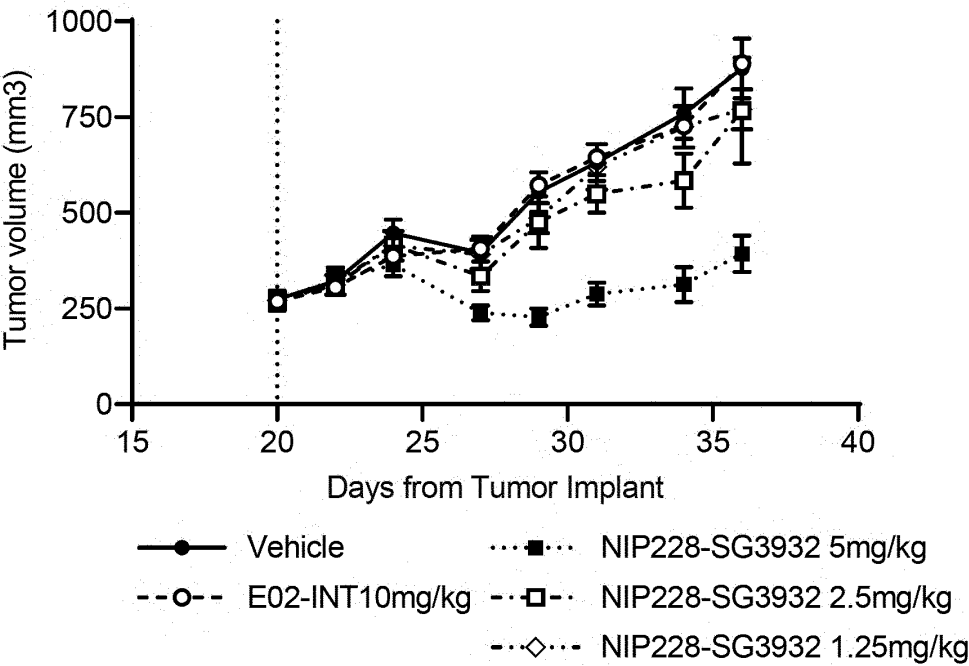
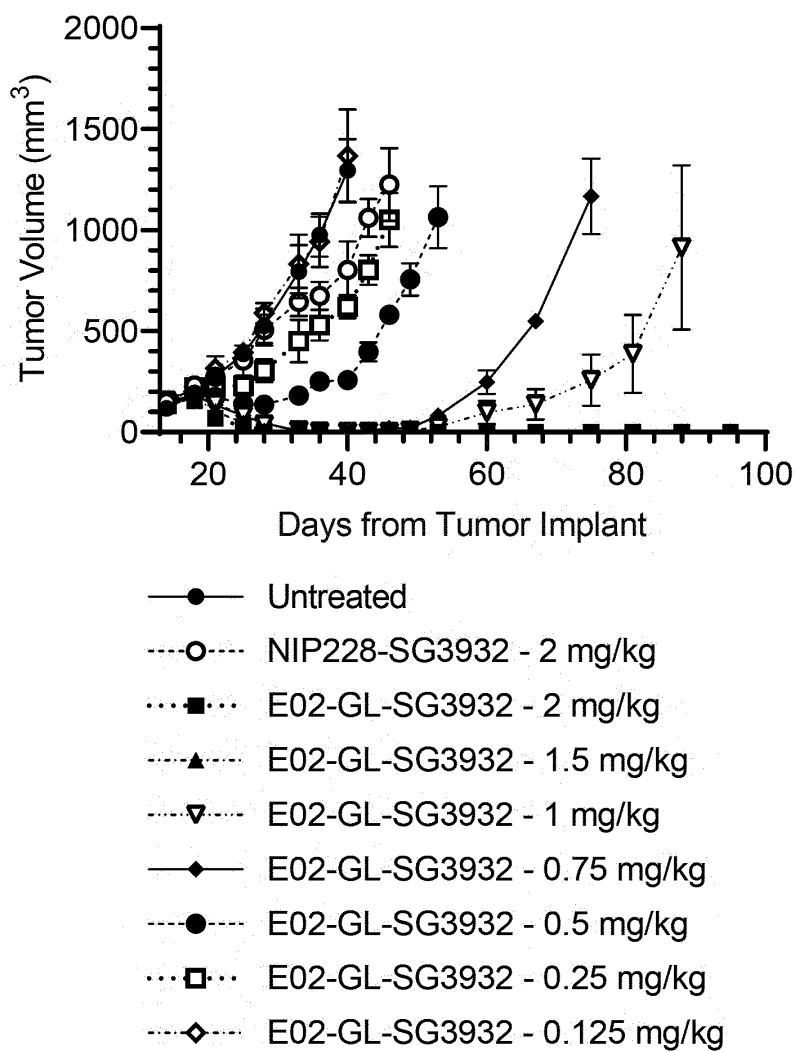
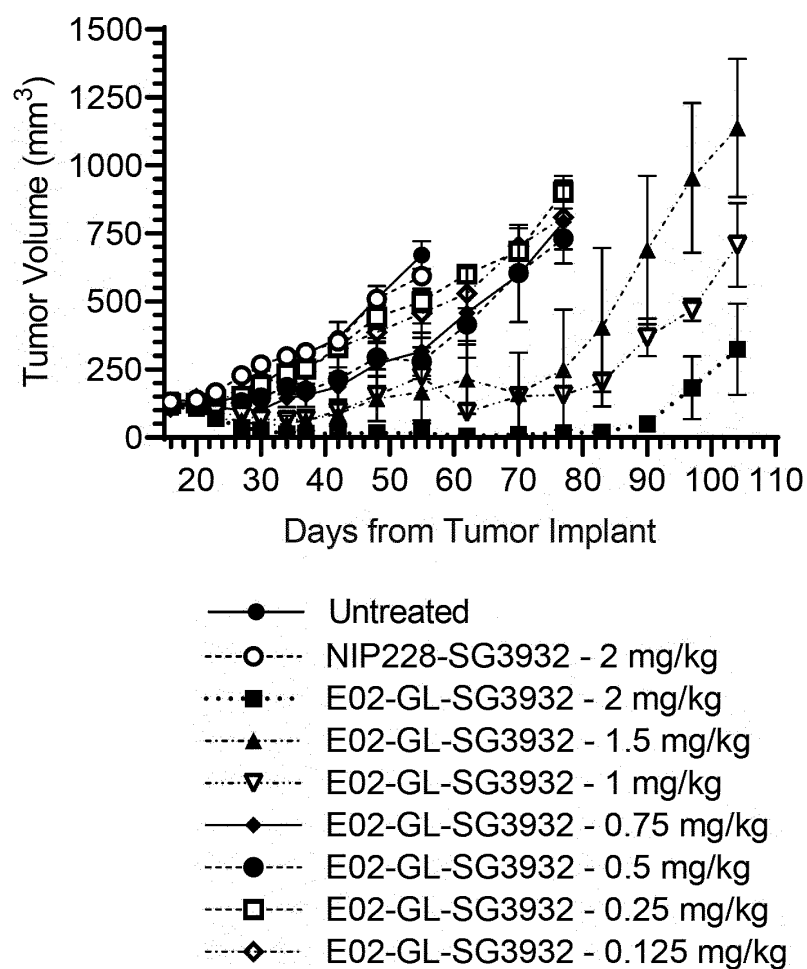


