

FIG. 1B

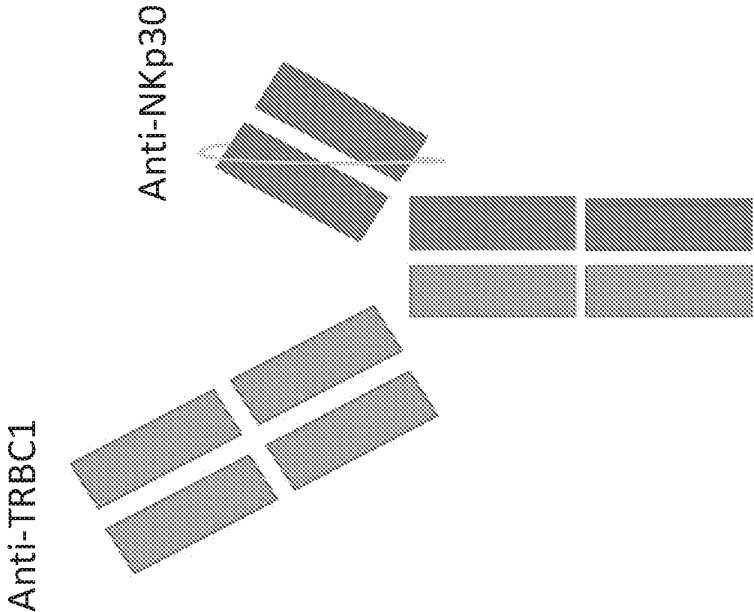


FIG. 1A

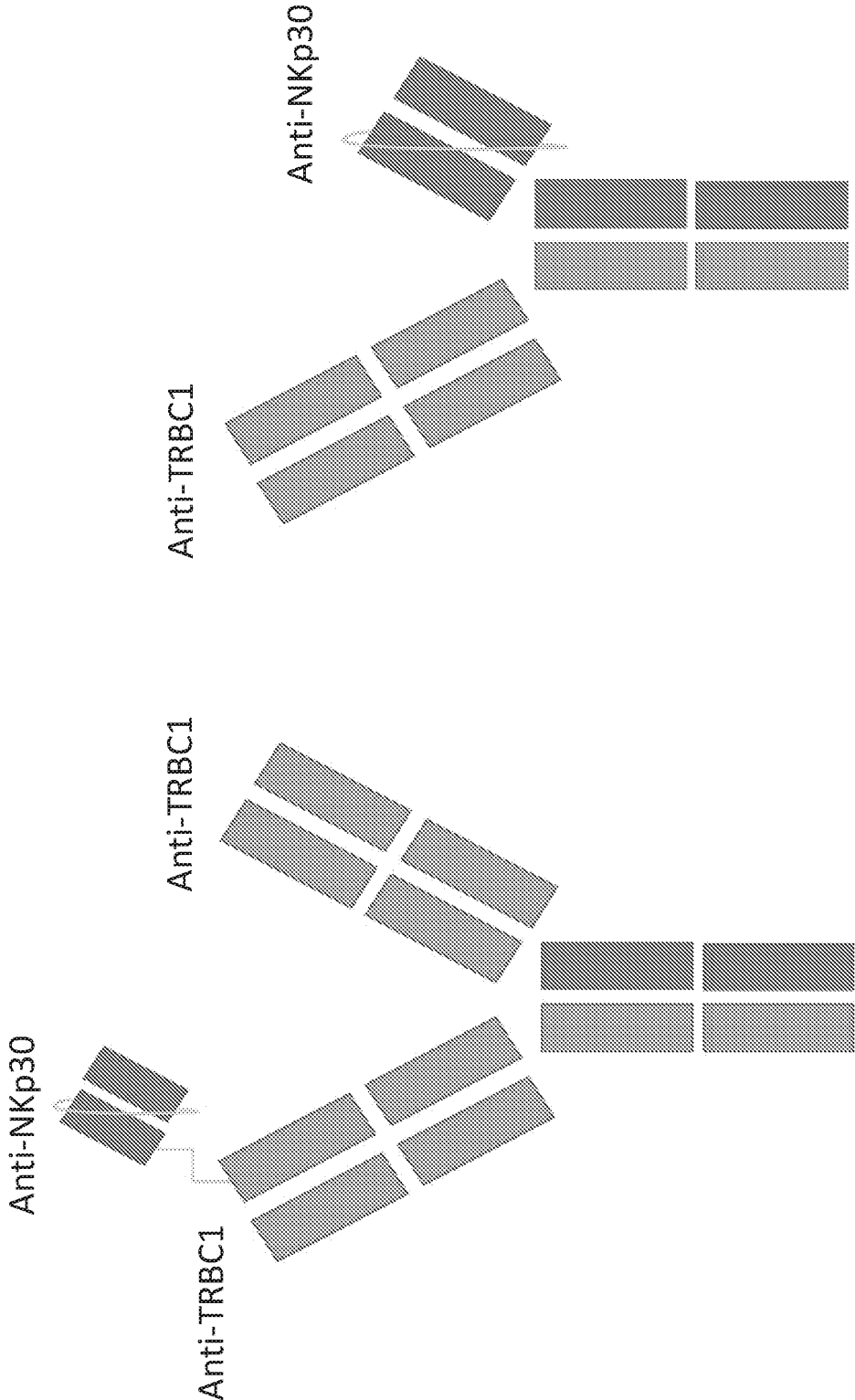


FIG. 1D

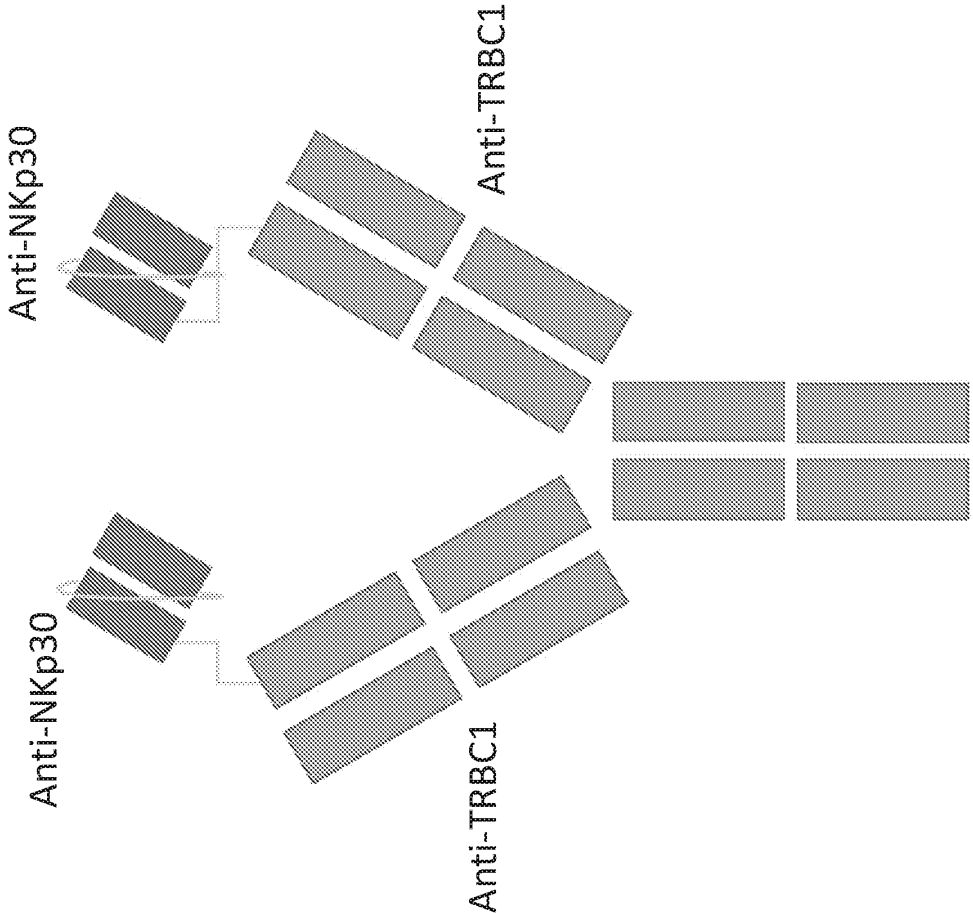


FIG. 1C

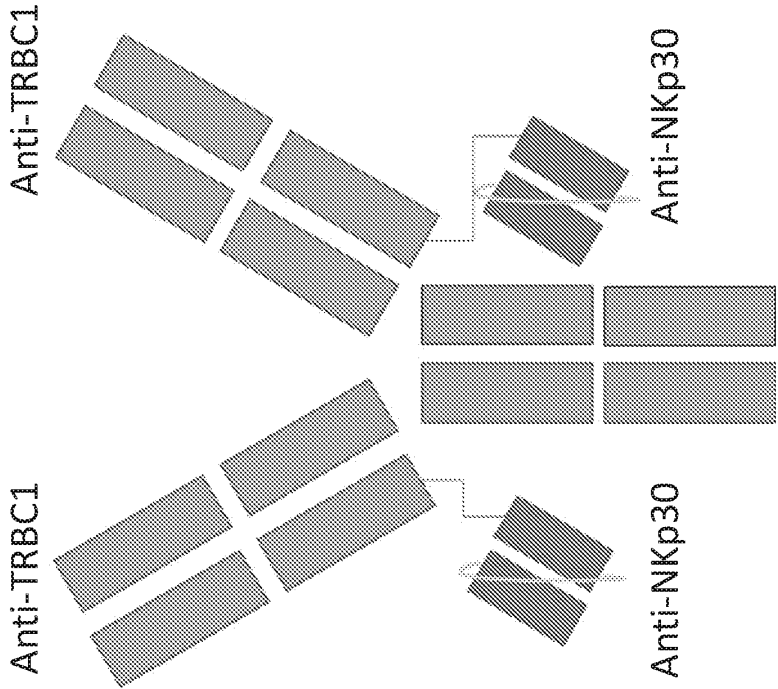


FIG. 2A

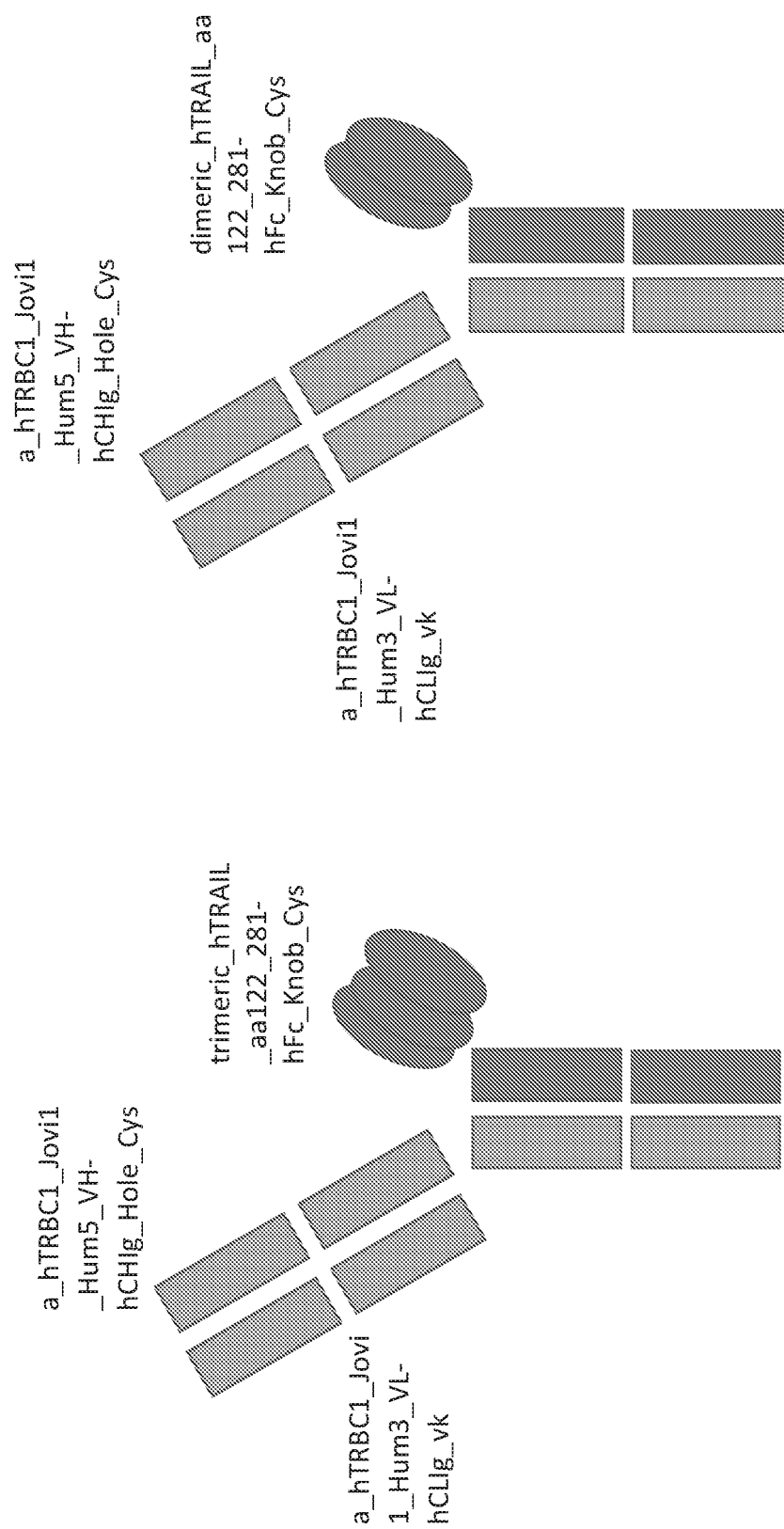


FIG. 2B

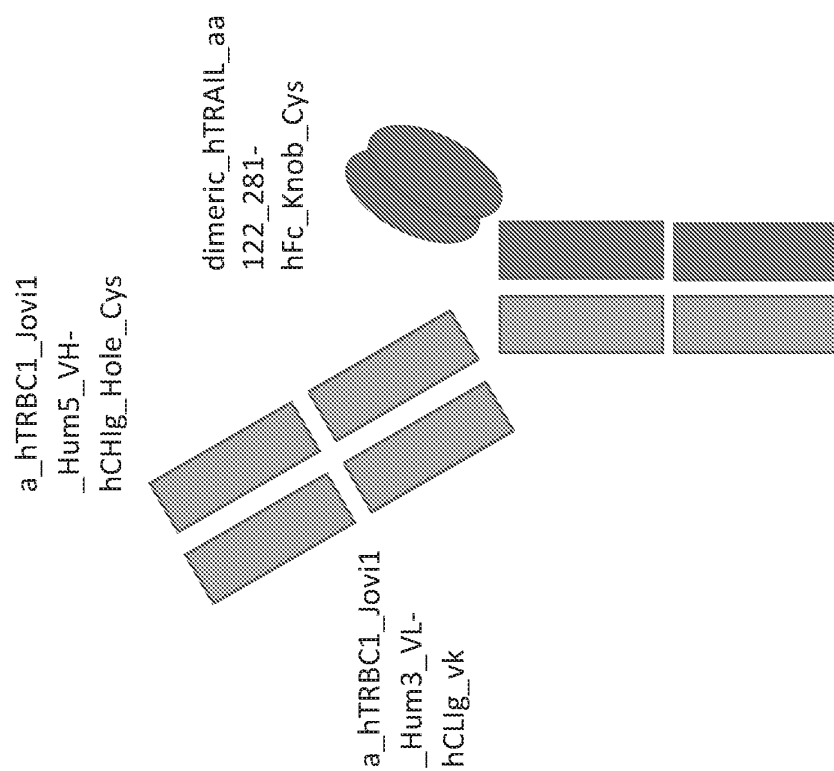


FIG. 2C

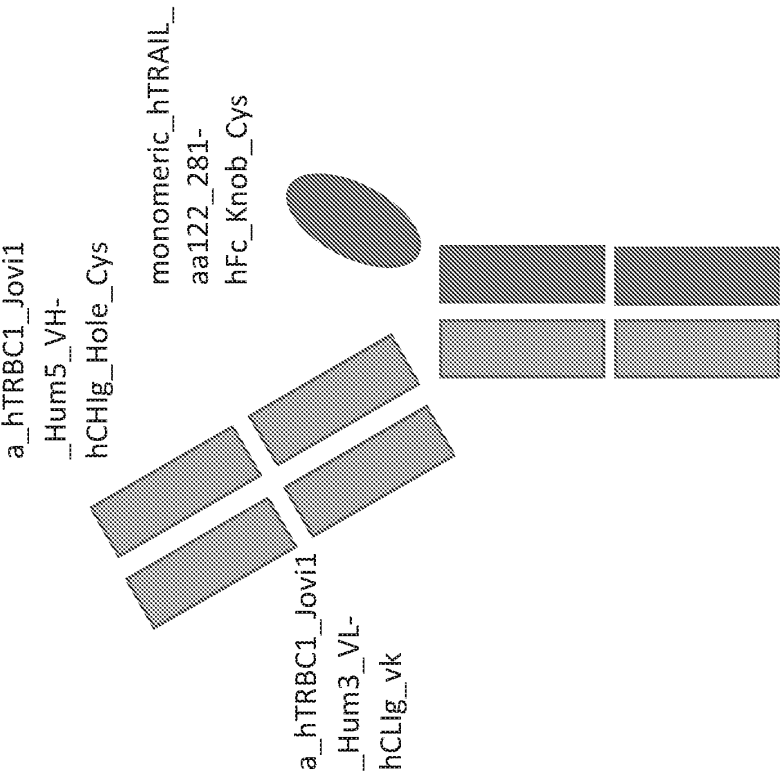


FIG. 2D

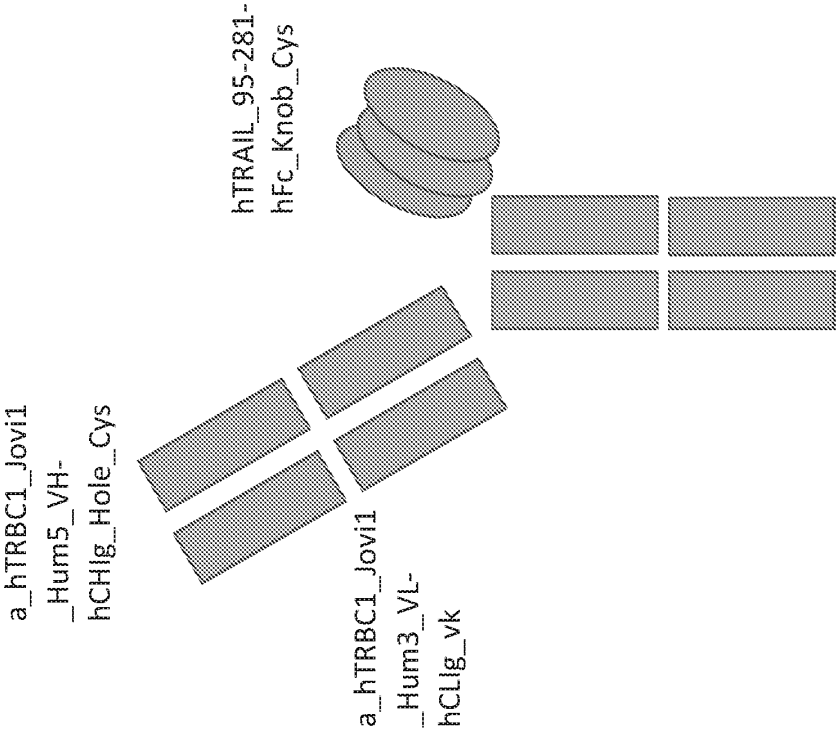


FIG. 2F

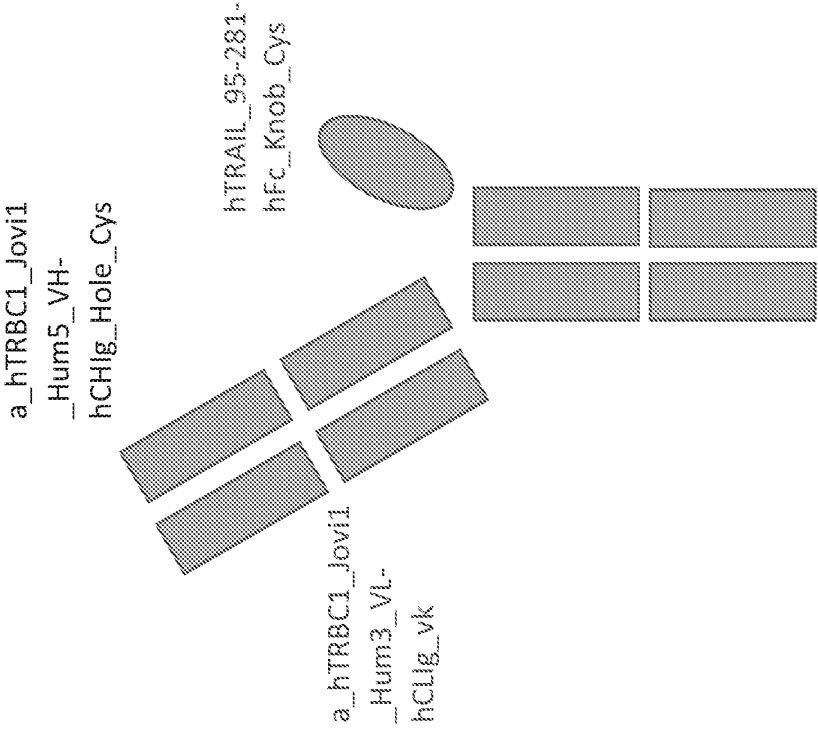


FIG. 2E

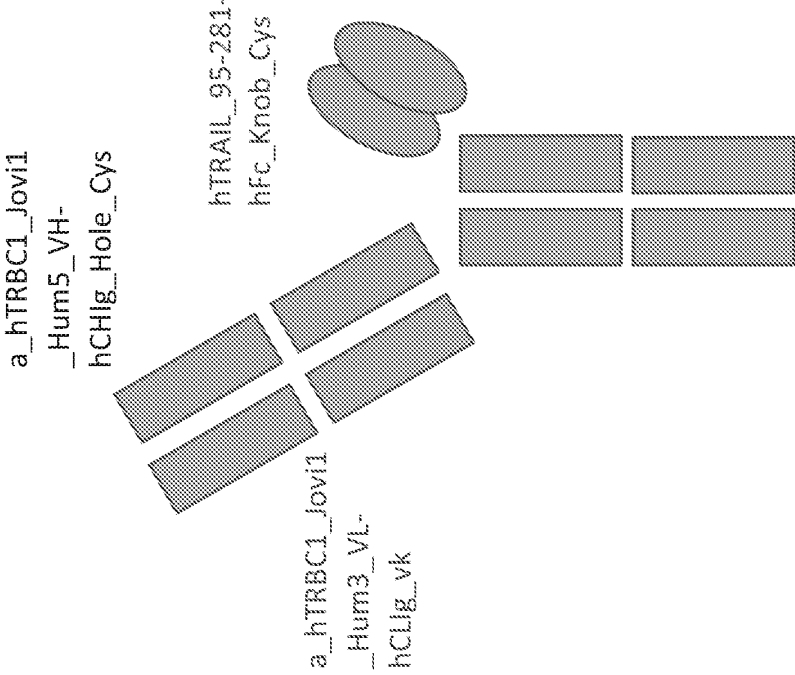
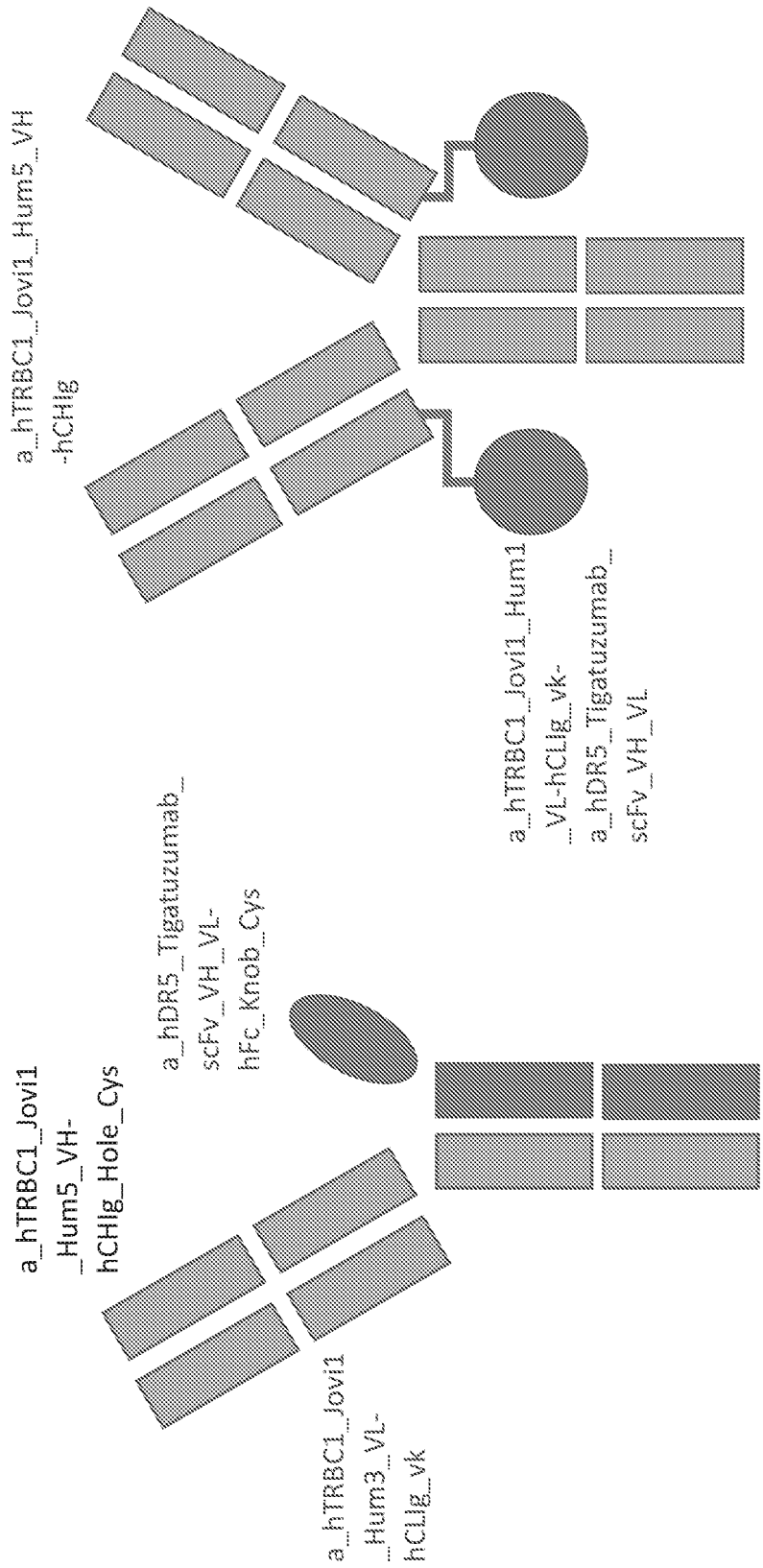


FIG. 3A

FIG. 3B



VH		Framework 1																																			CDR 1									
SEQ.ID NO:1	Q	V	Q	L	Q	Q	S	G	P	E	L	V	K	P	G	T	S	V	K	I	S	C	K	A	S	G	Y	S	F	T	T	Y	Y	I	H											
SEQ.ID NO:9	Q	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	S	S	V	K	V	S	C	K	A	S	G	Y	S	F	T	T	Y	Y	I	H											

		Framework 2																																			CDR 2									
SEQ.ID NO:1	W	V	K	Q	R	P	G	Q	G	L	E	W	I	G	W	F	F	P	G	S	G	N	I	K	Y	N	E	K	F	K	G															
SEQ.ID NO:9	W	V	R	Q	A	P	G	Q	G	L	E	W	M	G	W	F	F	P	G	S	G	N	I	K	Y	N	E	K	F	K	G															

		Framework 3																																			CDR 3									
SEQ.ID NO:1	K	A	T	L	T	A	D	T	S	S	S	T	A	Y	M	Q	L	S	S	L	T	S	E	E	S	A	V	Y	F	C	A	G														
SEQ.ID NO:9	R	V	T	I	T	A	D	I	S	T	S	T	A	Y	M	E	L	S	S	L	R	S	E	D	T	A	V	Y	Y	C	A	G														

		Framework 4																																			CDR 4									
SEQ.ID NO:1	S	Y	Y	S	Y	D	V	L	D	Y	W	G	H	G	T	T	L	T	V	S	S																									
SEQ.ID NO:9	S	Y	Y	S	Y	D	V	L	D	Y	W	G	Q	G	T	T	V	T	V	S	S																									

FIG. 4A

VL																																							
Framework 1																								CDR 1															
SEQ.ID NO: 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34					
SEQ.ID NO: 10	D	I	L	M	T	Q	S	Q	K	F	M	S	T	S	L	G	D	R	V	S	V	S	C	K	A	S	Q	N	V	G	I	N	V	V					
SEQ.ID NO: 10	D	I	Q	M	T	Q	S	P	S	E	L	S	A	S	V	G	D	R	V	T	I	T	C	K	A	S	Q	N	V	G	I	N	V	V					
SEQ.ID NO: 11	D	I	Q	M	T	Q	S	P	S	S	L	S	A	S	V	G	D	R	V	T	I	T	C	K	A	S	Q	N	V	G	I	N	V	V					
Framework 2																								CDR 2															
SEQ.ID NO: 2	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56																	
SEQ.ID NO: 2	W	H	Q	Q	K	P	G	Q	S	P	K	A	L	I	Y	S	S	S	H	R	Y	S																	
SEQ.ID NO: 10	W	H	Q	Q	K	P	G	K	A	P	K	A	L	I	Y	S	S	S	H	R	Y	S																	
SEQ.ID NO: 11	W	H	Q	Q	K	P	G	K	V	P	K	A	L	I	Y	S	S	S	H	R	Y	S																	
Framework 3																																							
SEQ.ID NO: 2	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88							
SEQ.ID NO: 2	G	V	P	D	R	F	T	G	S	G	S	G	T	D	F	T	L	T	I	N	N	V	Q	S	E	D	L	A	E	Y	F	C							
SEQ.ID NO: 10	G	V	P	S	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P	E	D	F	A	T	Y	E	C							
SEQ.ID NO: 11	G	V	P	S	R	F	S	G	S	G	S	G	T	D	F	T	L	T	I	S	S	L	Q	P	E	D	V	A	T	Y	E	C							
CDR 3																								Framework 4															
SEQ.ID NO: 2	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107																				
SEQ.ID NO: 2	Q	Q	F	K	S	Y	P	L	T	F	G	A	G	T	K	L	E	L	K																				
SEQ.ID NO: 10	Q	Q	F	K	S	Y	P	L	T	F	G	Q	G	T	K	L	E	I	K																				
SEQ.ID NO: 11	Q	Q	F	K	S	Y	P	L	T	F	G	Q	G	T	K	L	E	I	K																				