FIG. 47B

**FIG. 48**

**FIG. 49**

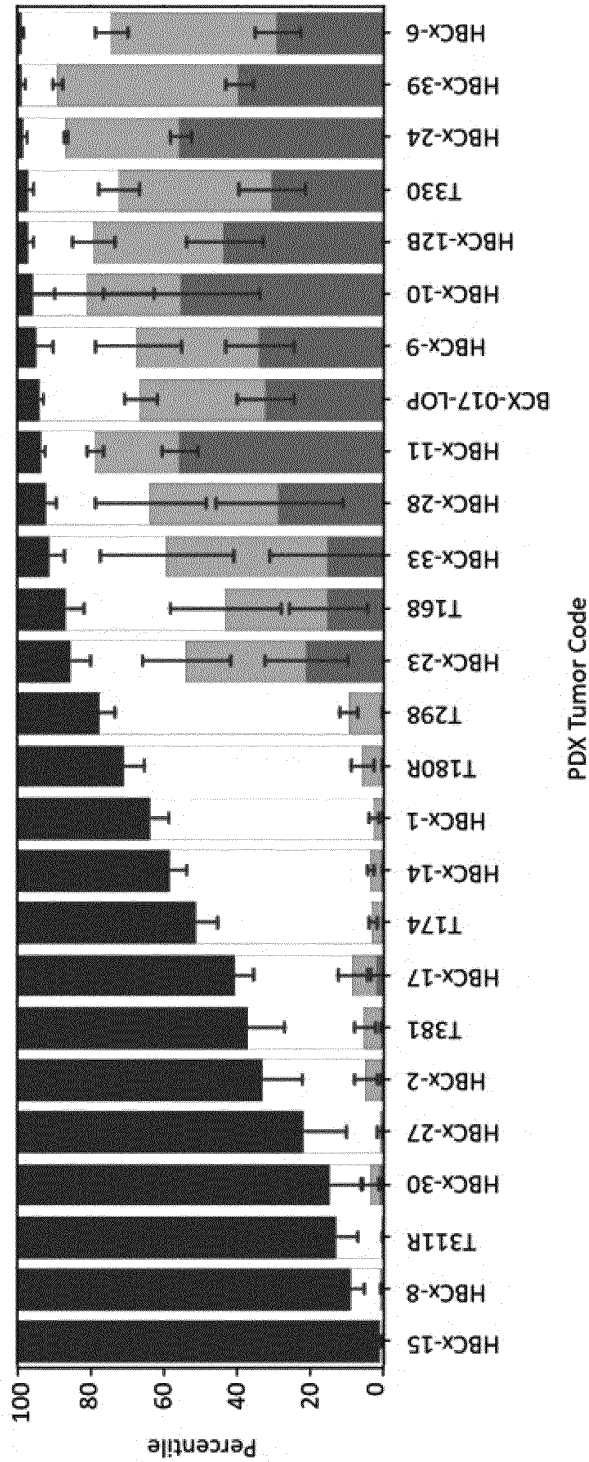


FIG. 50

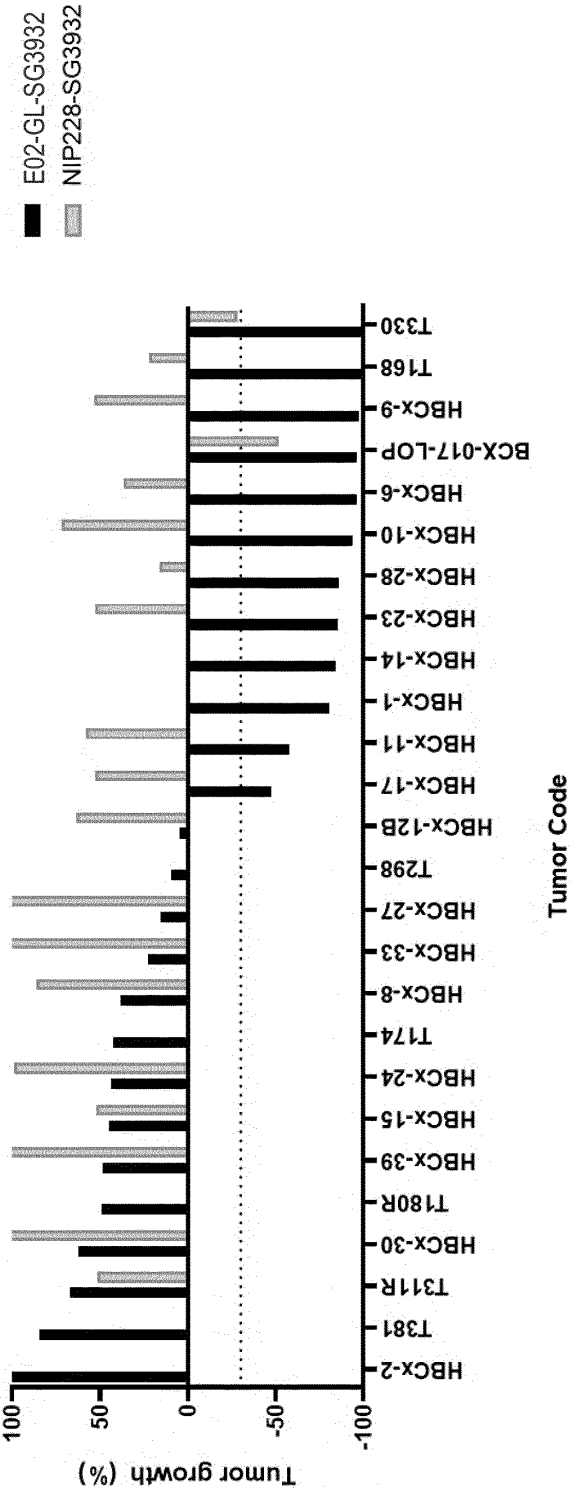


FIG. 51

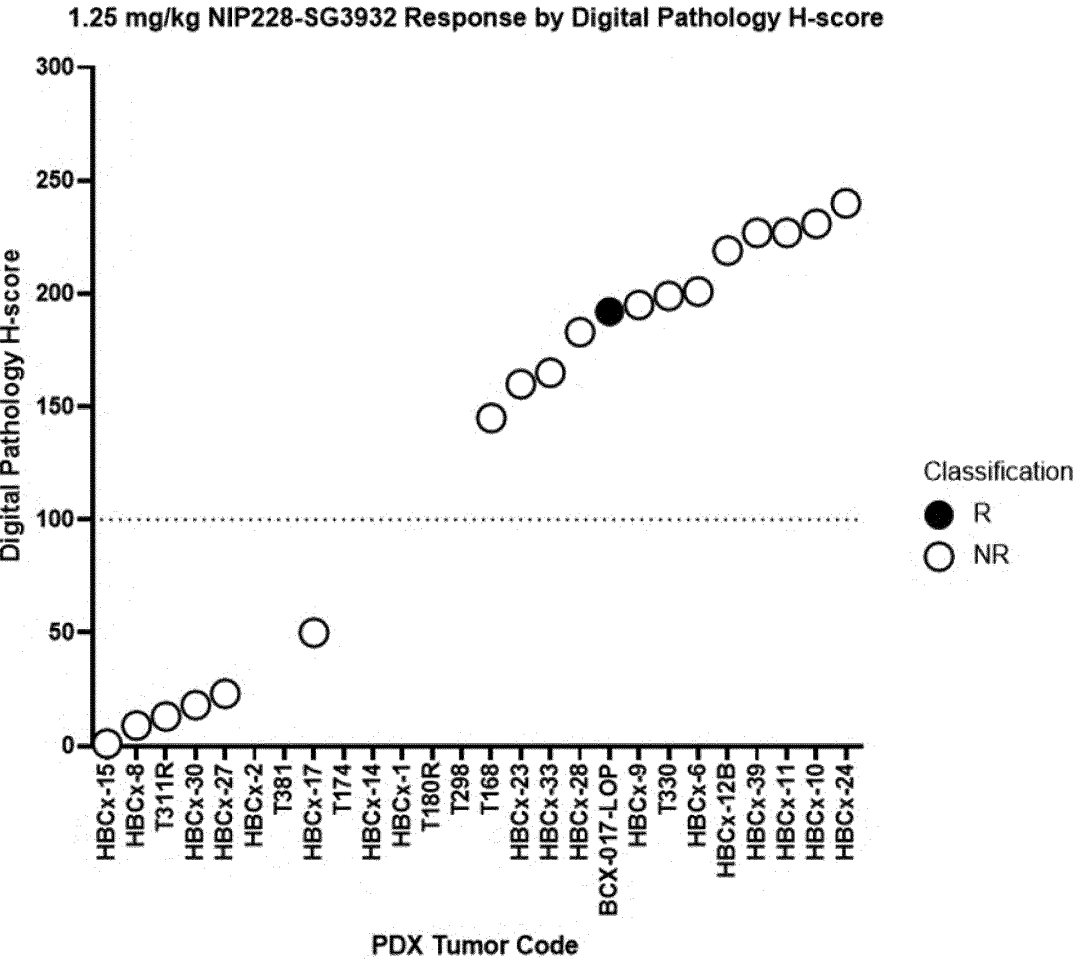


FIG. 52A

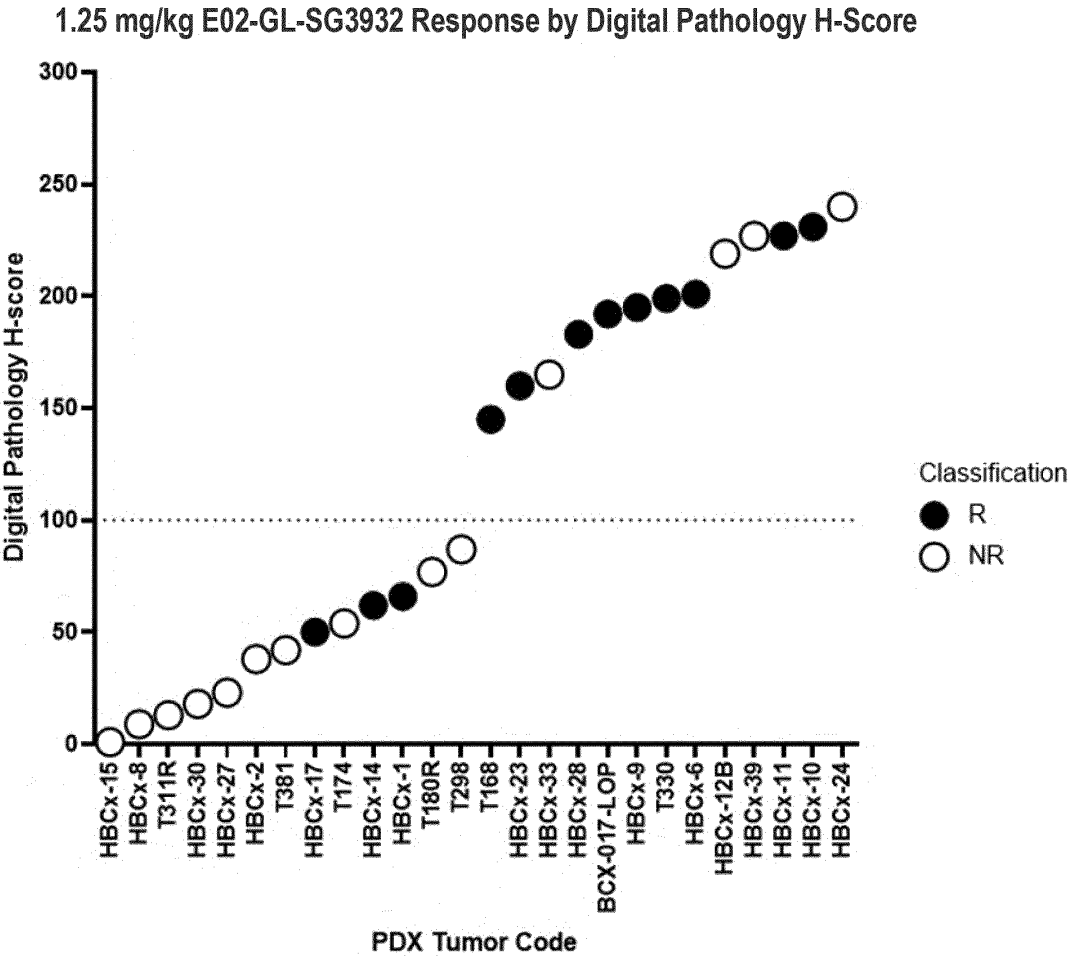


FIG. 52B

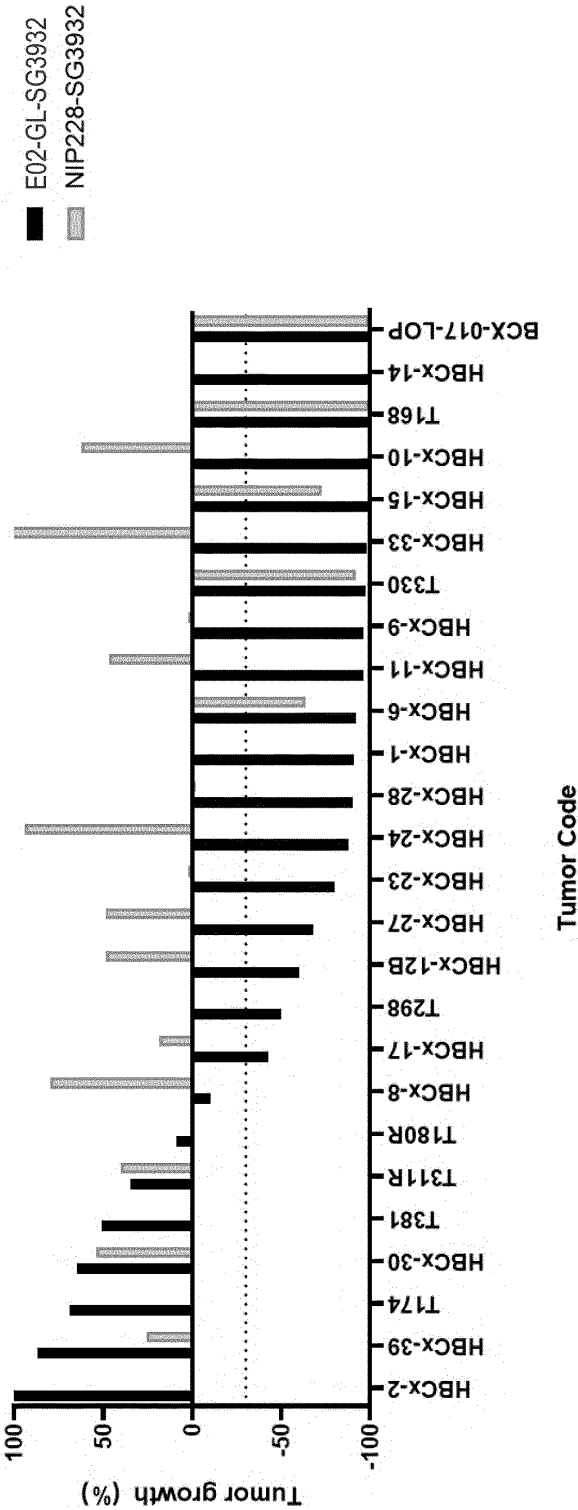


FIG. 53A

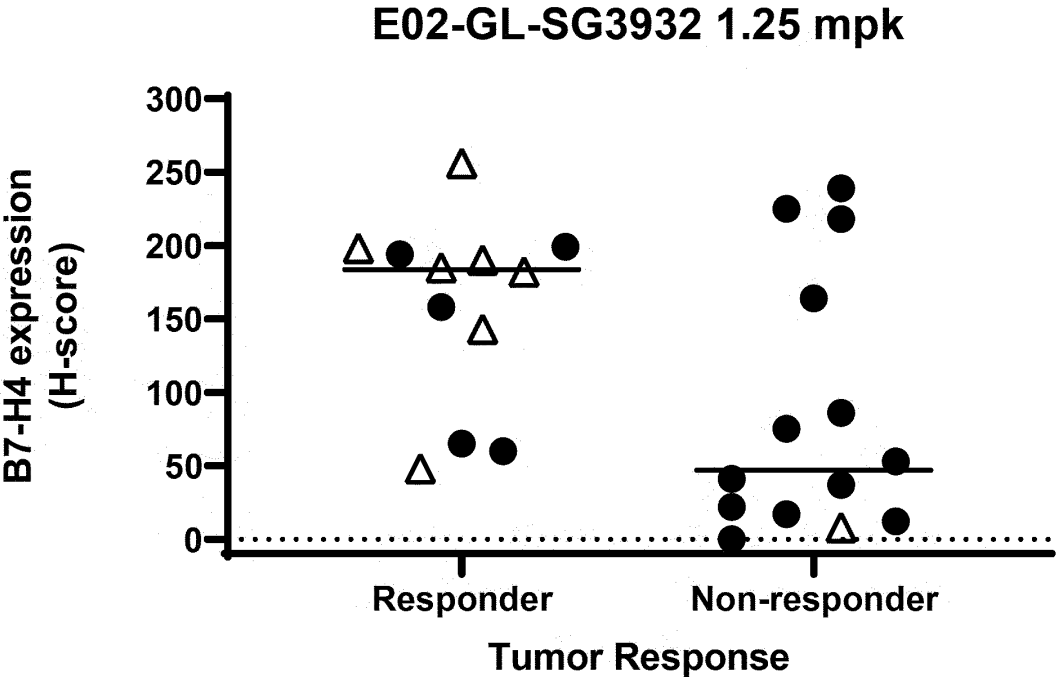


FIG. 53B

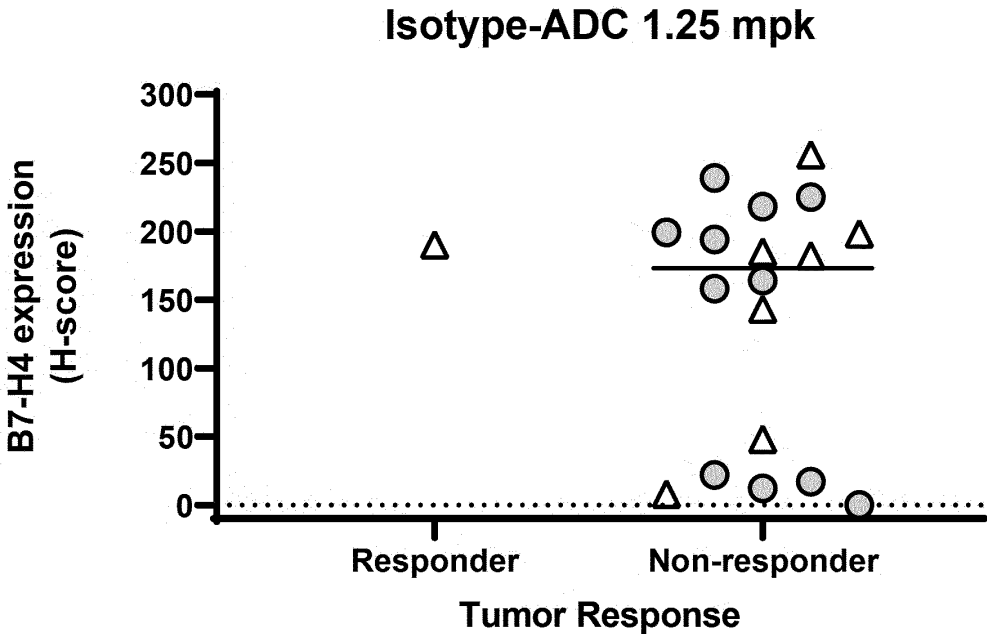