FIG. 4B

VH

		Framework 1																																CDR1									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35							
SEQ ID NO: 15		D	V	Q	L	V	E	S	G	G	G	L	V	Q	P	G	G	S	R	K	L	S	C	A	A	S	G	F	T	F	S	N	F	G	M	H							
SEQ ID NO: 25		Q	V	Q	L	V	E	S	G	G	G	V	V	Q	P	G	R	S	L	R	L	S	C	A	A	S	G	F	T	F	S	N	F	G	M	H							
SEQ ID NO: 23		E	V	Q	L	V	E	S	G	G	G	L	V	Q	P	G	G	S	L	R	L	S	C	A	A	S	G	F	T	F	S	N	F	G	M	H							
SEQ ID NO: 24		E	V	Q	L	V	E	S	G	G	G	L	V	Q	P	G	G	S	L	R	L	S	C	A	A	S	G	F	T	F	S	N	F	G	M	H							

		Framework 2																				CDR 2										
		36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	52a	53	54	55	56	57	58	59	60	61	62	63	64	65
SEQ ID NO: 15		W	V	R	Q	A	P	D	K	G	L	E	W	V	A	Y	I	S	S	G	S	S	T	I	Y	Y	A	D	T	L	K	G
SEQ ID NO: 25		W	V	R	Q	A	P	G	K	G	L	E	W	V	A	Y	I	S	S	G	S	S	T	I	Y	Y	A	D	T	L	K	G
SEQ ID NO: 23		W	V	R	Q	A	P	G	K	G	L	E	W	V	S	Y	I	S	S	G	S	S	T	I	Y	Y	A	D	T	L	K	G
SEQ ID NO: 24		W	V	R	Q	A	P	G	K	G	L	E	W	V	S	Y	I	S	S	G	S	S	T	I	Y	Y	A	D	T	L	K	G

		Framework 3																				CDR3											
		66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	82a	82b	82c	83	84	85	86	87	88	89	90	91	92	93	94
SEQ ID NO: 15		R	F	T	I	S	R	O	N	P	K	N	T	L	F	L	Q	M	T	S	L	R	S	E	D	T	A	M	Y	Y	C	A	R
SEQ ID NO: 25		R	F	T	I	S	R	O	N	S	K	N	T	L	Y	L	Q	M	N	S	L	R	A	E	D	T	A	V	Y	Y	C	A	R
SEQ ID NO: 23		R	F	T	I	S	R	O	N	A	K	N	S	L	Y	L	Q	M	N	S	L	R	A	E	D	T	A	V	Y	Y	C	A	R
SEQ ID NO: 24		R	F	T	I	S	R	O	N	S	K	N	T	L	Y	L	Q	M	N	S	L	R	A	E	D	T	A	V	Y	Y	C	A	R

		Framework 4																				CDR3									
		95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113											
SEQ ID NO: 15		R	G	E	G	A	M	D	Y	W	G	Q	G	T	S	V	T	V	S	S											
SEQ ID NO: 25		R	G	E	G	A	M	D	Y	W	G	Q	G	T	T	V	T	V	S	S											
SEQ ID NO: 23		R	G	E	G	A	M	D	Y	W	G	Q	G	T	T	V	T	V	S	S											
SEQ ID NO: 24		R	G	E	G	A	M	D	Y	W	G	Q	G	T	T	V	T	V	S	S											

FIG. 5A

VL

			Framework 1												CDR 1																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
SEQ.ID NO: 16	E	N	V	L	T	Q	S	P	A	I	M	S	A	S	L	G	E	K	V	T	M	S	C	R	A	S	S	S	V	-	N	Y	I	Y
SEQ.ID NO: 26	D	N	Q	L	T	Q	S	P	S	F	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	S	S	V	-	N	Y	I	Y
SEQ.ID NO: 27	D	N	Q	L	T	Q	S	P	S	S	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	S	S	V	-	N	Y	I	Y
SEQ.ID NO: 28	E	N	V	L	T	Q	S	P	A	T	L	S	V	S	P	G	E	R	A	T	L	S	C	R	A	S	S	S	V	-	N	Y	I	Y
SEQ.ID NO: 29	Q	N	V	L	T	Q	P	P	S	-	A	S	G	T	P	G	Q	R	V	T	I	S	C	R	A	S	S	S	V	-	N	Y	I	Y
SEQ.ID NO: 30	S	N	E	L	T	Q	P	P	S	-	V	S	V	S	P	G	Q	T	A	R	I	T	C	R	A	S	S	S	V	-	N	Y	I	Y

			Framework 2												CDR 2											
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56				
SEQ.ID NO: 16	W	Y	Q	Q	K	S	D	A	S	P	K	L	W	I	Y	Y	T	S	N	L	A	P				
SEQ.ID NO: 26	W	Y	Q	Q	K	P	G	K	A	P	K	L	L	I	Y	Y	T	S	N	L	A	P				
SEQ.ID NO: 27	W	Y	Q	Q	K	P	G	K	A	P	K	L	L	I	Y	Y	T	S	N	L	A	P				
SEQ.ID NO: 28	W	Y	Q	Q	K	P	G	Q	A	P	R	L	L	I	Y	Y	T	S	N	L	A	P				
SEQ.ID NO: 29	W	Y	Q	Q	L	P	G	T	A	P	K	L	L	I	Y	Y	T	S	N	L	A	P				
SEQ.ID NO: 30	W	Y	Q	Q	K	S	G	Q	A	P	V	L	V	I	Y	Y	T	S	N	L	A	P				

			Framework 3												CDR 3																	
	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
SEQ.ID NO: 16	G	V	P	T	R	F	S	G	S	G	S	G	N	S	Y	S	L	T	I	S	S	M	E	G	E	D	A	A	T	Y	Y	C
SEQ.ID NO: 26	G	V	P	S	R	F	S	G	S	G	S	G	N	E	Y	T	L	T	I	S	S	L	Q	P	E	D	F	A	T	Y	Y	C
SEQ.ID NO: 27	G	V	P	S	R	F	S	G	S	G	S	G	N	D	Y	T	L	T	I	S	S	L	Q	P	E	D	F	A	T	Y	Y	C
SEQ.ID NO: 28	G	I	P	A	R	F	S	G	S	G	S	G	N	E	Y	T	L	T	I	S	S	L	Q	S	E	D	F	A	V	Y	Y	C
SEQ.ID NO: 29	G	V	P	D	R	F	S	G	S	G	S	G	N	S	Y	S	L	A	I	S	G	L	R	S	E	D	E	A	D	Y	Y	C
SEQ.ID NO: 30	G	I	P	E	R	F	S	G	S	G	S	G	N	M	Y	T	L	T	I	S	G	A	Q	V	E	D	E	A	D	Y	Y	C

			Framework 4												CDR 4											
	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107							
SEQ.ID NO: 16	Q	Q	F	T	S	S	P	F	T	F	G	S	G	T	K	L	E	I	K							
SEQ.ID NO: 26	Q	Q	F	T	S	S	P	F	T	F	G	Q	G	T	K	L	E	I	K							
SEQ.ID NO: 27	Q	Q	F	T	S	S	P	F	T	F	G	Q	G	T	K	L	E	I	K							
SEQ.ID NO: 28	Q	Q	F	T	S	S	P	F	T	F	G	Q	G	T	K	L	E	I	K							
SEQ.ID NO: 29	Q	Q	F	T	S	S	P	F	T	F	G	T	G	T	K	V	T	V	L							
SEQ.ID NO: 30	Q	Q	F	T	S	S	P	F	T	F	G	T	G	T	K	V	T	V	L							

FIG. 5B

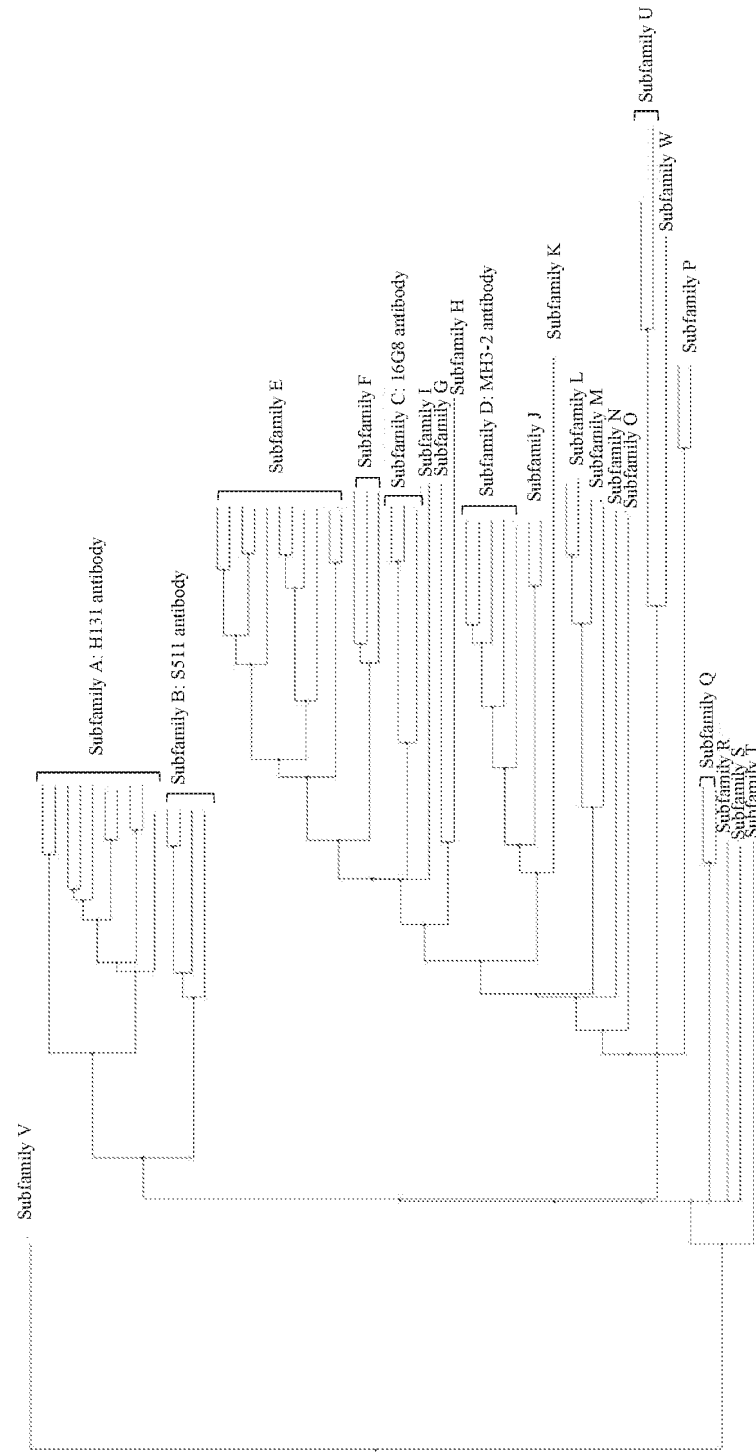
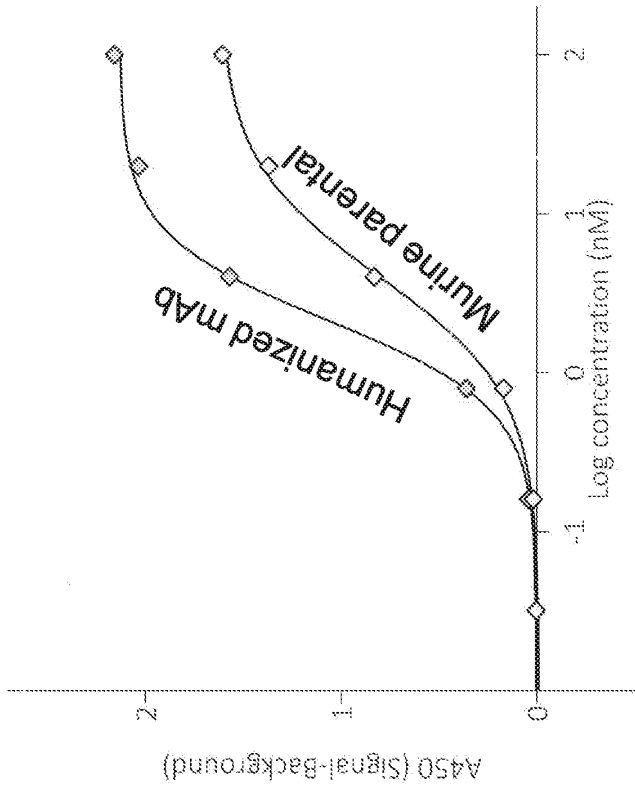
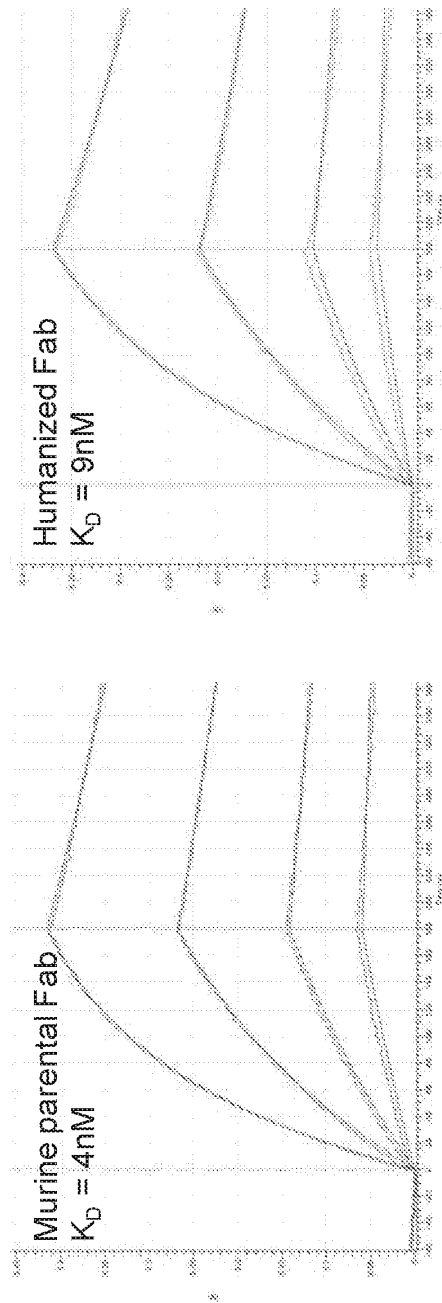


FIG. 6



ELISA data showing direct binding of anti-TRBC1 mAbs (bivalent) to hTRBC1 coated on the plate

FIG. 7



Octet data showing binding of anti-TRBC1 Fabs to hTRBC1. hTRBC1 was captured on the sensor tip and dipped in solution containing different concentrations of monovalent Fabs

FIG. 8

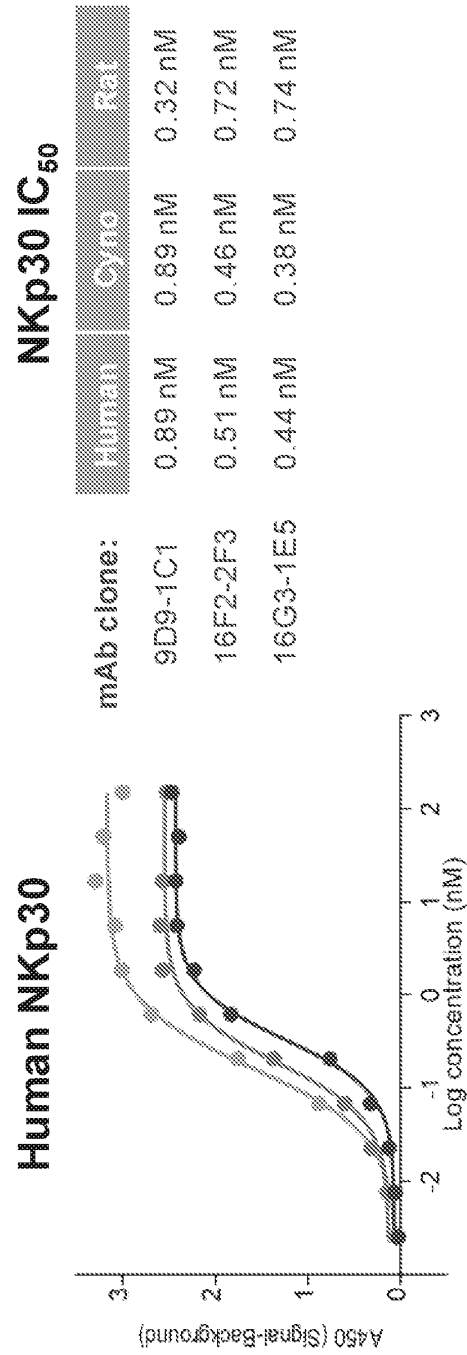


FIG. 9

Activation of NK92 cells by NK p30 Ab

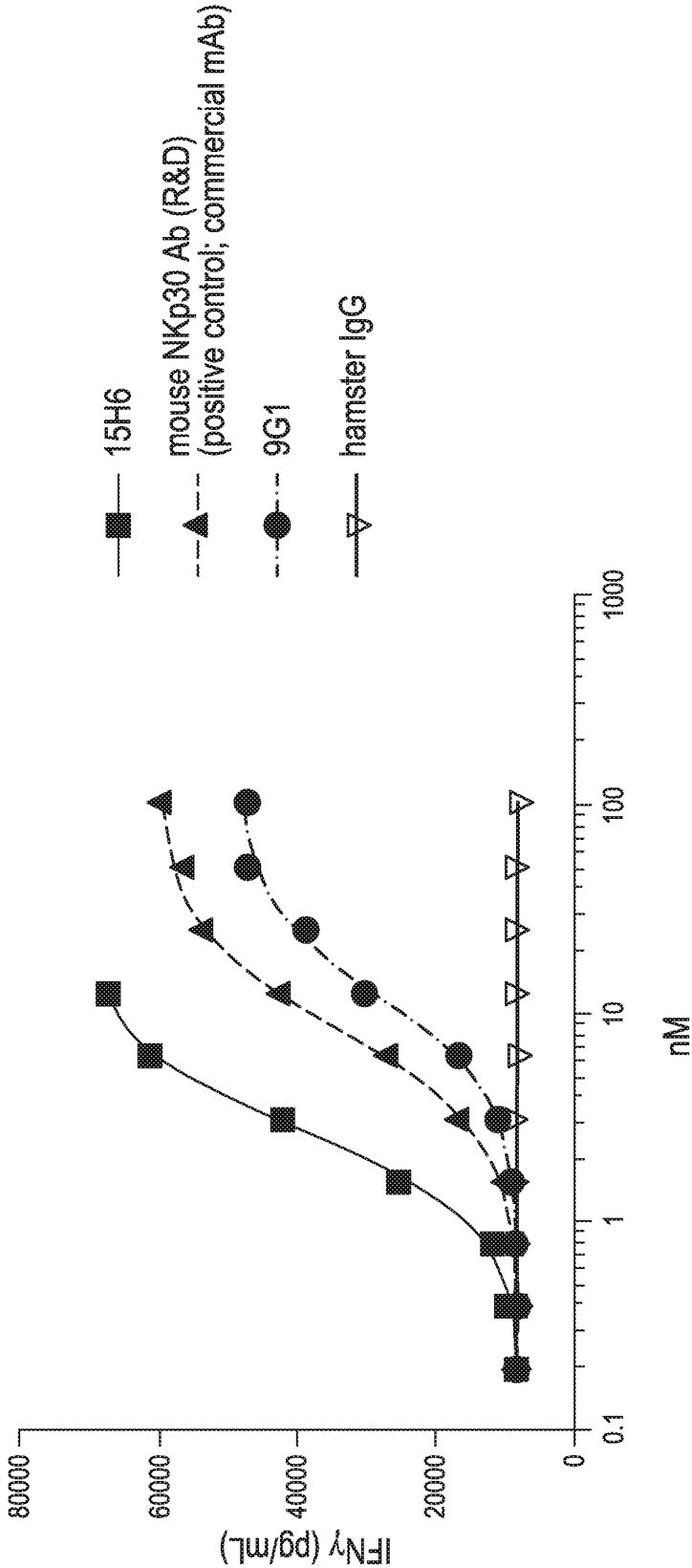


FIG. 10

FIG. 11A

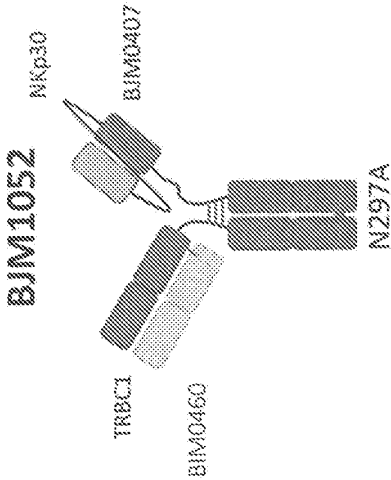


FIG. 11B

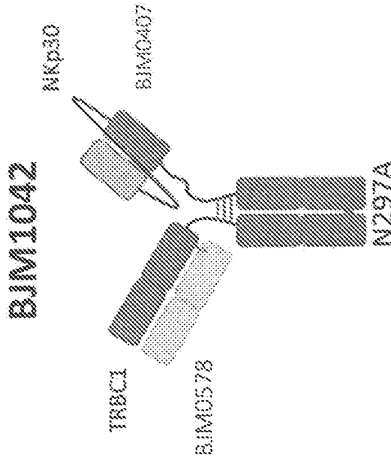


FIG. 11C

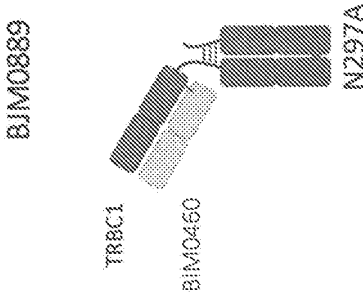


FIG. 11D

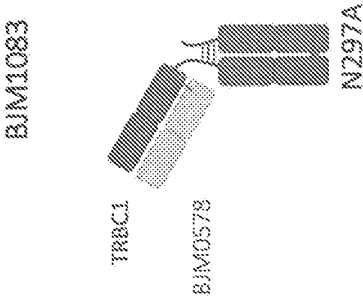


FIG. 11E

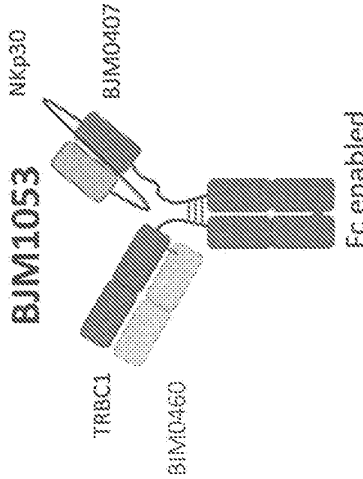