FIG. 53C

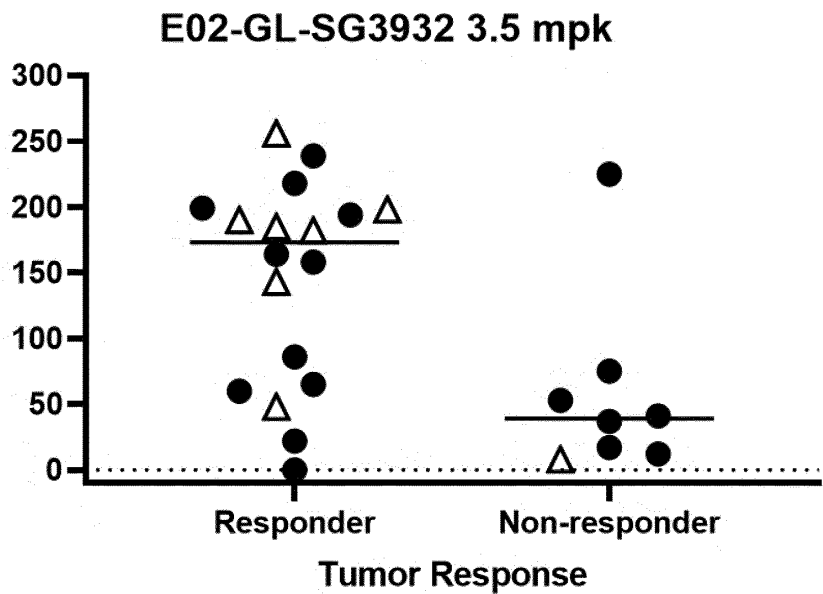


FIG. 53D

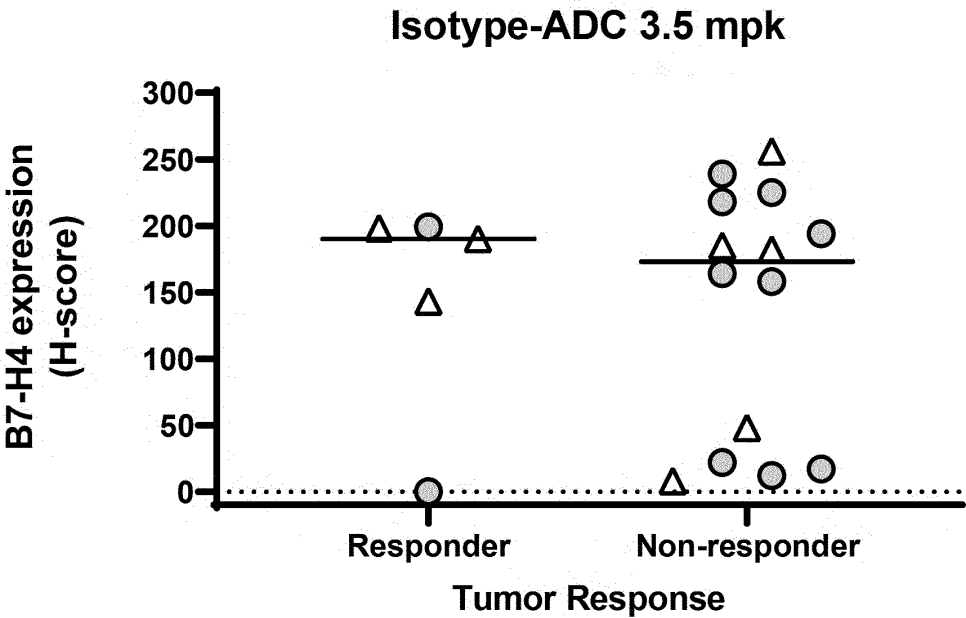


FIG. 53E

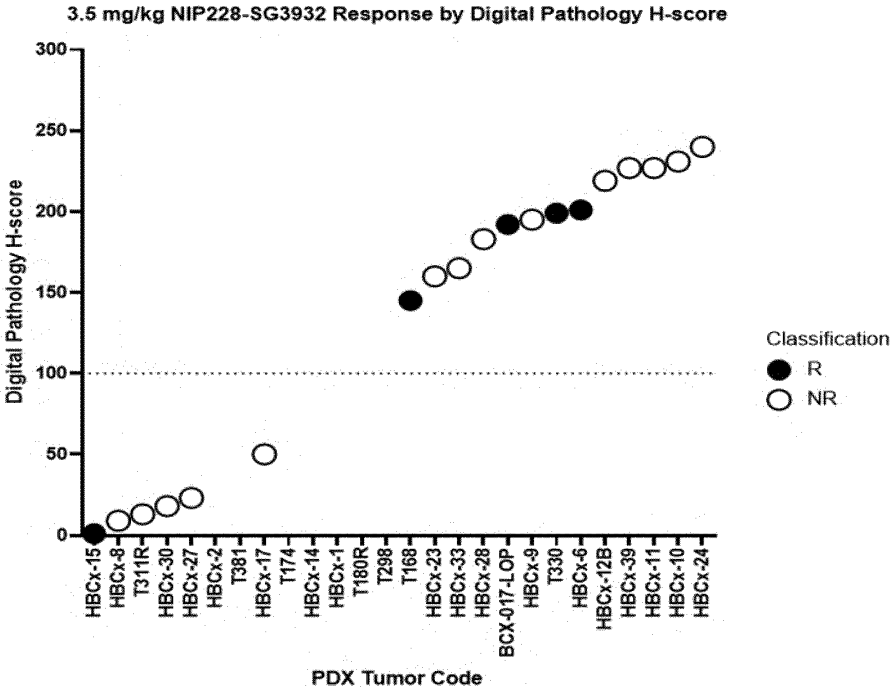


FIG. 54A

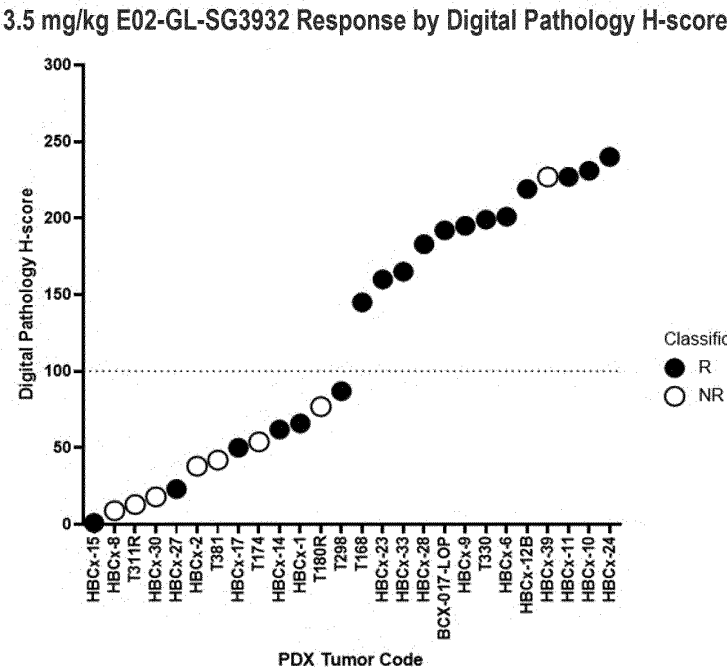


FIG. 54B

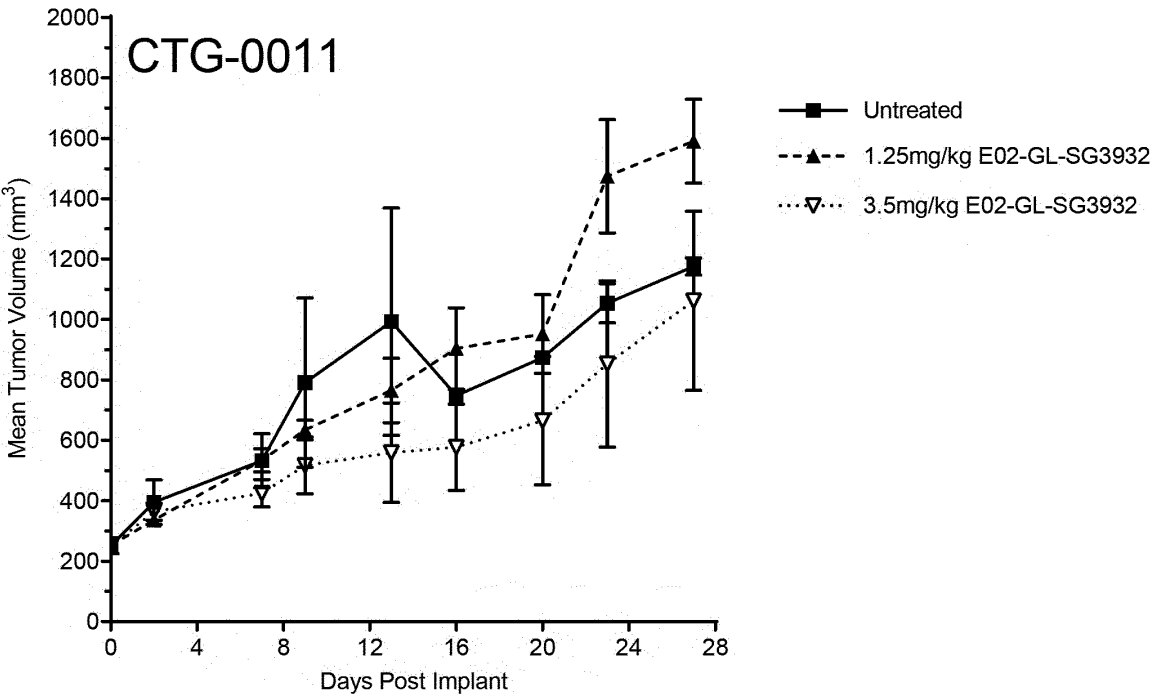


FIG. 55A

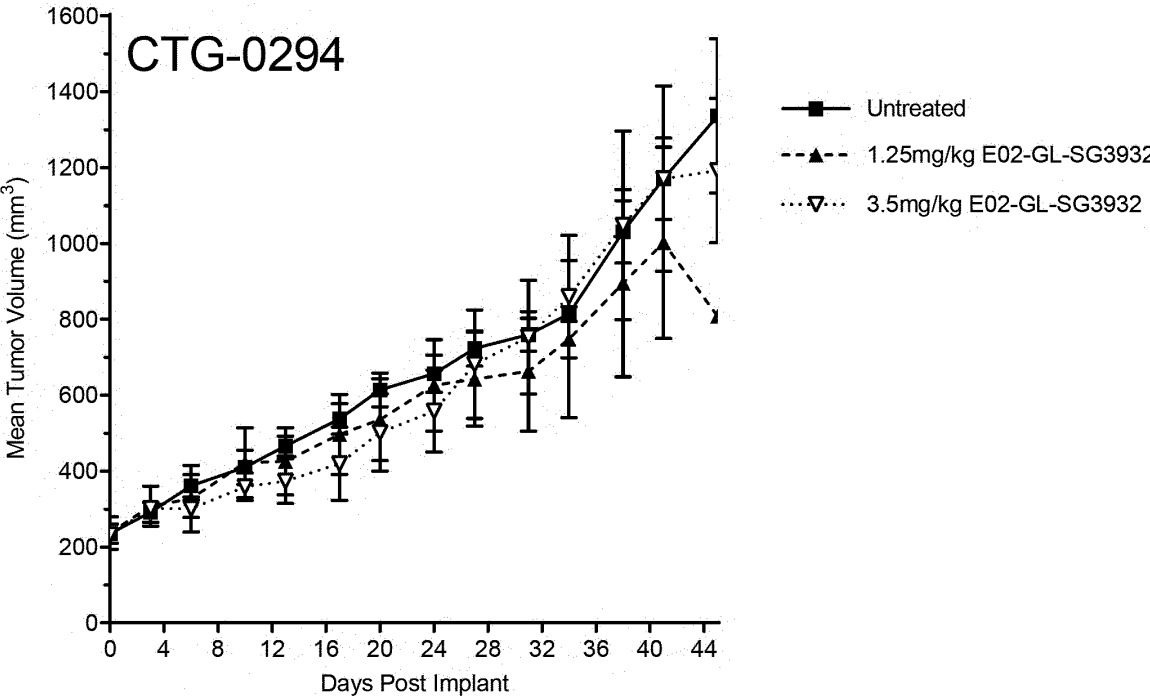
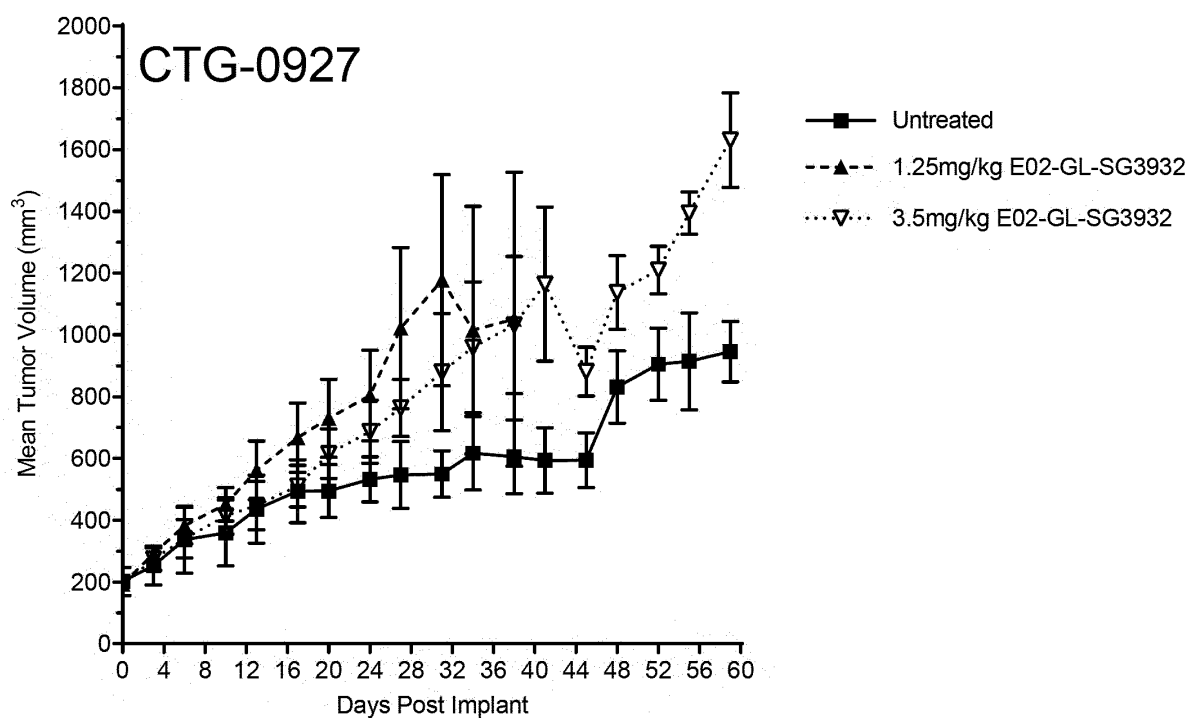
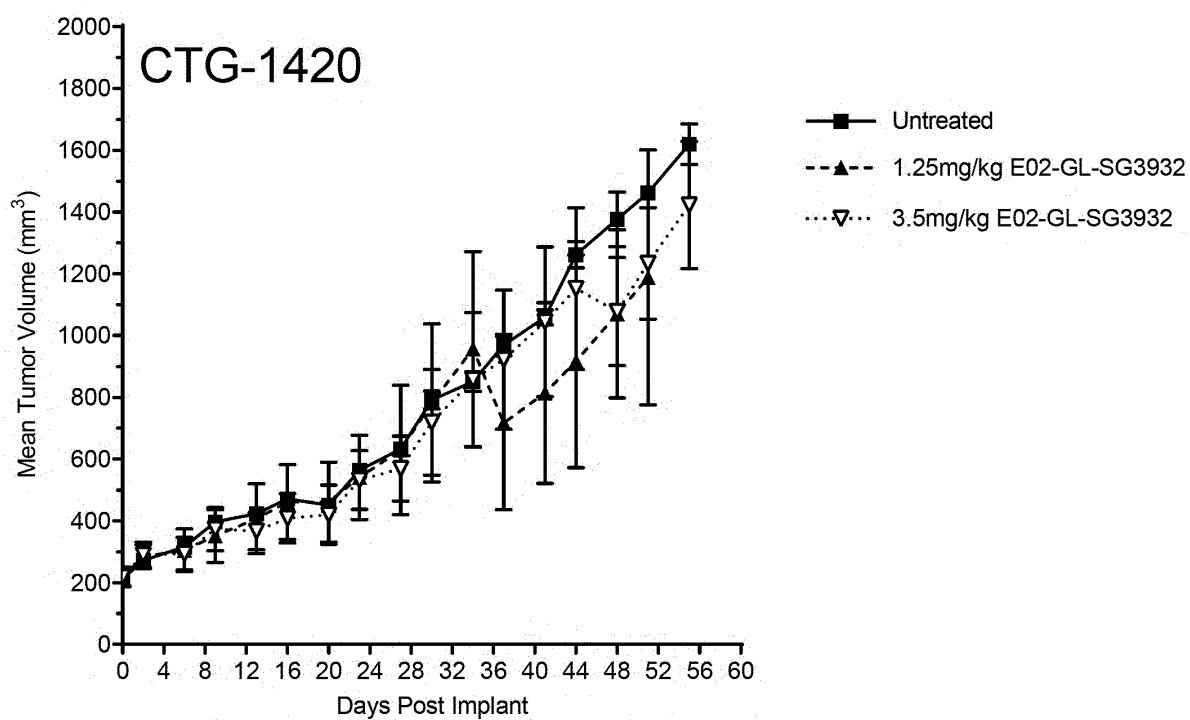


FIG. 55B

**FIG. 55C****FIG. 55D**

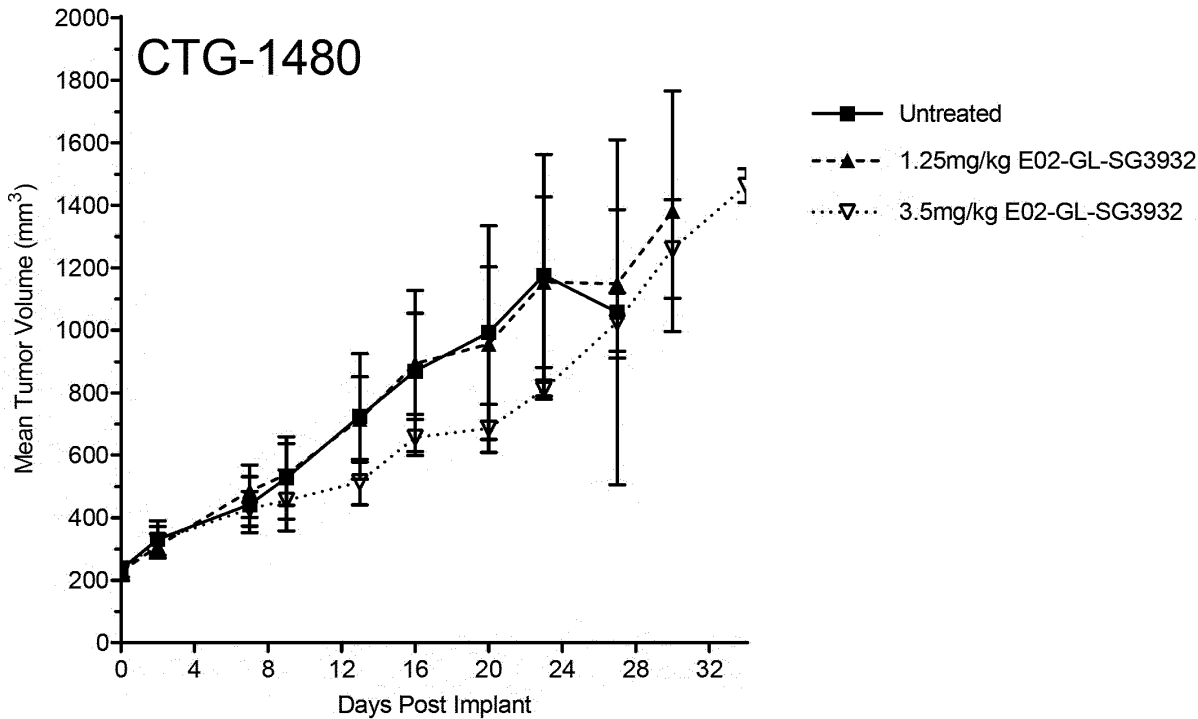


FIG. 55E

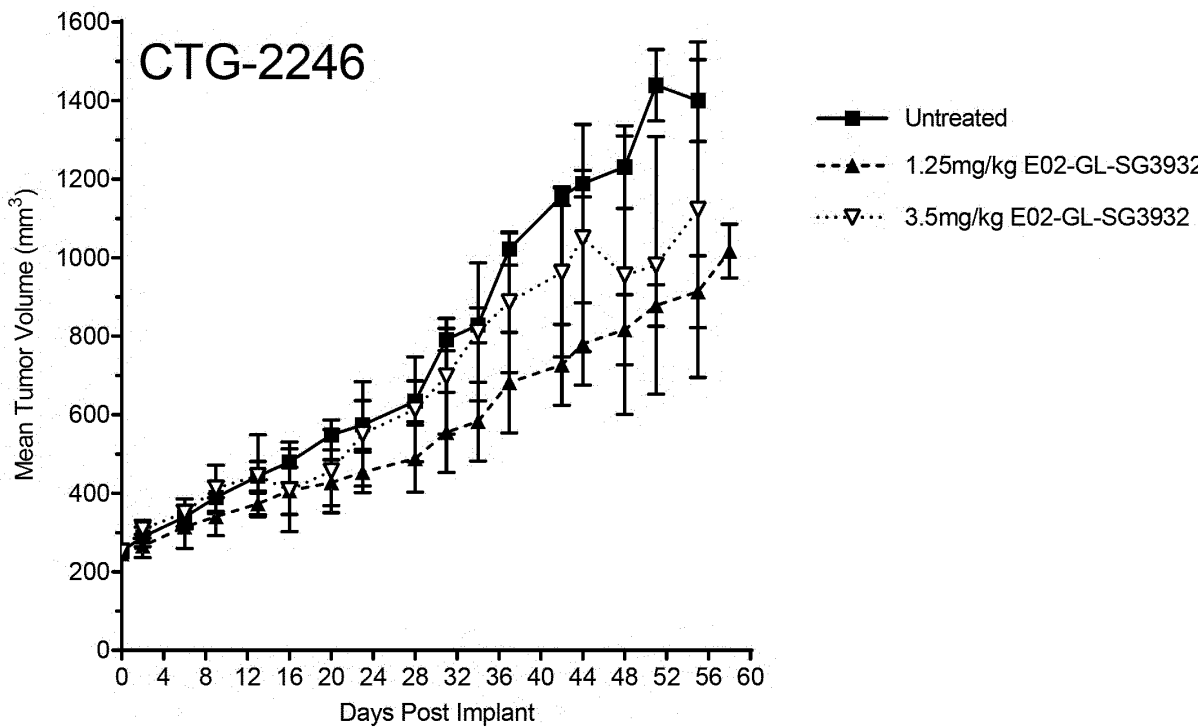


FIG. 55F

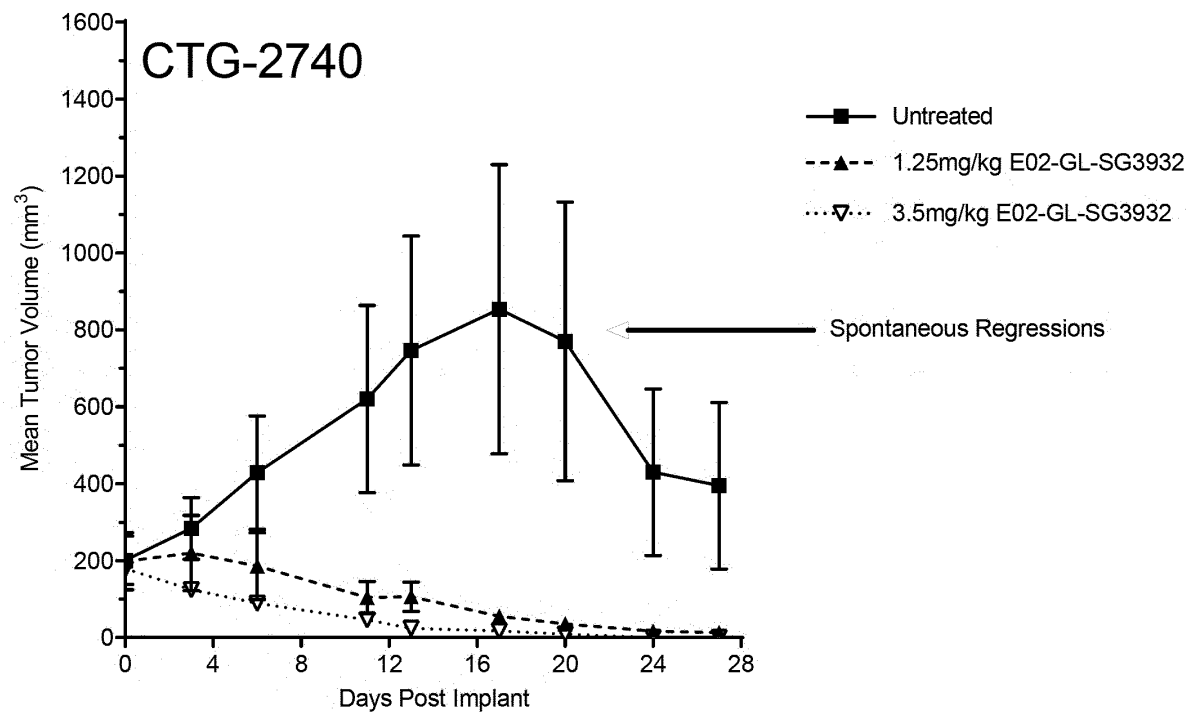


FIG. 55G

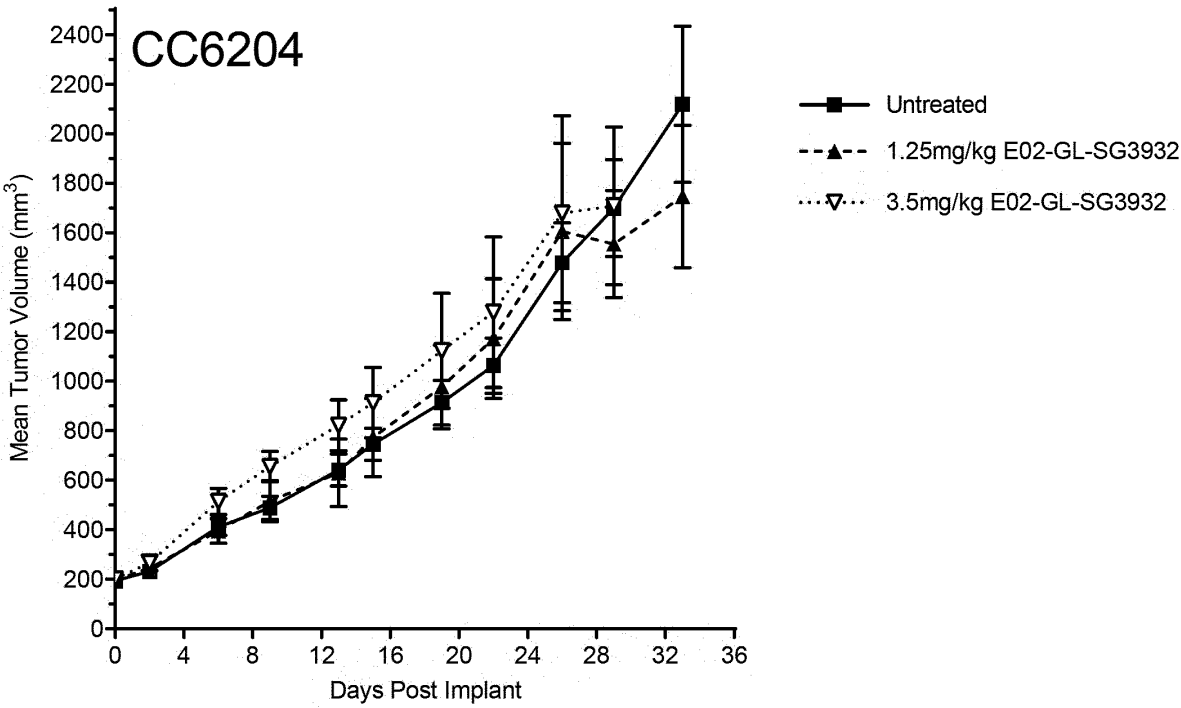


FIG. 56A

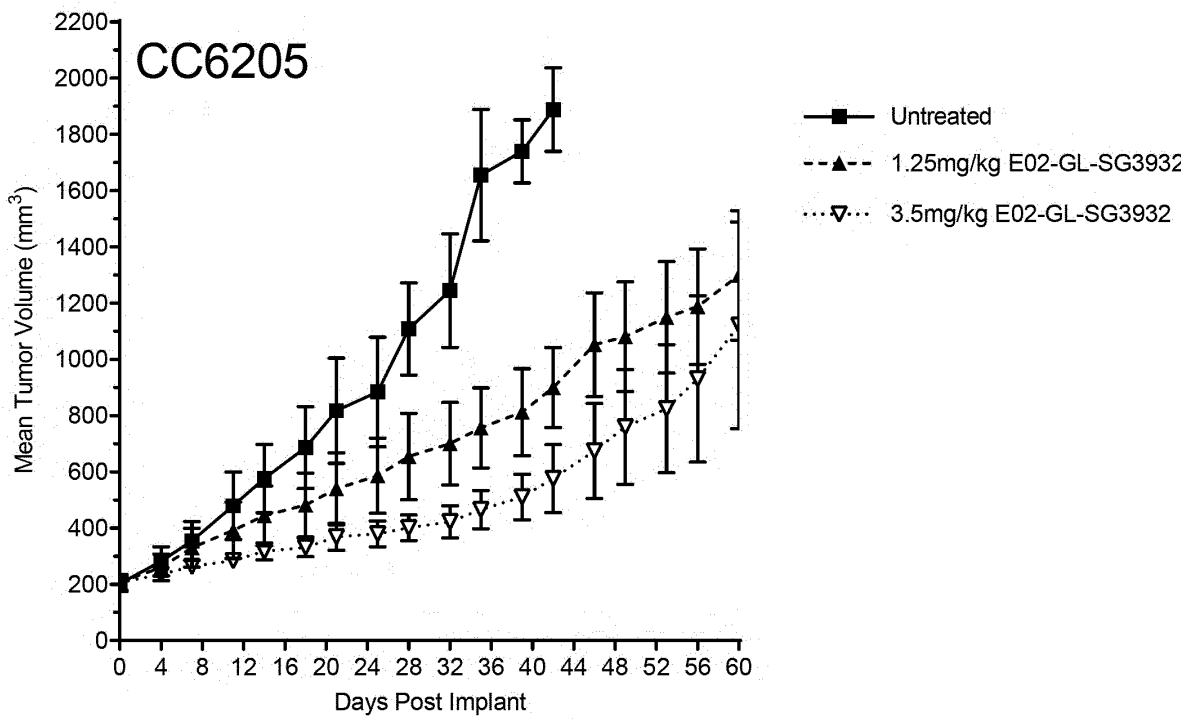


FIG. 56B

85/98