FIG. 12A

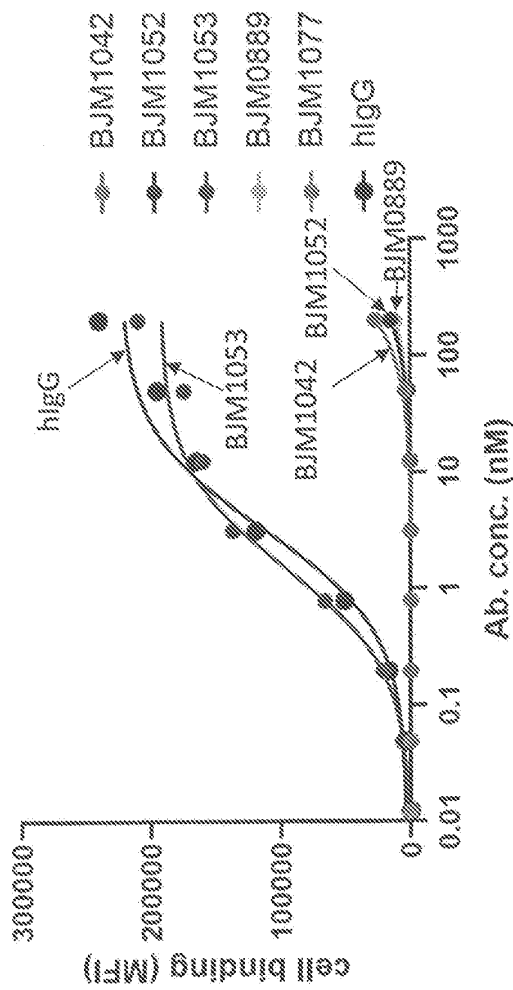


FIG. 12B

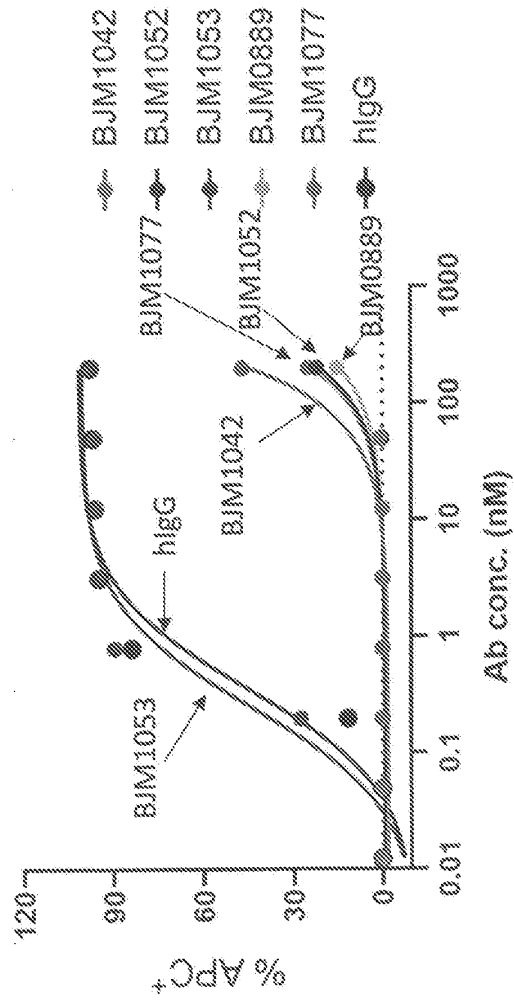


FIG. 13A

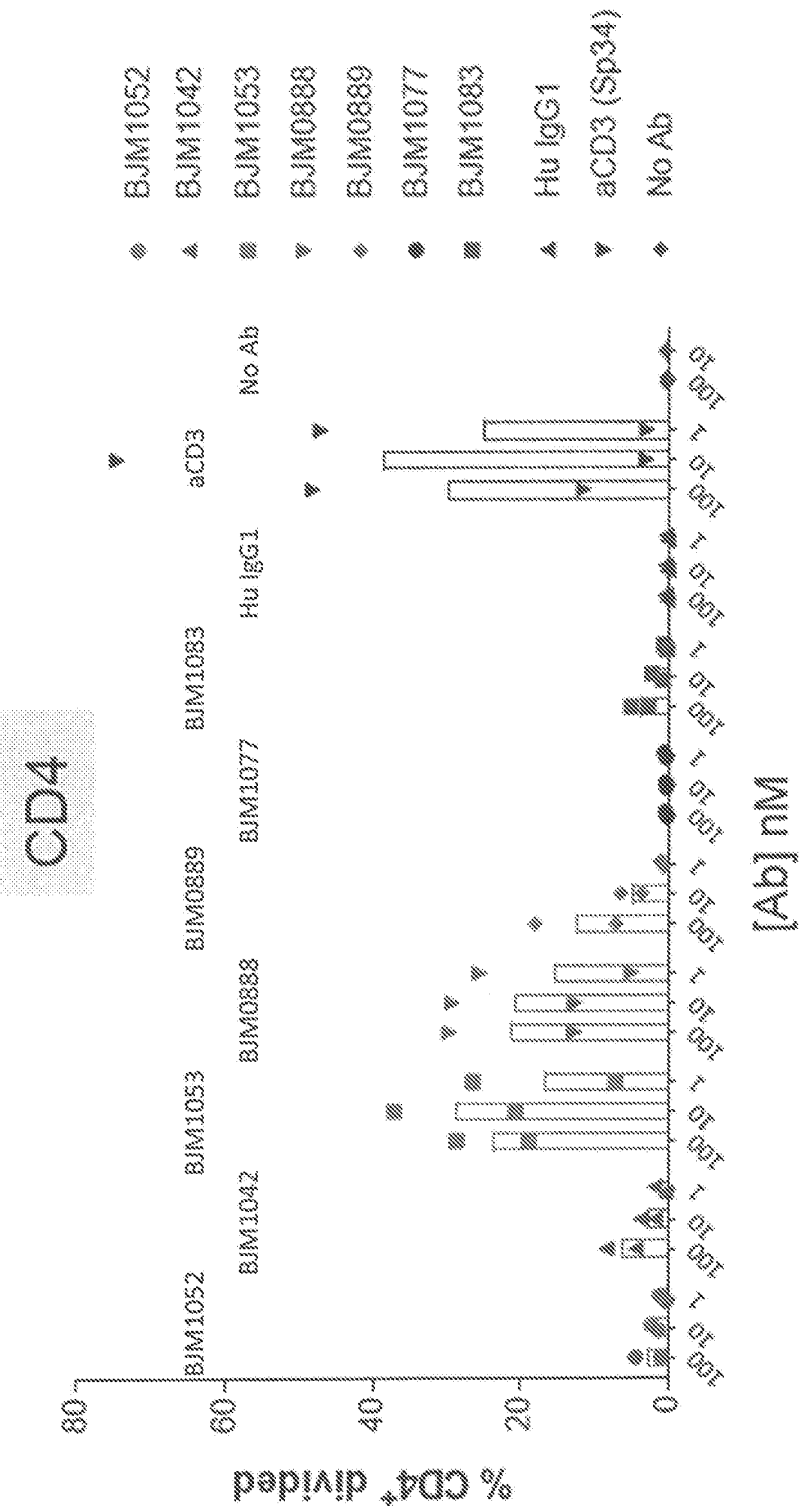


FIG. 13B

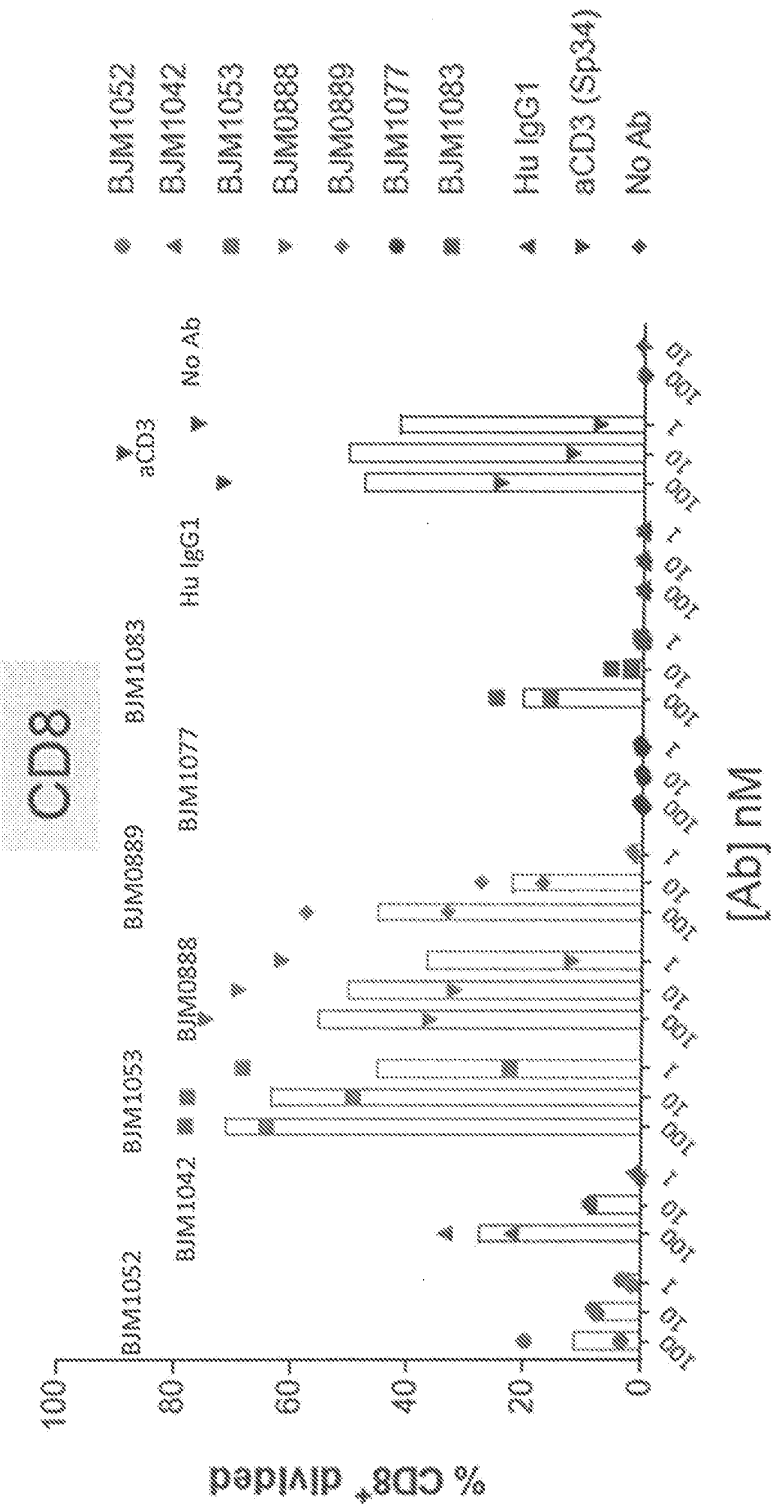


FIG. 13C

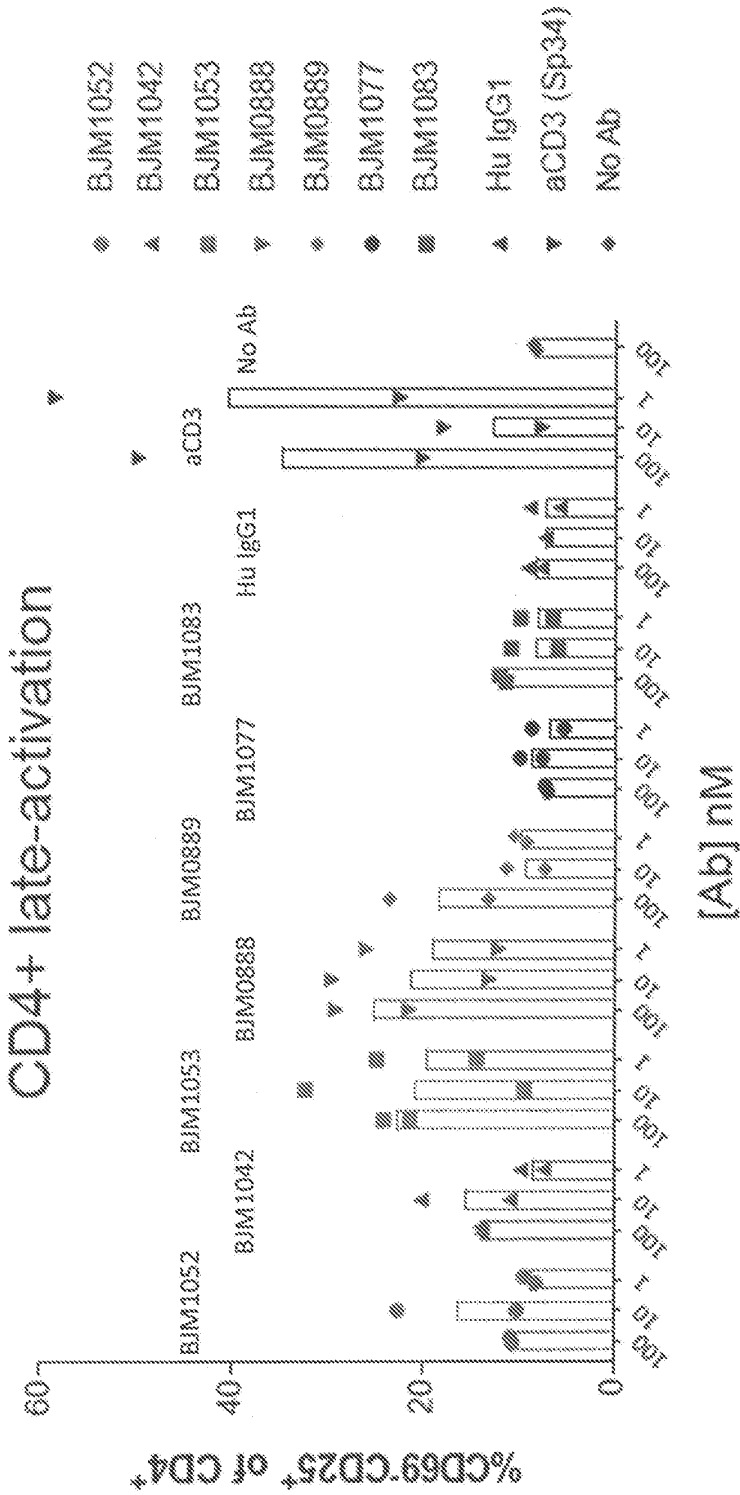


FIG. 13D

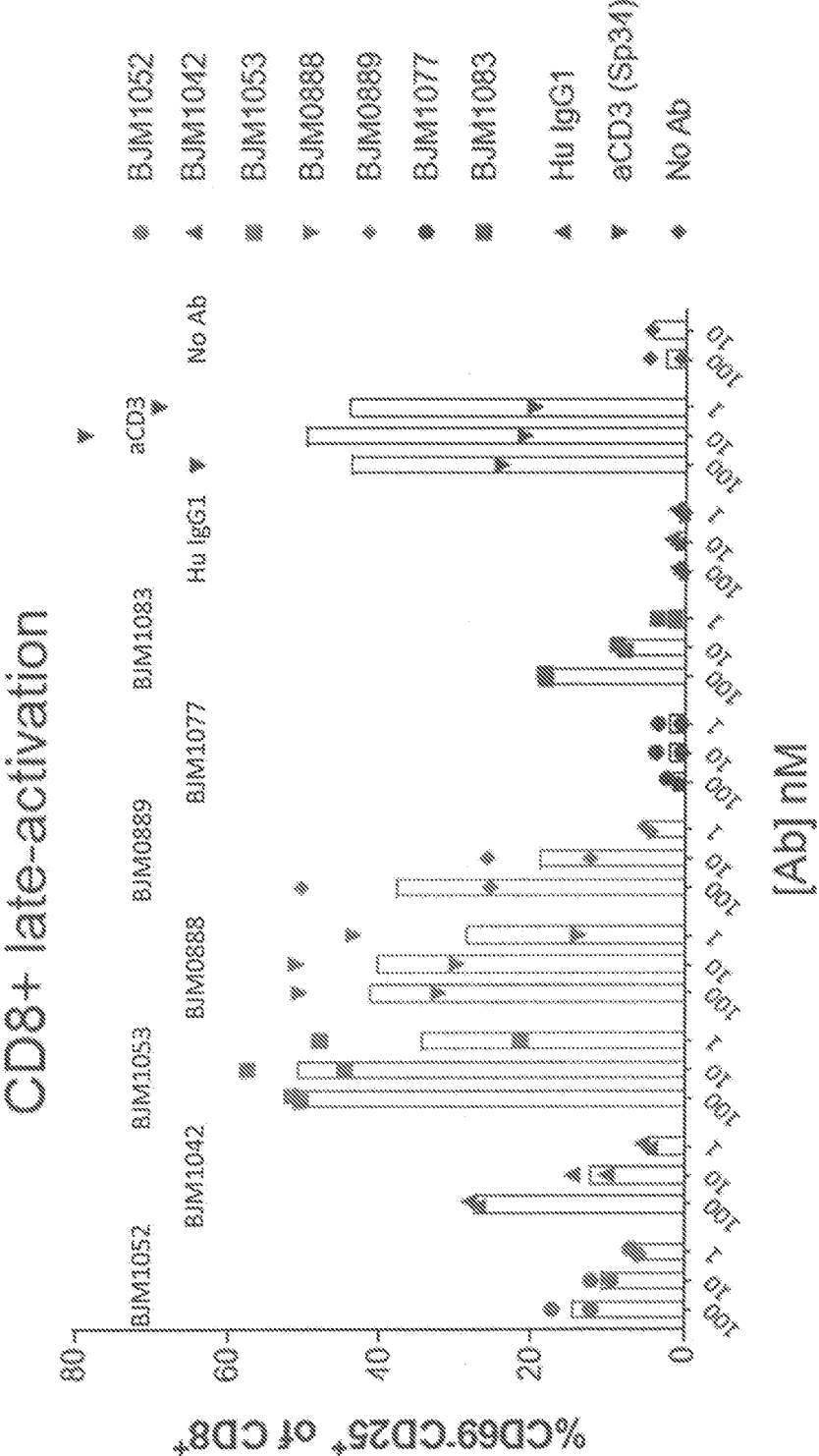
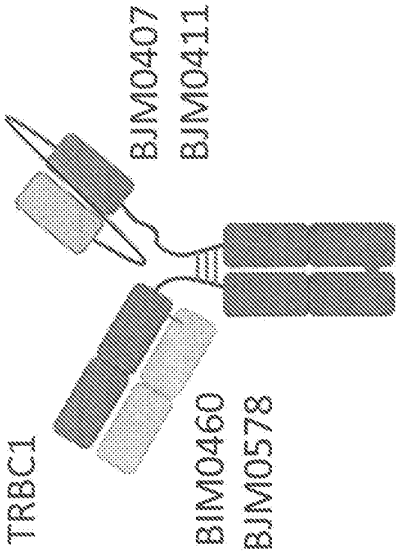


FIG. 14A

FIG. 14B

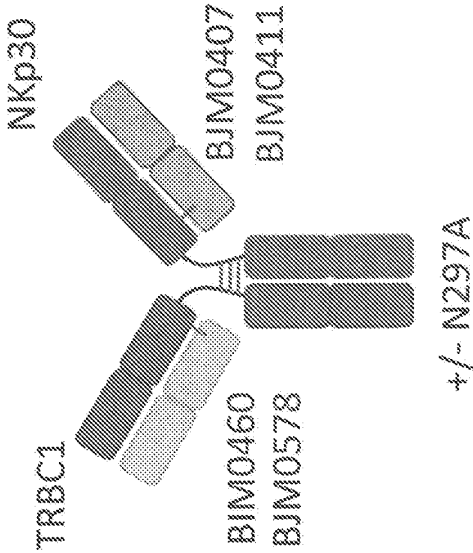


BJM1048 460/407 N297A	BJM1032 578/407
BJM1051 460/407	BJM1034 578/411
BJM1052 460/411 N297A	BJM1038 578/407 N297A
BJM1053 460/411	BJM1042 578/411 N297A