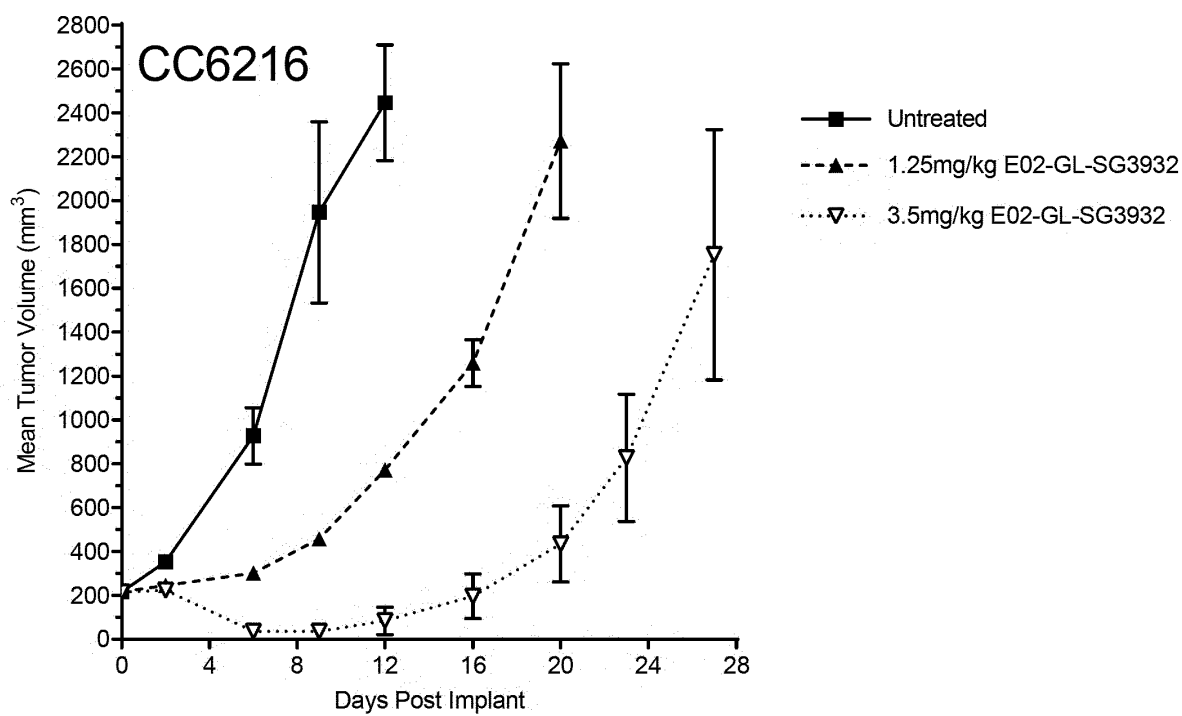


FIG. 56C

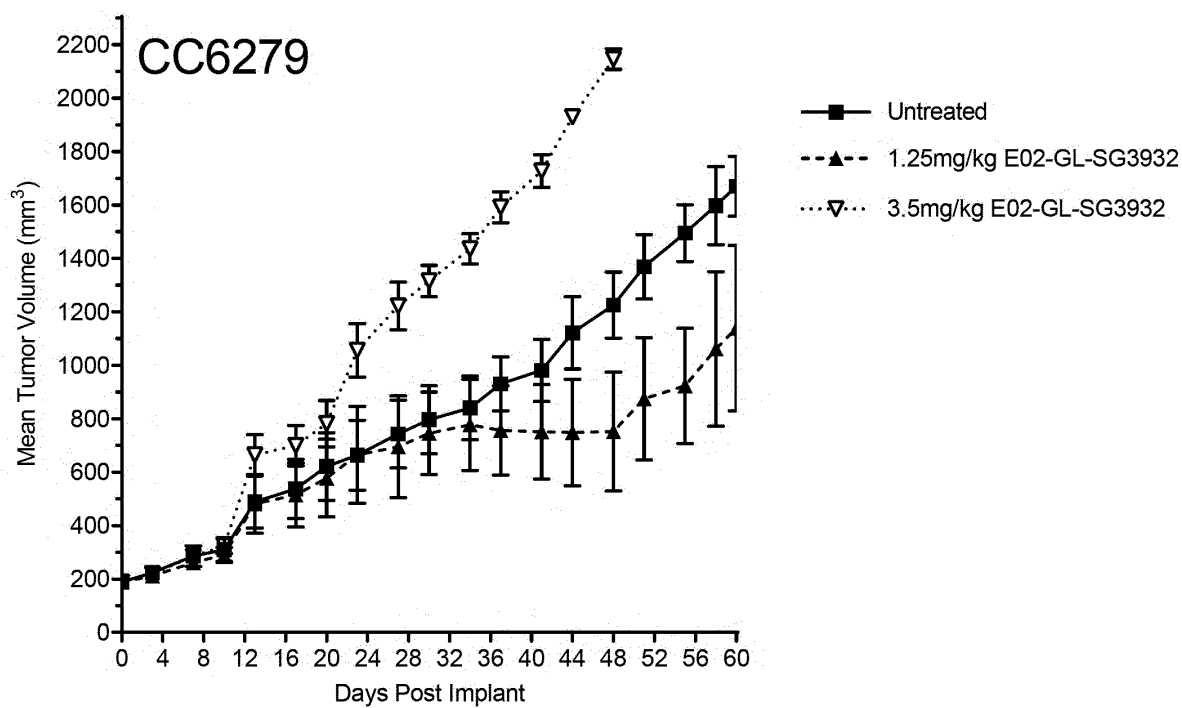


FIG. 56D

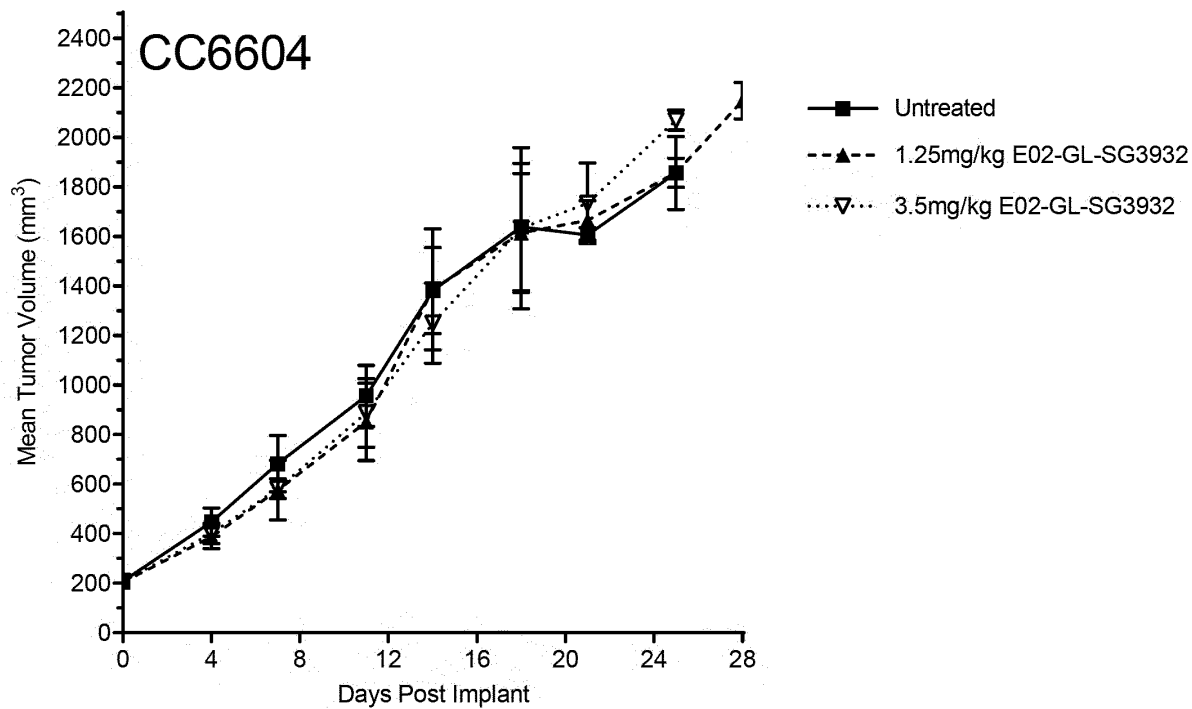


FIG. 56E

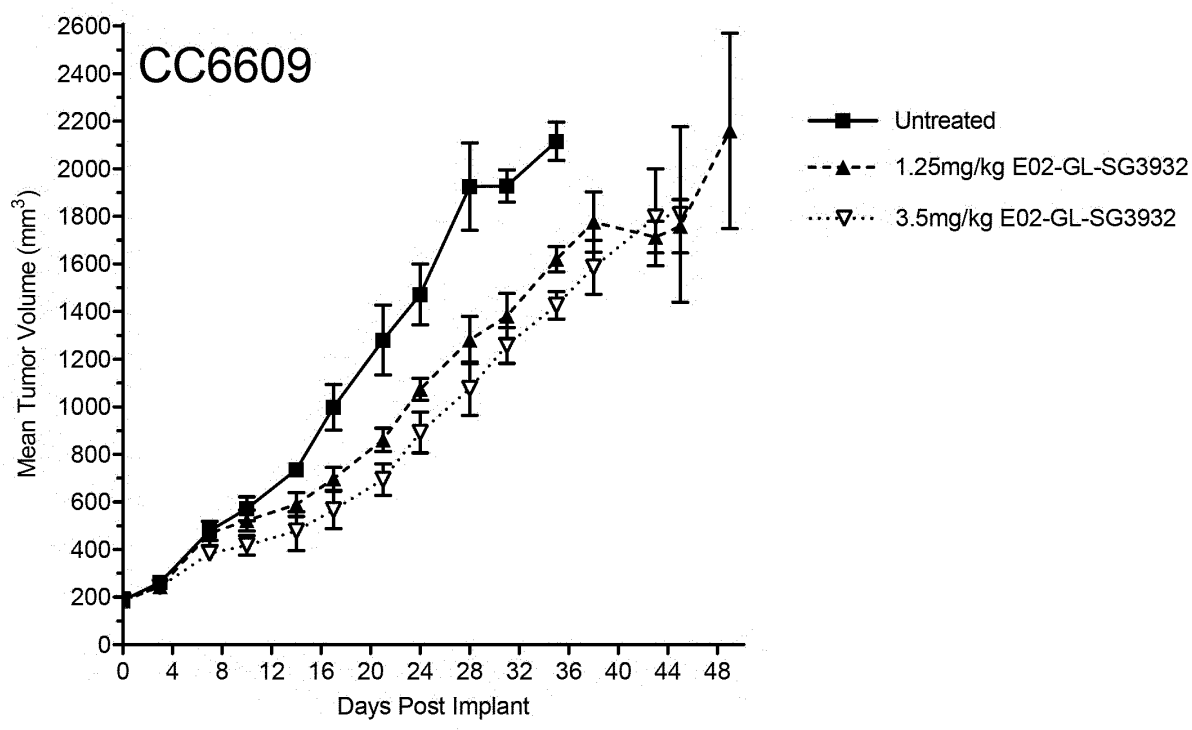


FIG. 56F

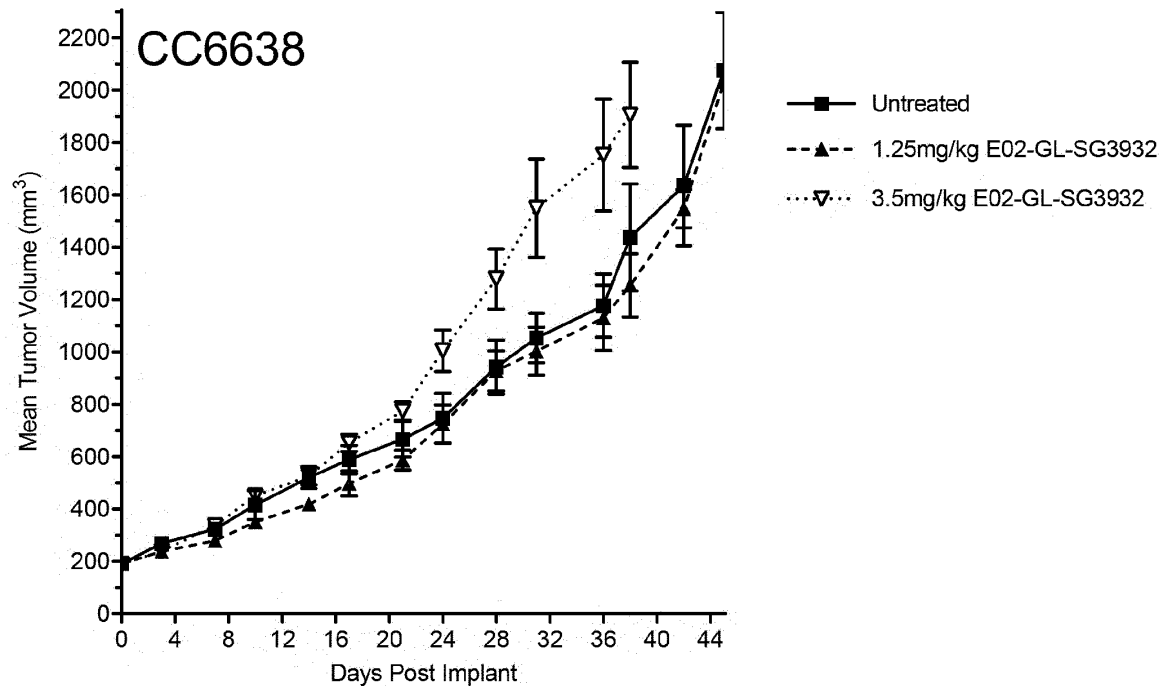


FIG. 56G

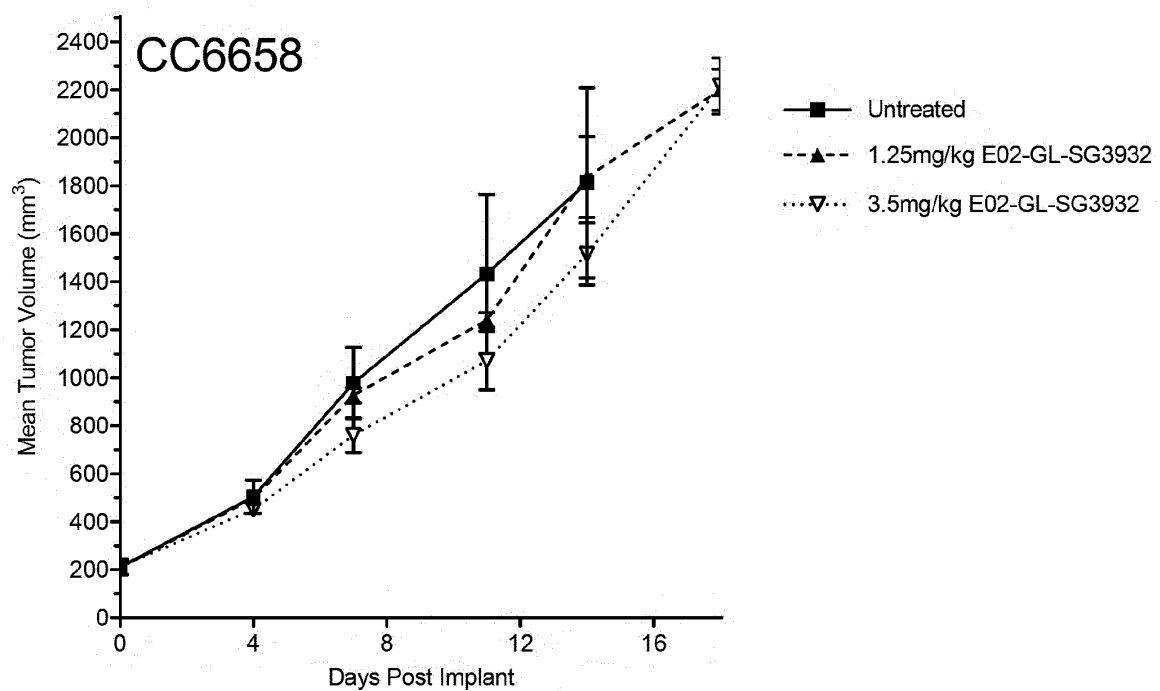


FIG. 56H

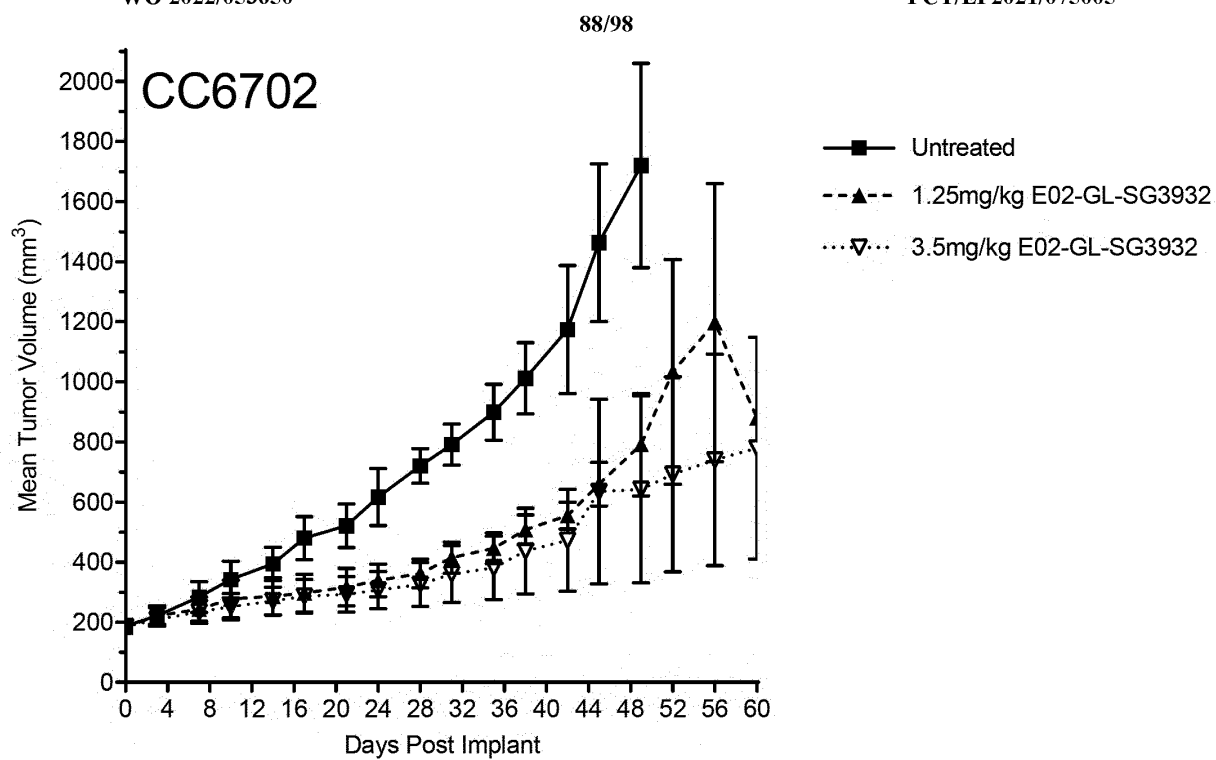


FIG. 56I

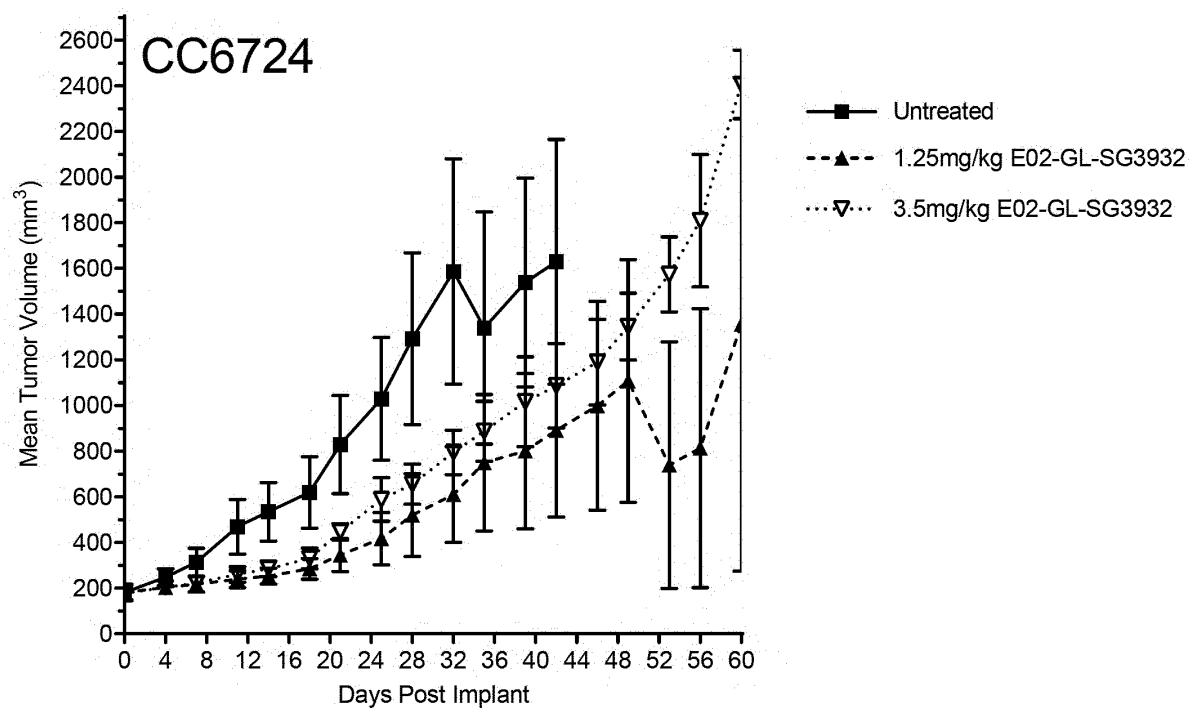


FIG. 56J

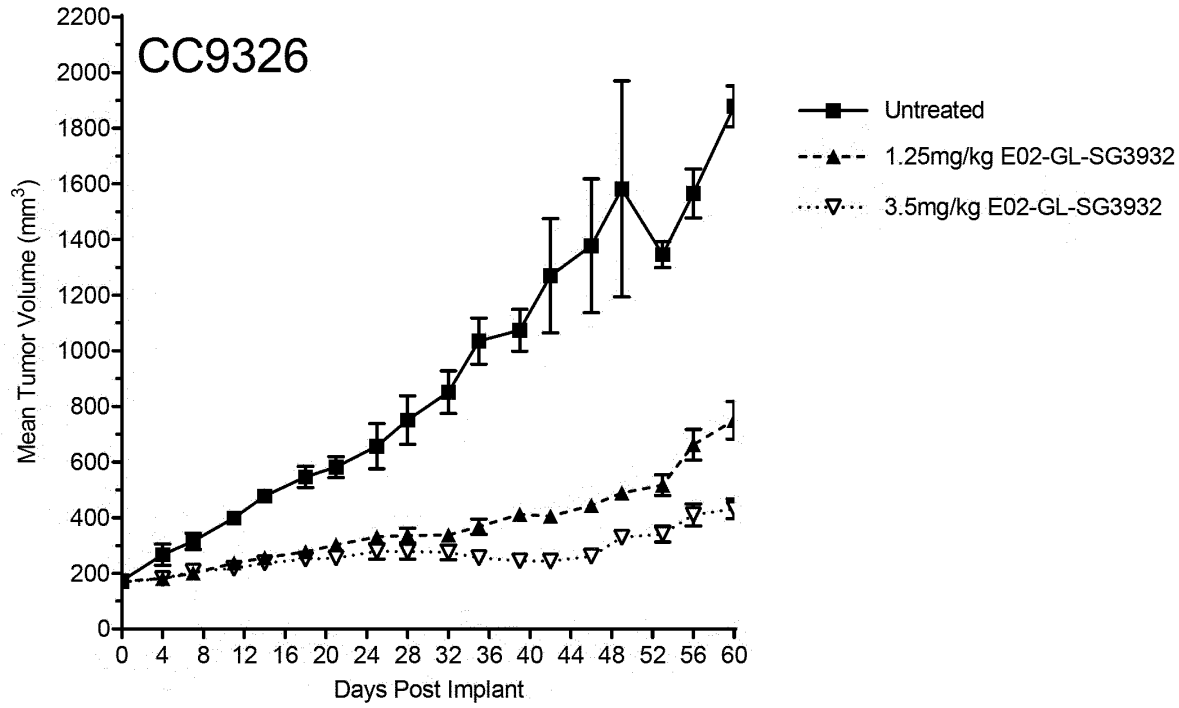


FIG. 56K

	ADC	Linker-warhead
1	E02-INT-cleavable mal-PEG8-val-ala linker-SG3932	mp PEG8 Val-Ala SG3932
2	E02-INT-SG4010	mc Val-Ala SG3932
3	E02-INT-SG4057	mp PEG8 GGFG SG3932
4	E02-INT-SG4052	mc GGFG SG3932