+/- N297A

FIG. 14C

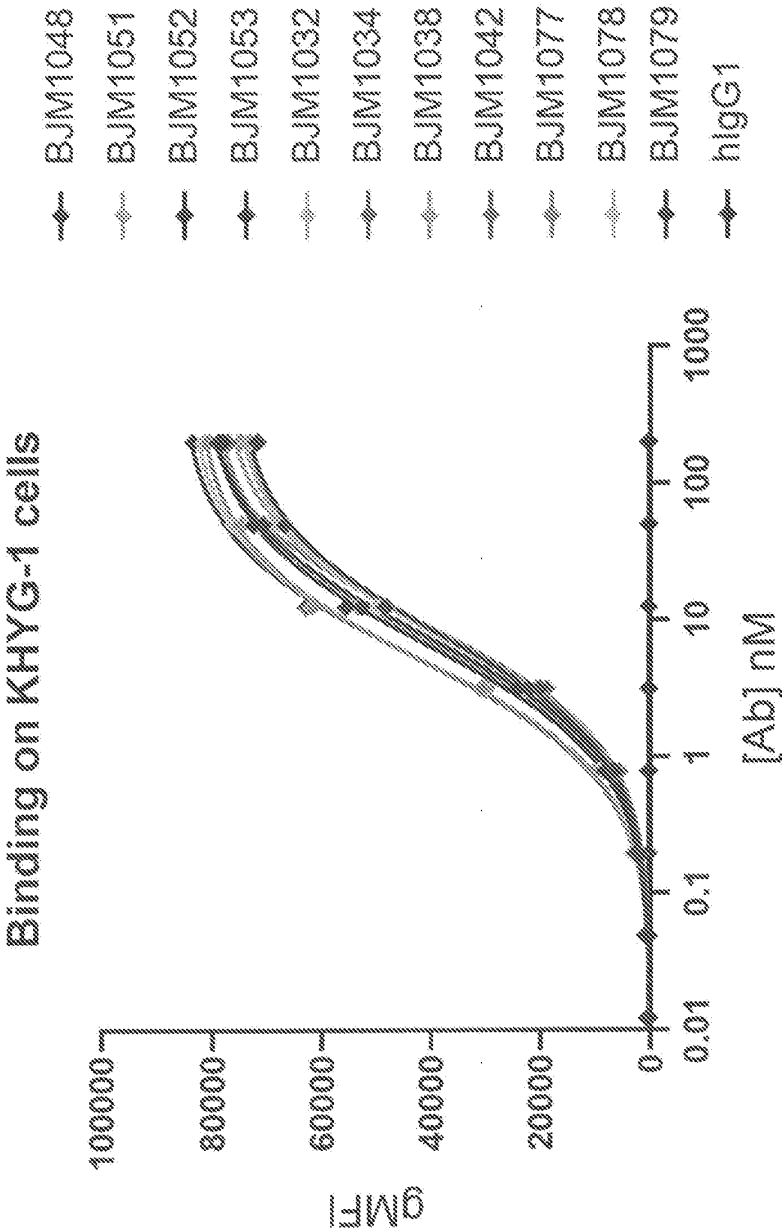
FIG. 14D



BJM0862 460/407
BJM0863 460/411
BJM1028 578/407 N297A
BJM1046 578/411 N297A

+/- N297A

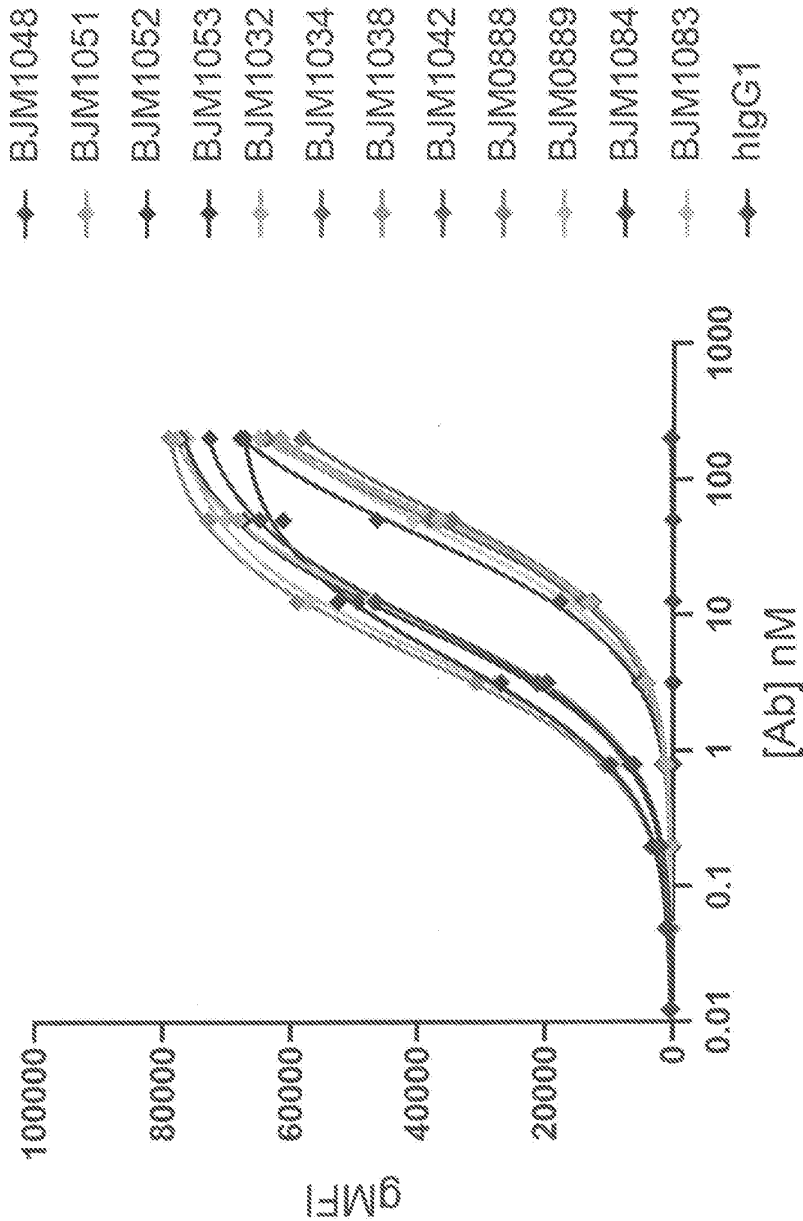
FIG. 15A



	BJM1048	BJM1051	BJM1052	BJM1053	BJM1032	BJM1034	BJM1038	BJM1042	BJM1077
EC50	7.656	8.051	6.608	7.654	7.494	7.054	7.989	9.484	4.947

FIG. 15B

Cell binding on Jurkat cells



	BJM1048	BJM1051	BJM1052	BJM1053	BJM1032	BJM1034	BJM1038	BJM1042	BJM0888
EC50	8.298	9.545	4.554	8.271	70.99	59.60	60.48	61.01	4.971

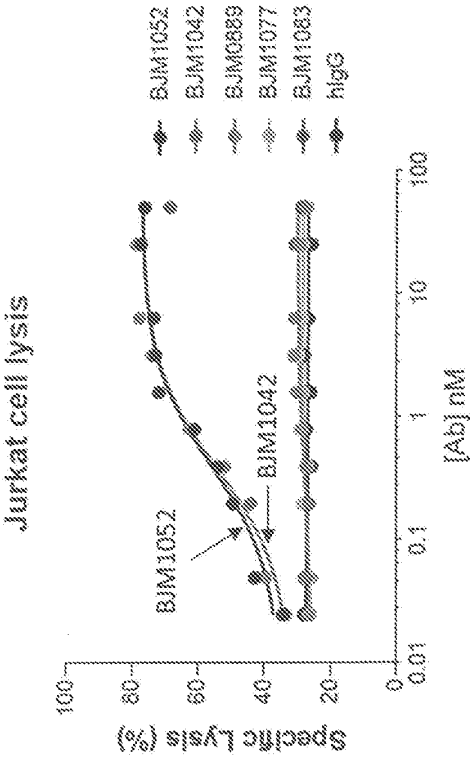
FIG. 15C

BJM1048	Nkp30/TRBC1 bispecific 407/460_N297A
BJM1051	Nkp30/TRBC1 bispecific 407/460_WT
BJM1052	Nkp30/TRBC1 bispecific 411/460_N297A
BJM1053	Nkp30/TRBC1 bispecific 411/460_WT
BJM1032	Nkp30/TRBC1 bispecific 407/578_WT
BJM1034	Nkp30/TRBC1 bispecific 411/578_WT
BJM1038	Nkp30/TRBC1 bispecific 407/578_N297A
BJM1042	Nkp30/TRBC1 bispecific 411/578_N297A
BJM1077	Nkp30 single arm control 411_N297A
BJM1078	Nkp30 single arm control 407_WT
BJM1079	Nkp30 single arm control 411_WT
BJM0888	TRBC1 single arm WT 460
BJM0889	TRBC1 single arm N297A 460
BJM1084	TRBC1 578 Single arm control WT
BJM1083	TRBC1 578 Single arm control N297A knob

FIG. 15D

Sample	gMFI	EC50 Jurkat (TRBC1) [nM]
BJM1048	7.656	8.288
BJM1051	8.051	9.545
BJM1052	6.608	4.554
BJM1053	7.664	8.271
BJM1032	7.494	70.99
BJM1034	7.064	59.6
BJM1038	7.989	60.48
BJM1042	9.484	61.01
BJM1077	4.947	
BJM1078	5.2	
BJM1079	5.357	
BJM0888		4.971
BJM0889		5.261
BJM1084		40.33
BJM1083		44.16

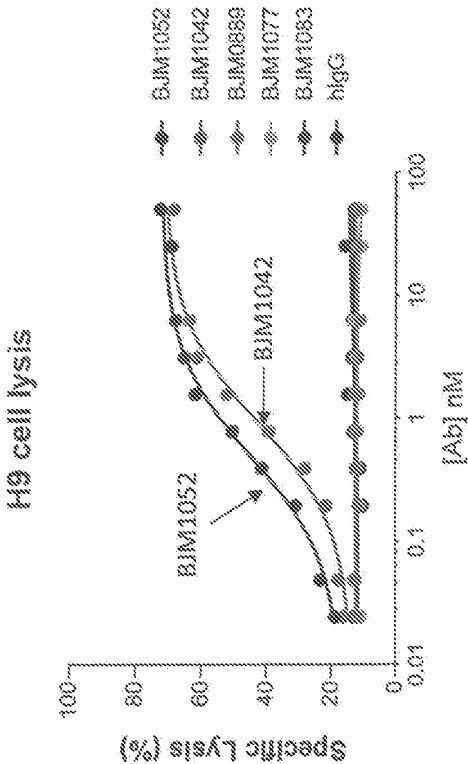
FIG. 16A



Jurkat	BJM1052	BJM1042
EC ₅₀	0.3976	0.3838

BJM1052: Nkp30xTRBC1(460)
BJM1042: Nkp30xTRBC1(578)
BJM0889: TRBC1 (460, N297A)
BJM1077: Nkp30 (N297A)
BJM1083: TRBC1 (578, N297A)

FIG. 16B



H9	BJM1052	BJM1042
EC ₅₀	0.4775	0.9082

FIG. 16C

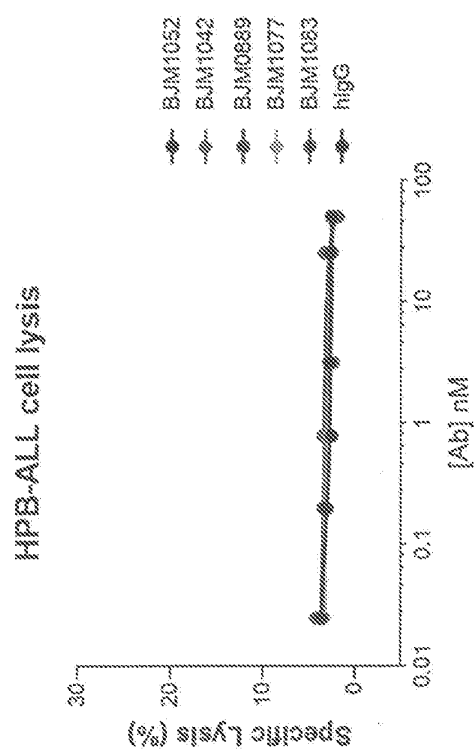


FIG. 17A

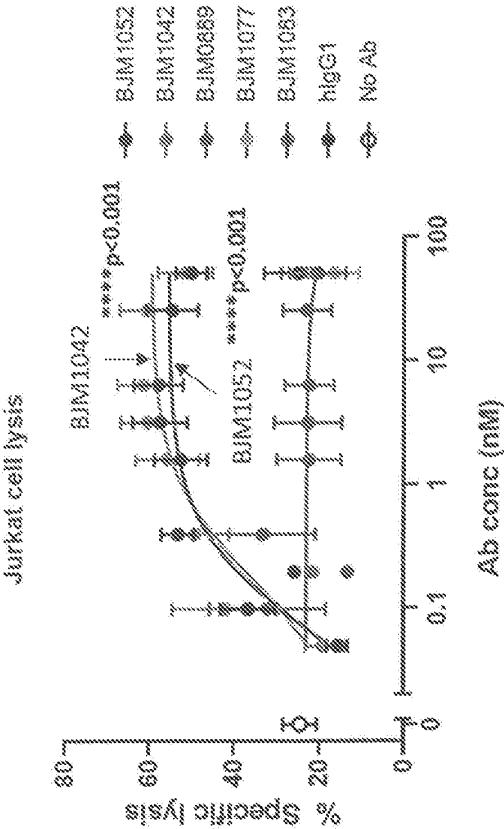
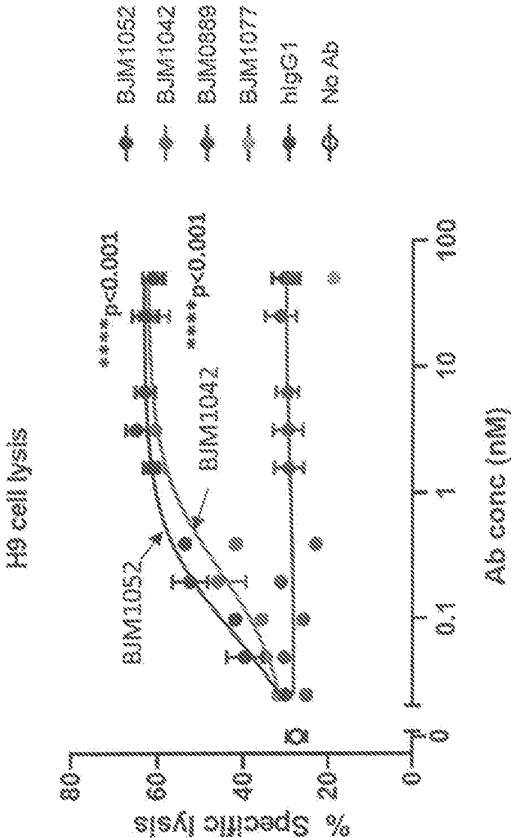


FIG. 17B



	BJM1052	BJM1042
EC50	0.064	0.1778

BJM1052: NKp30xTRBC1(460)
BJM1042: NKp30xTRBC1(578)
BJM0889: TRBC1 (460, N297A)
BJM1077: NKp30 (N297A)
BJM1083: TRBC1 (578, N297A)