FIG. 57A

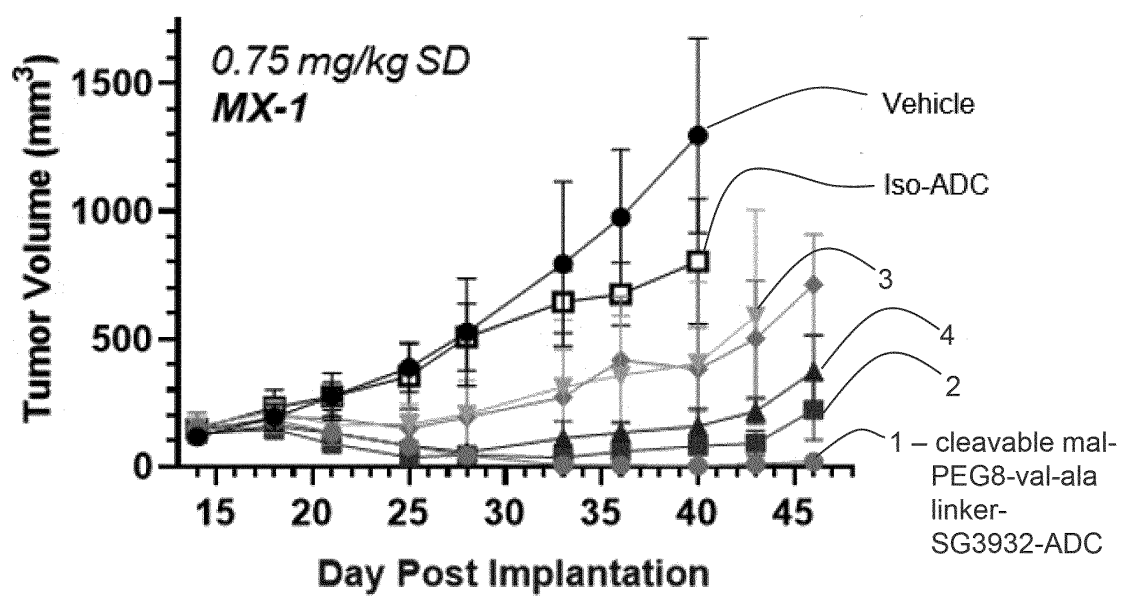


FIG. 57B

Aim: Evaluate off-target toxicity and TK in rats

Study design:



20 mg/kg
60 mg/kg
Q3W x2 iv

In-life assessments:
All major organ and systems functions, PK

Light microscopic exam of 45+ organs,
samples for metabolomic, proteomic analysis

Summary of findings observed at either dose level

Findings	1 **	2 SG4010	3 SG4057	4 SG4052
Haem				
Liver				
Testes				
GIT				
Kidney				
Lung				
Thyroid wt				

 Indicates changes were noted with increased severity over background/control

**** Cleavable mal-PEG8-val-ala linker-SG3932**

FIG. 58

	ADC	Linker-warhead
1	E02-INT-cleavable mal-PEG8-val-ala linker-SG3932	mp PEG8 Val-Ala SG3932
2	E02-INT-SG4010	mc Val-Ala SG3932
3	E02-INT-SG4057	mp PEG8 GGFG SG3932
4	E02-INT-SG4052	mc GGFG SG3932

FIG. 59A

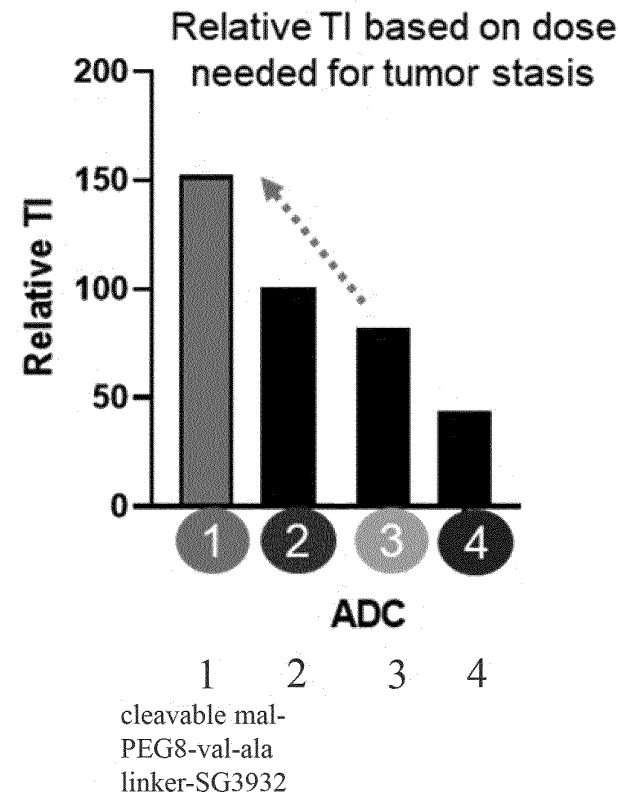


FIG. 59B

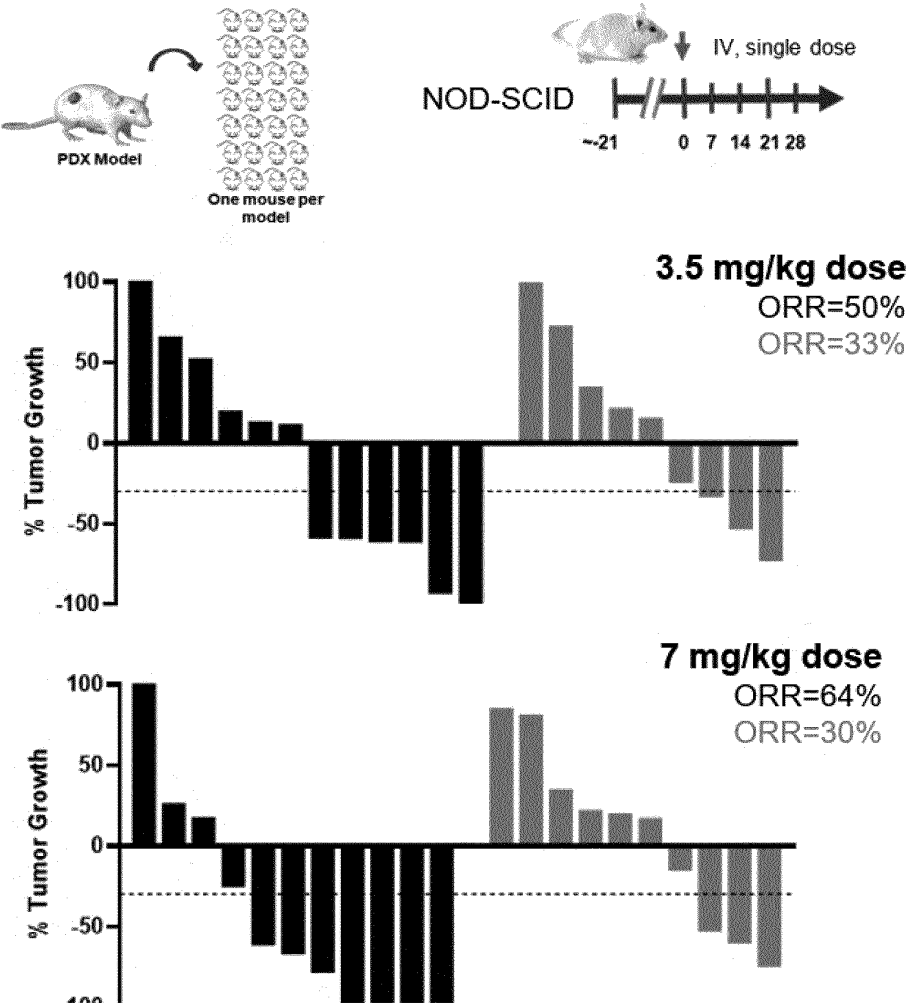
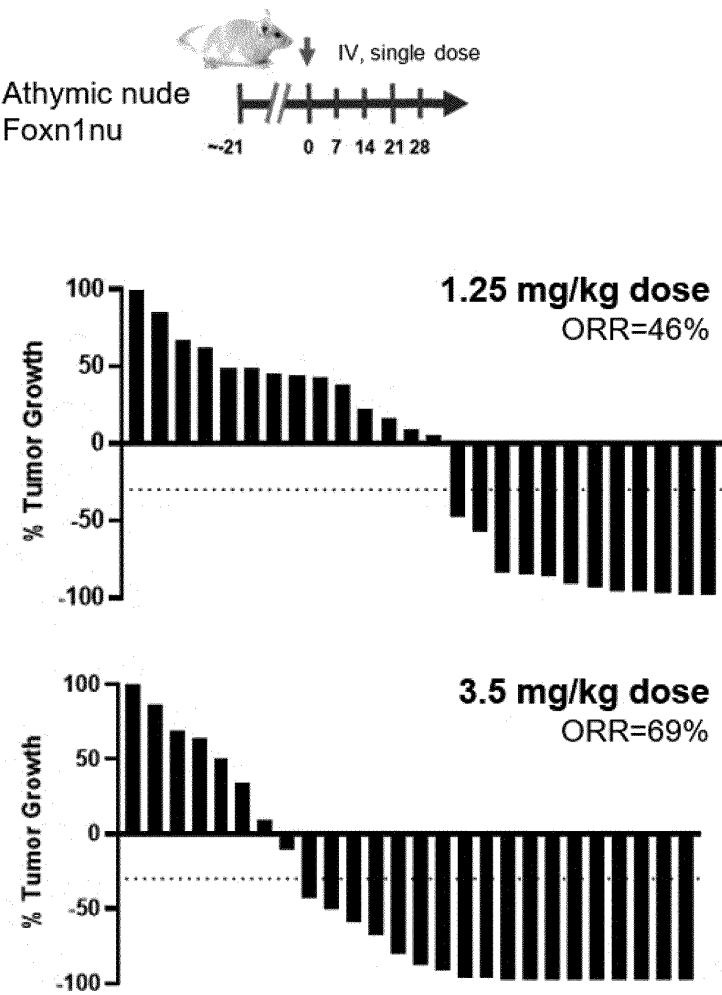