	BJM1052	BJM1042
EC50	0.075	0.238

FIG. 17C

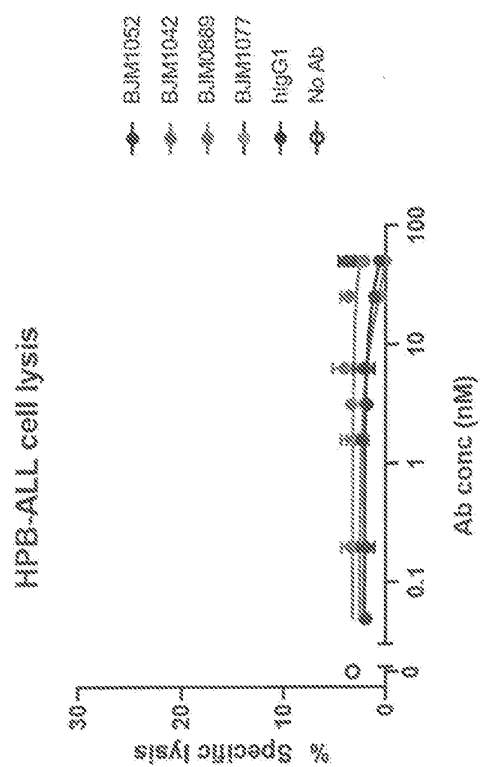


FIG. 18A

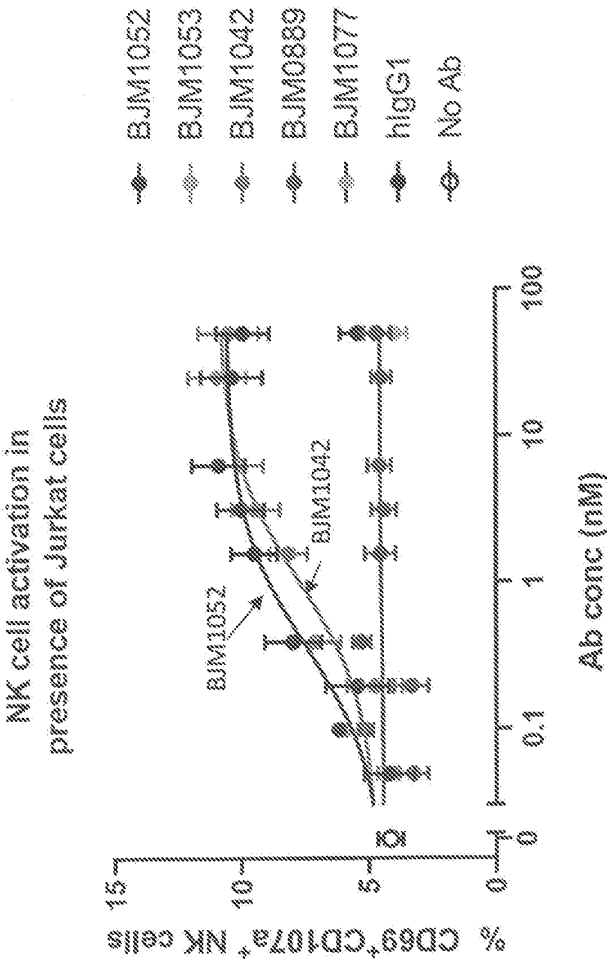


FIG. 18B

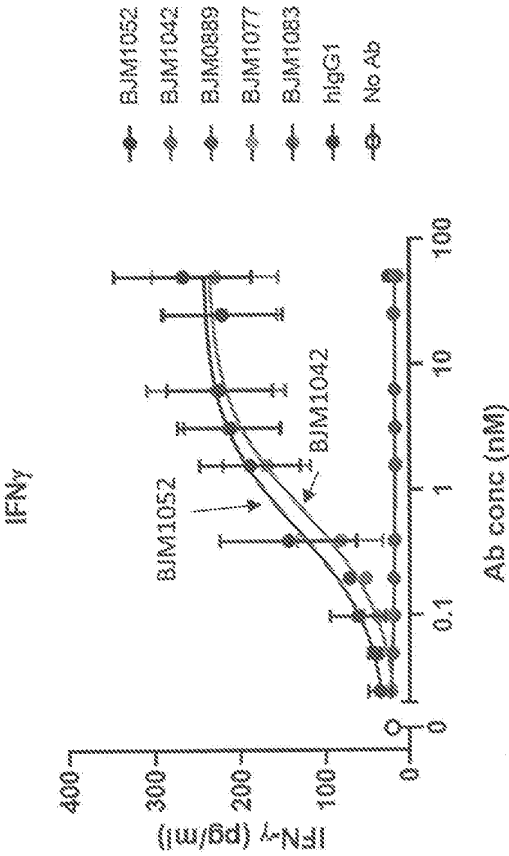


FIG. 18C

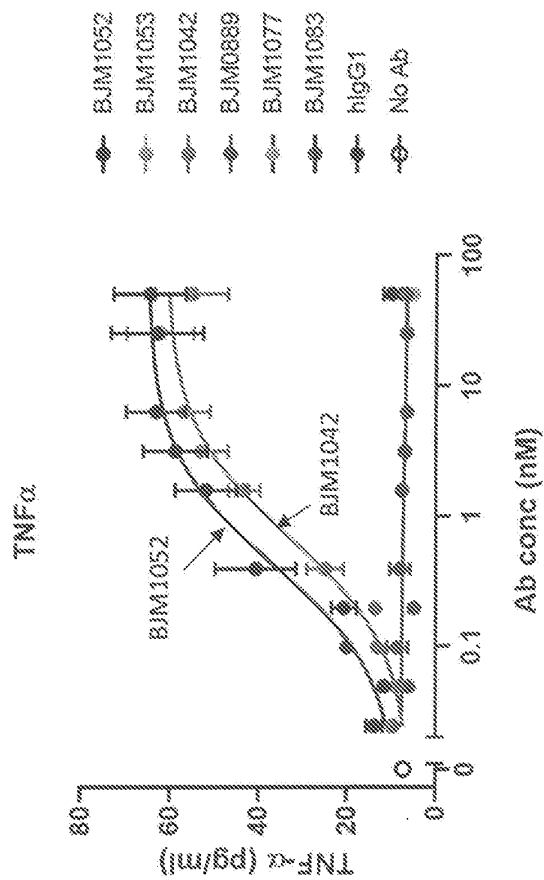


FIG. 19A

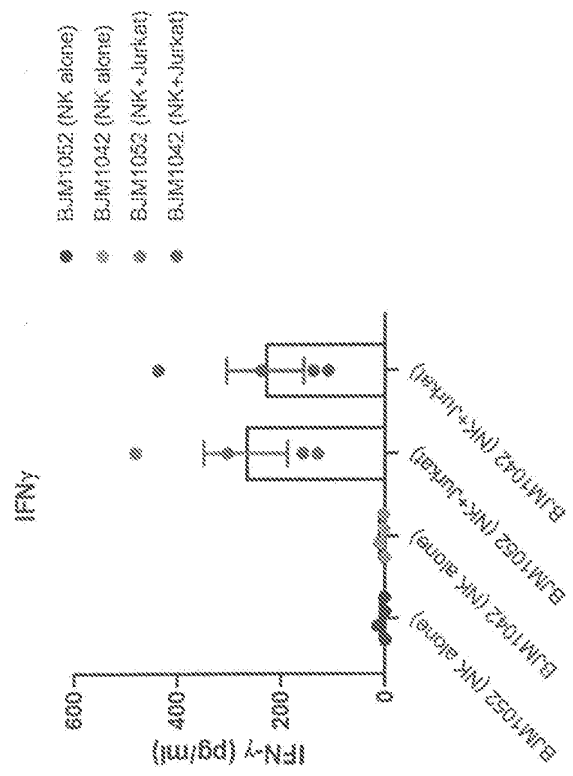


FIG. 19B

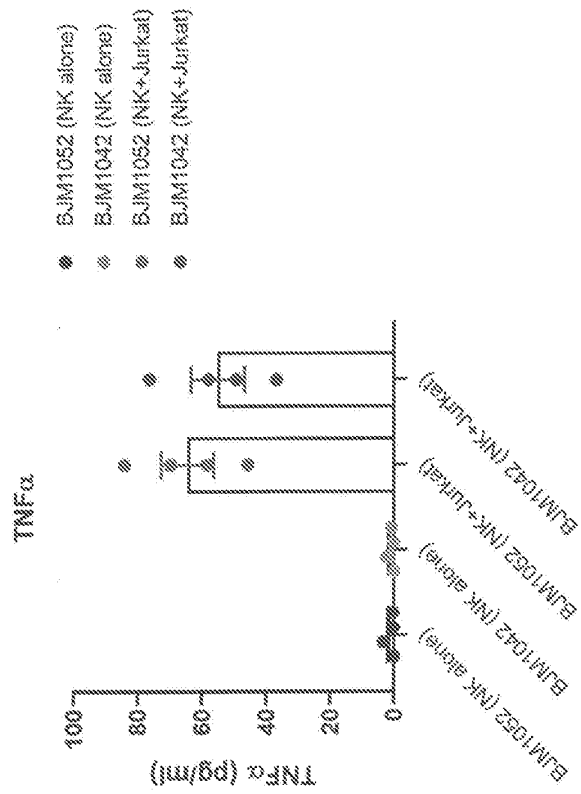


FIG. 20

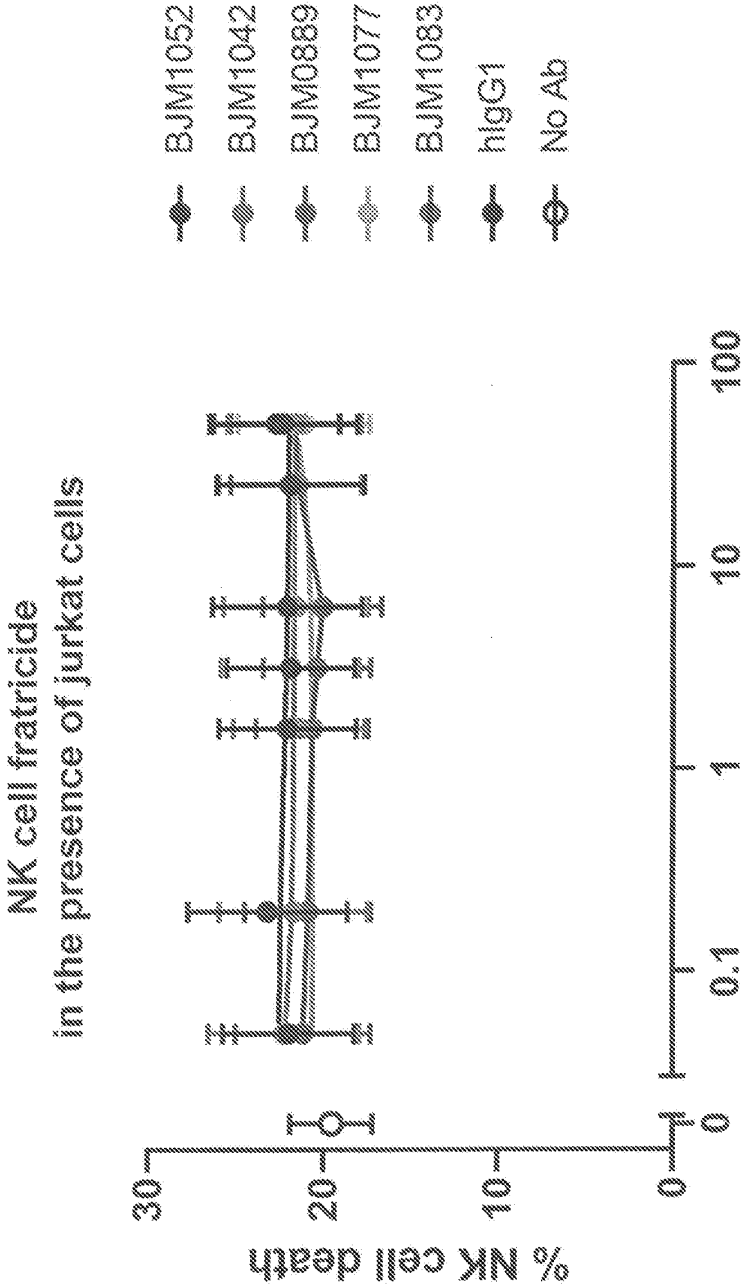


FIG. 21B

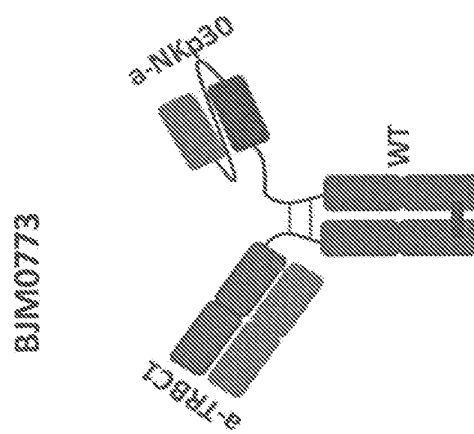


FIG. 21A

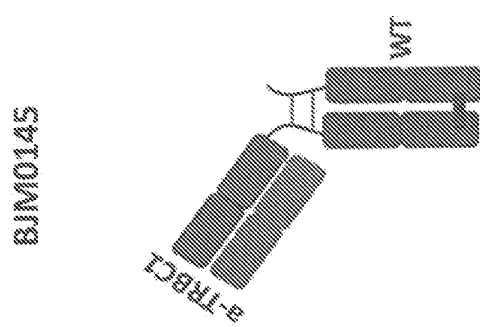


FIG. 22A

PDX3 (TRBC1+) (ALL)

Primary NK : PDX (5:1)

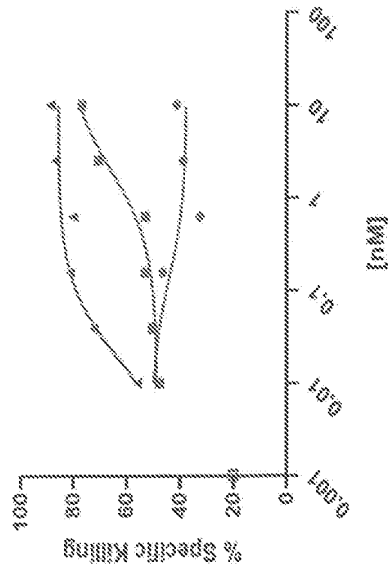


FIG. 22B

PDX3 (TRBC1+) (ALL)

KHYG1 + PDX (5:1)

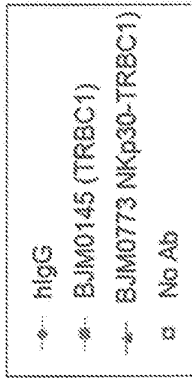
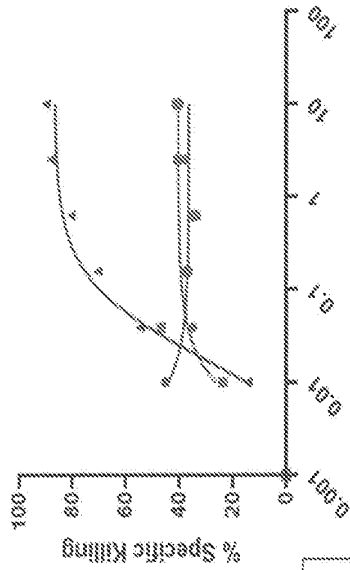


FIG. 22C

PDX6 (TRBC1+) (CTCL)

Primary NK : PDX (5:1)

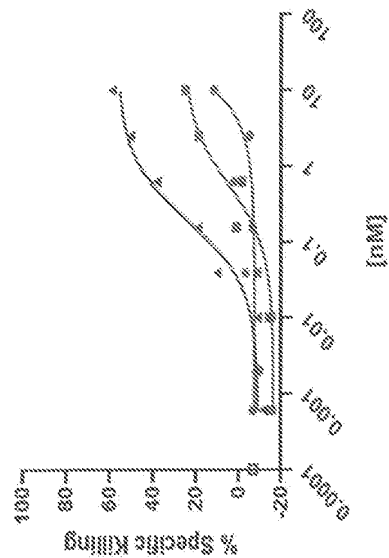


FIG. 22D

PDX6 (TRBC1+) (CTCL)

KHYG1 + PDX (5:1)