FIG. 60A



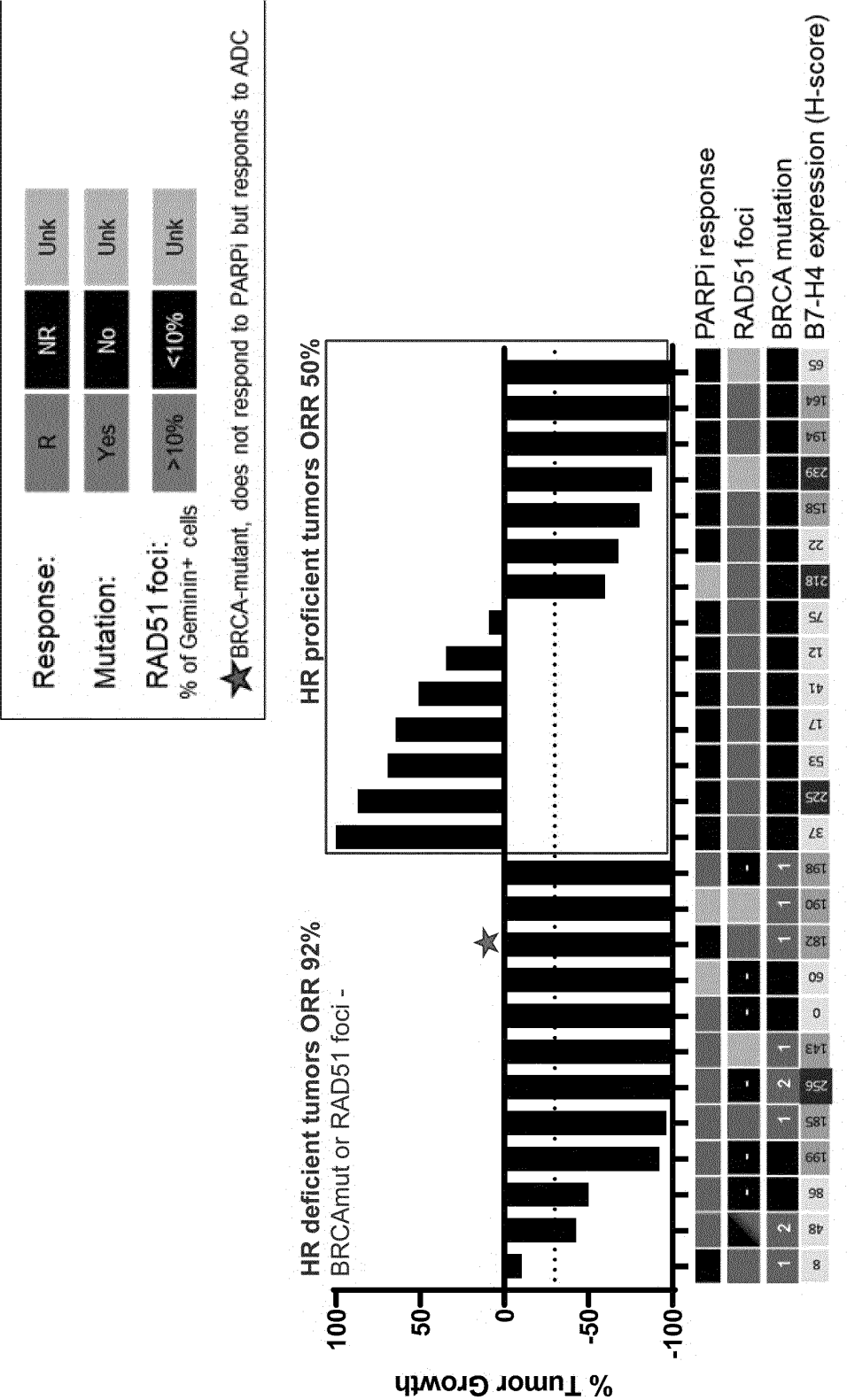


FIG. 61

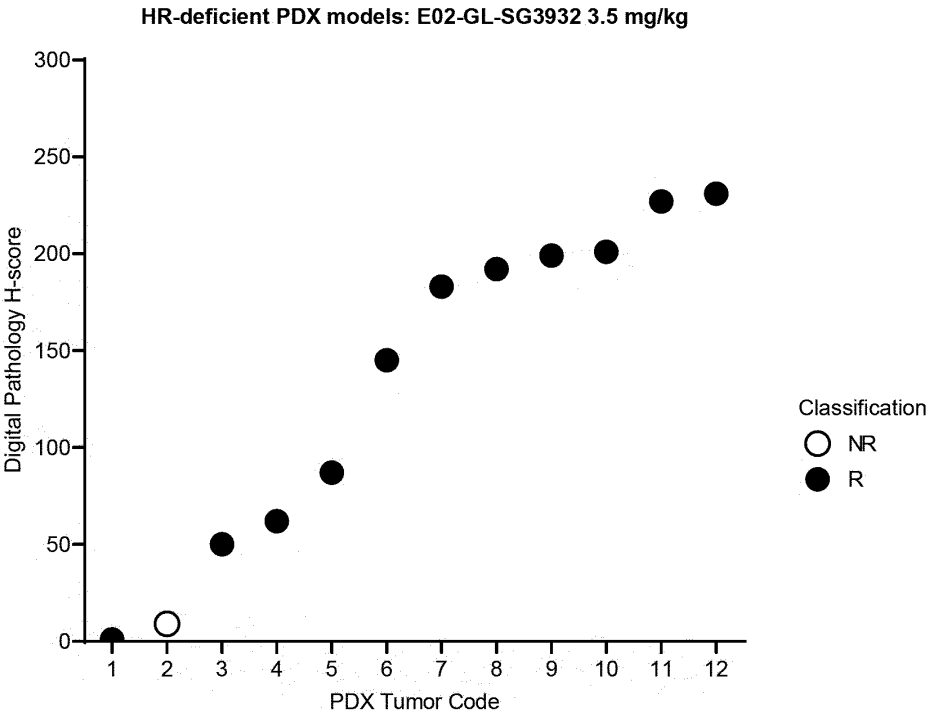


FIG. 62A

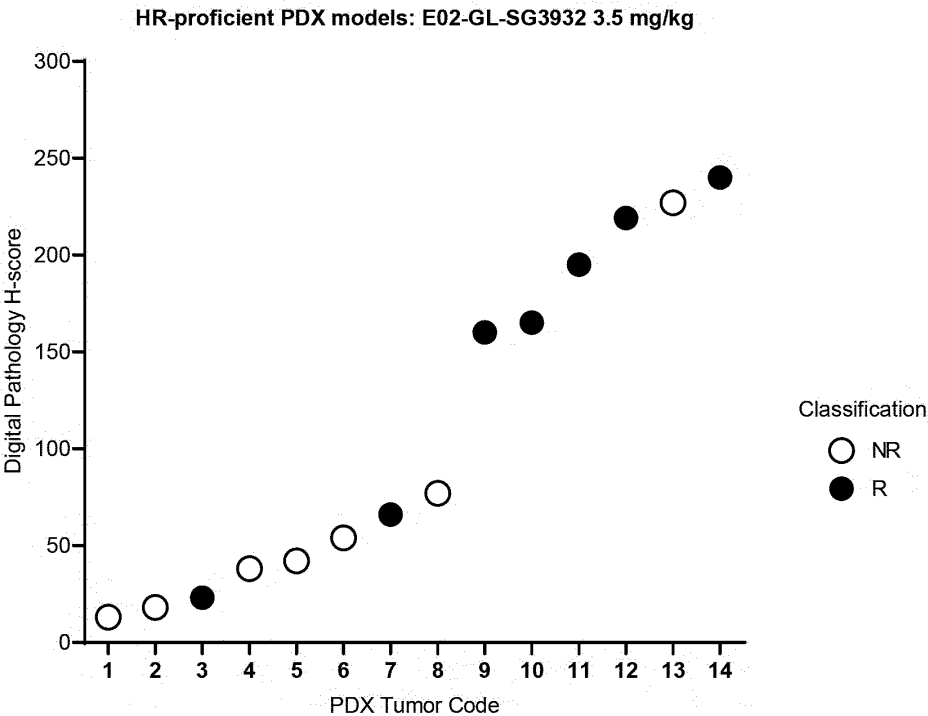


FIG. 62B

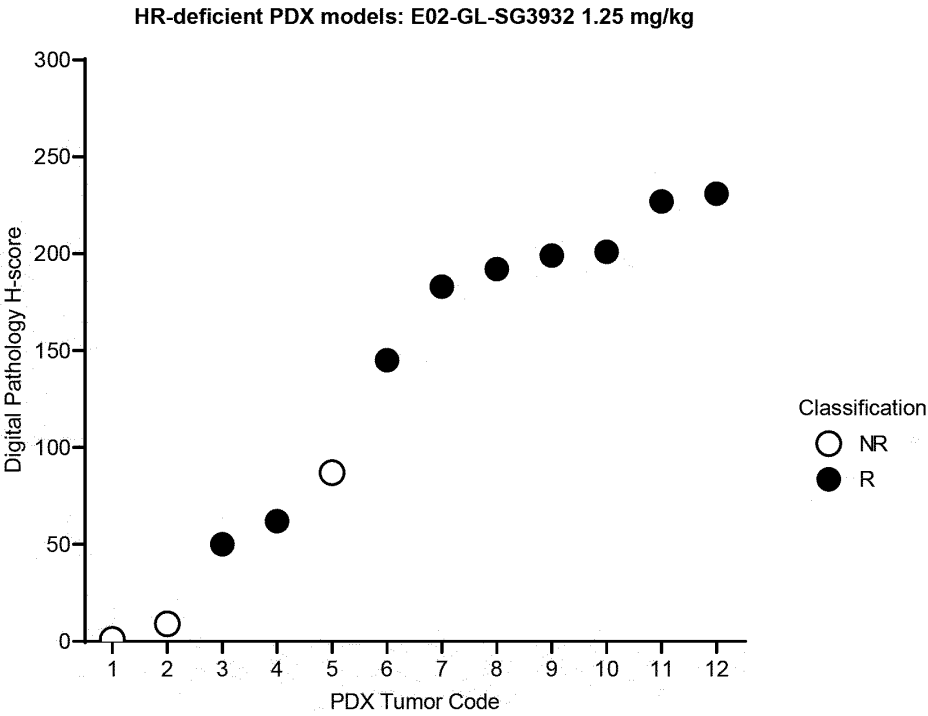


FIG. 62C

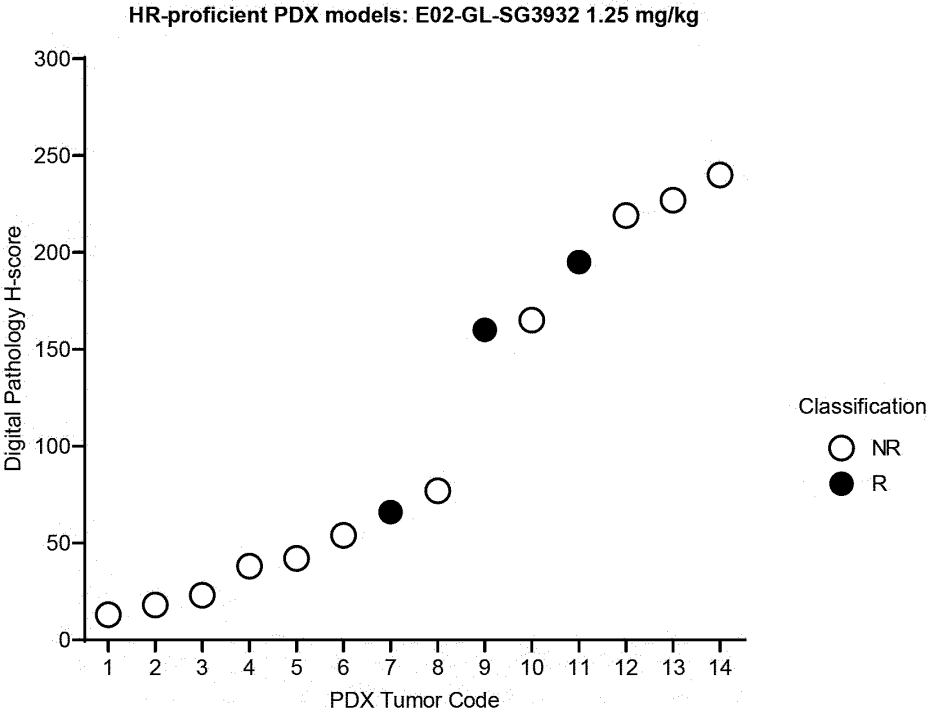


FIG. 62D

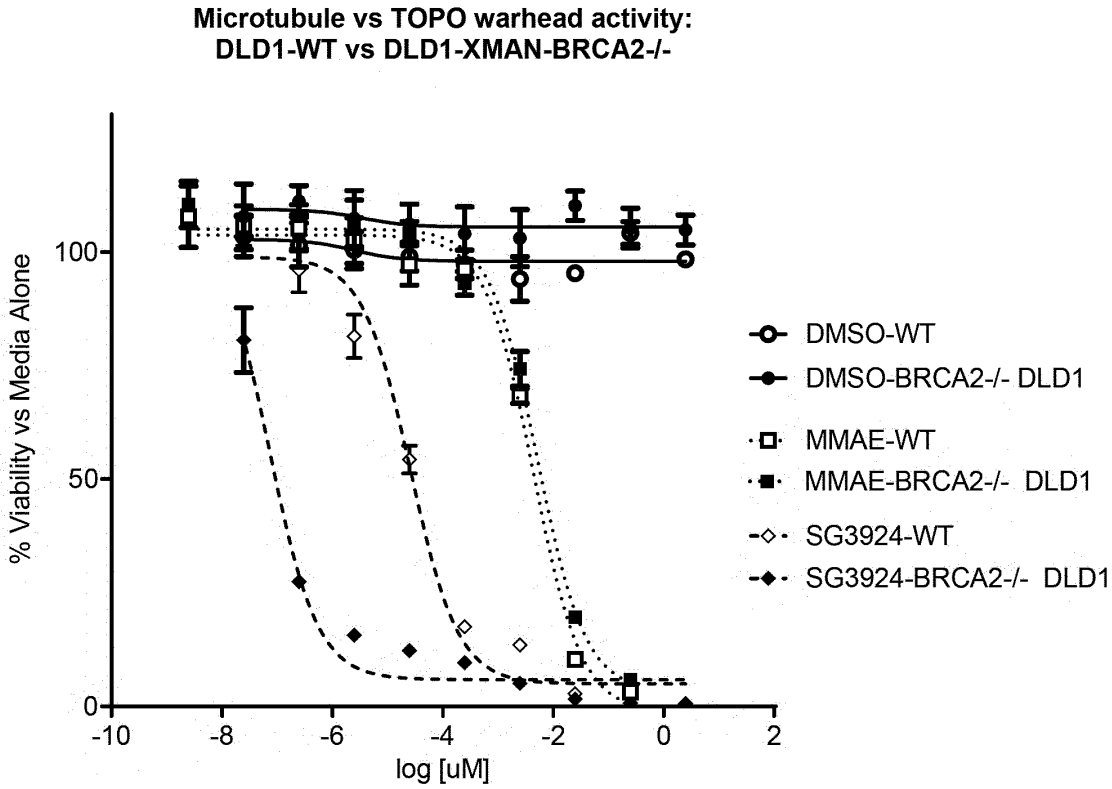


FIG. 63