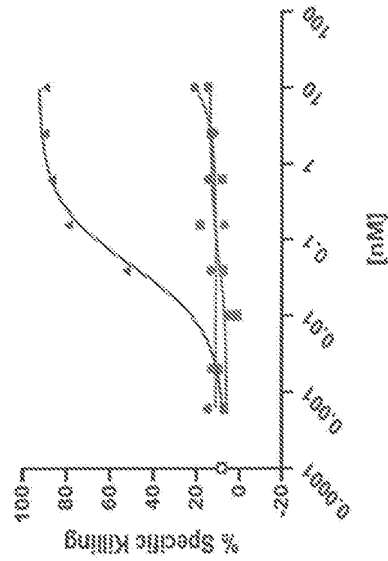


FIG. 23

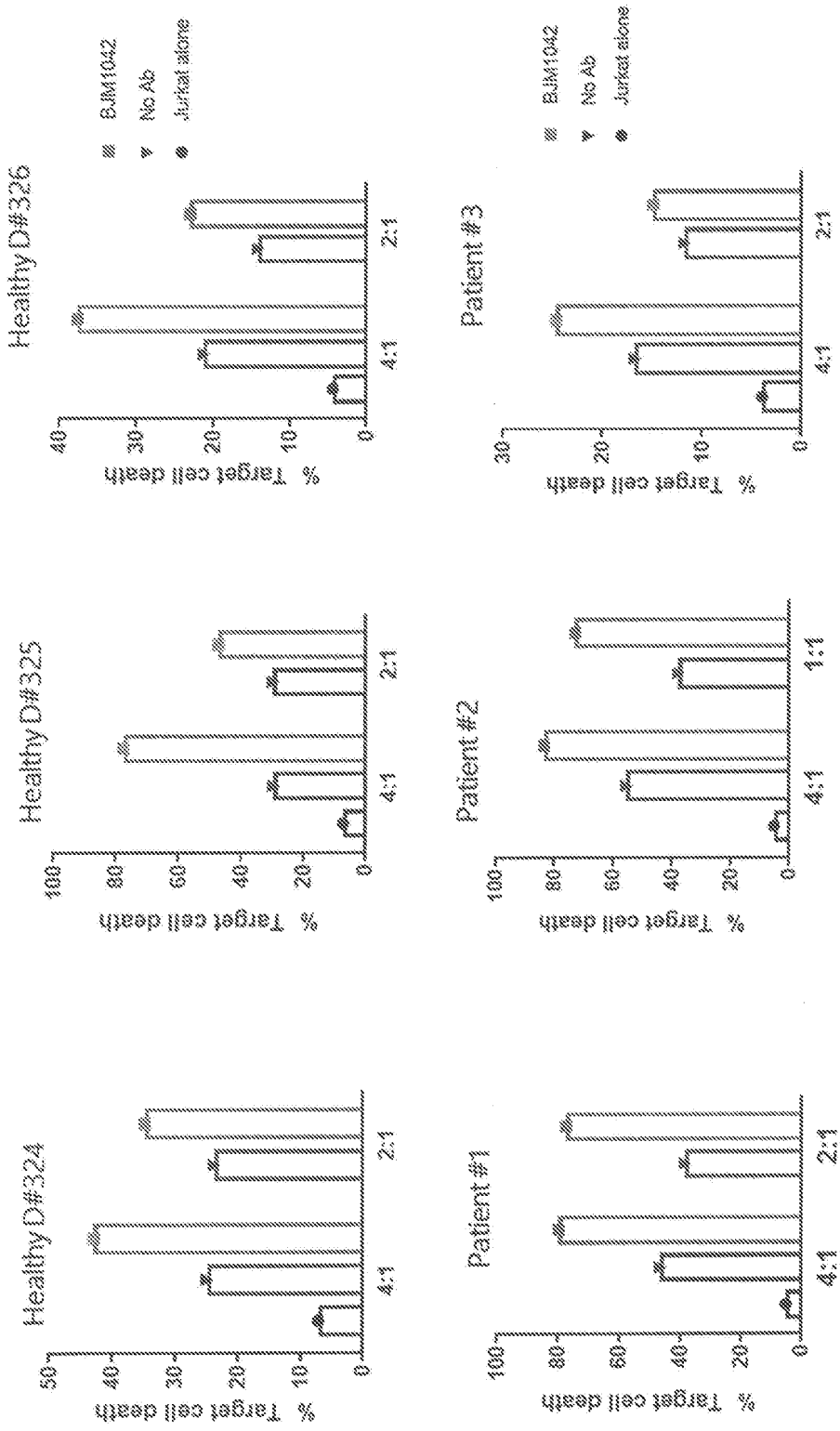


FIG. 24

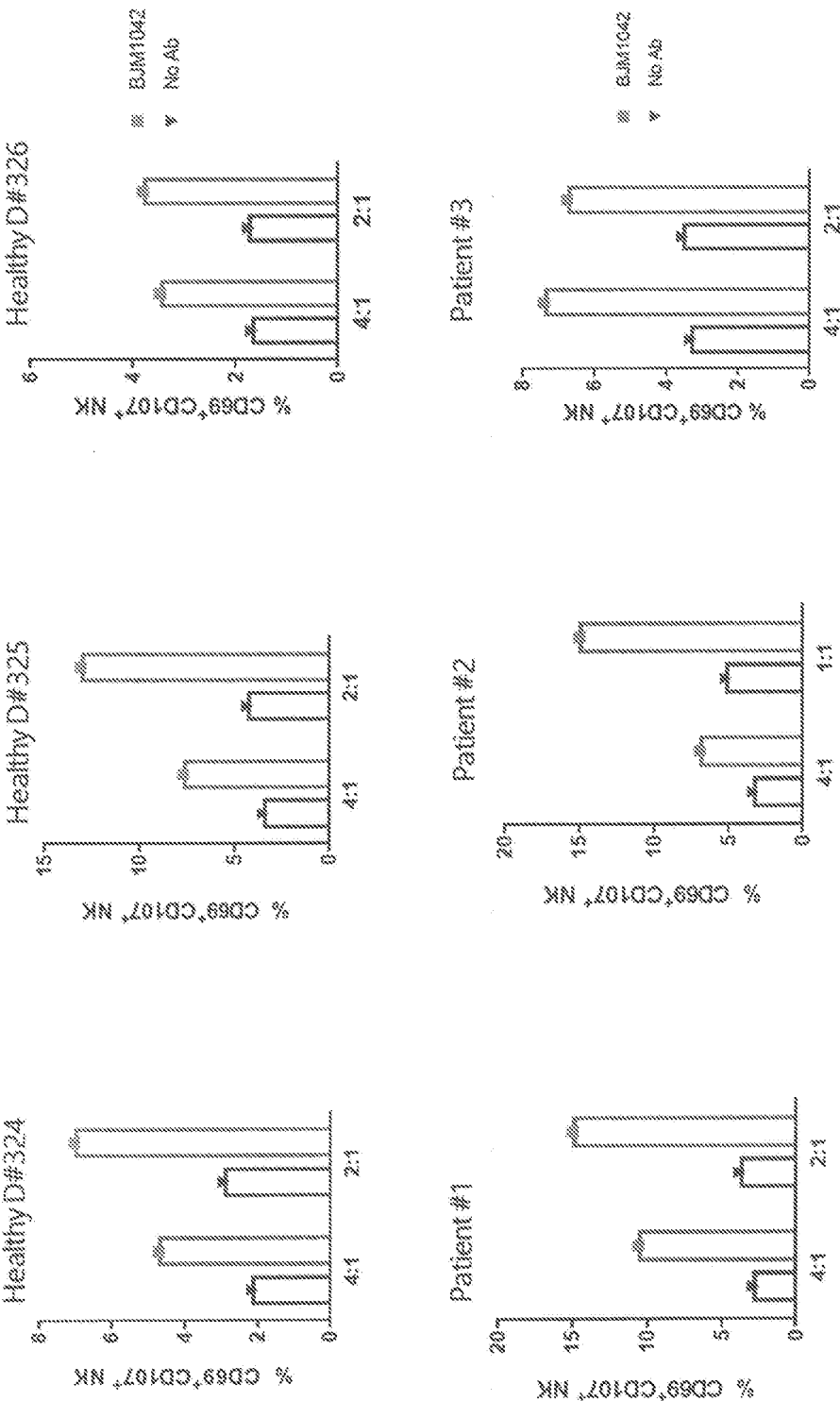


FIG. 25A

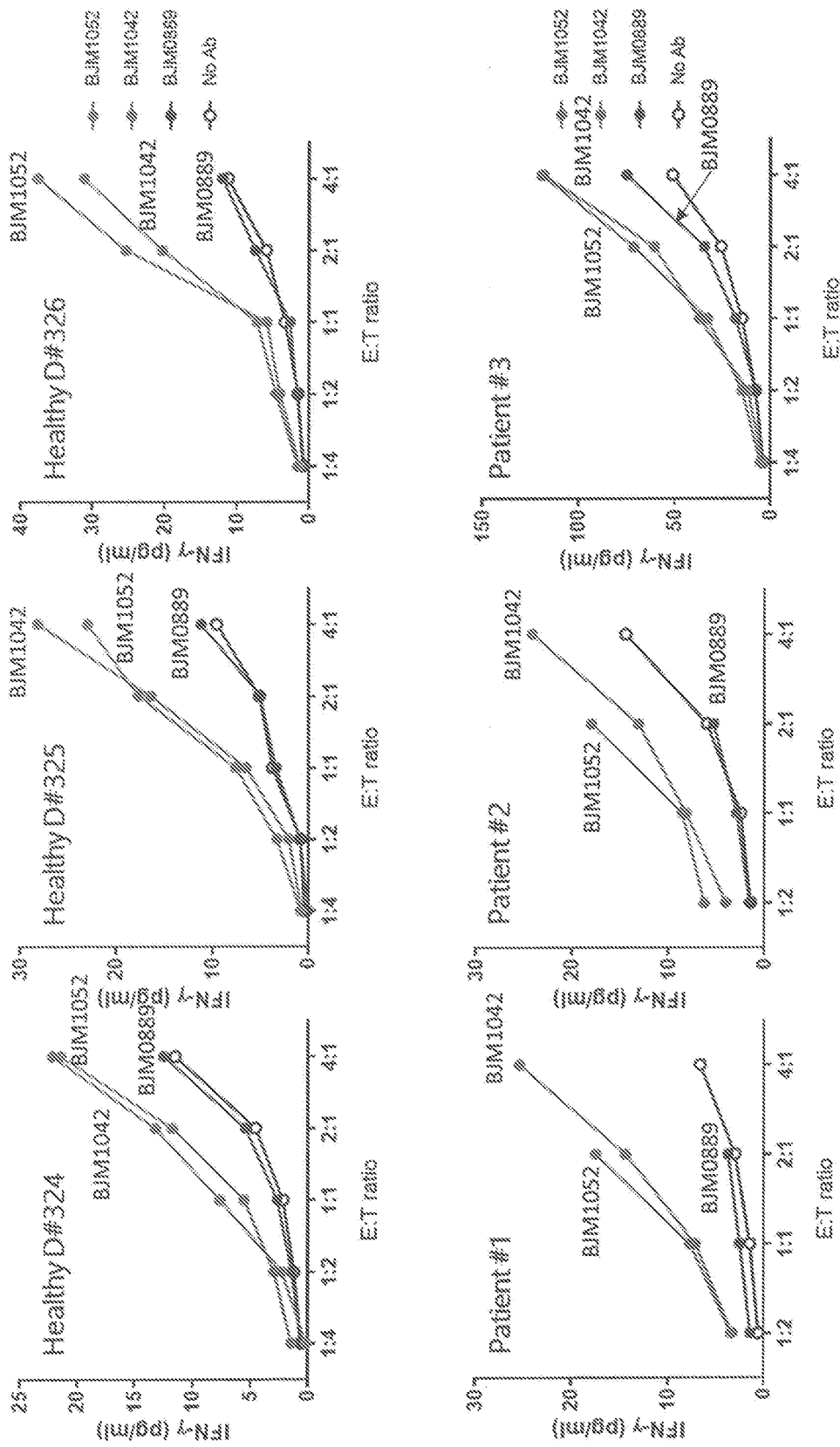


FIG. 25B

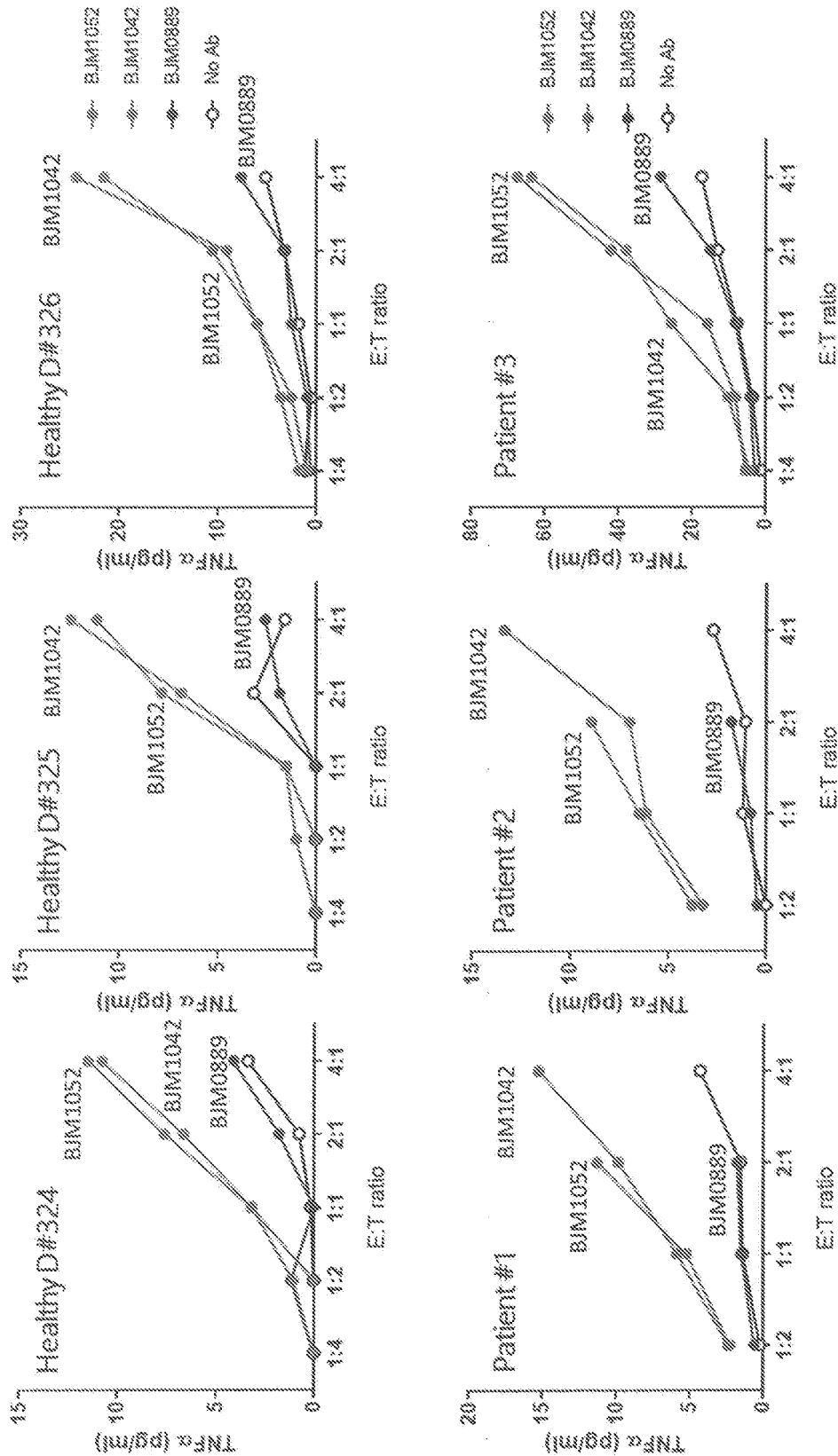


FIG. 26A

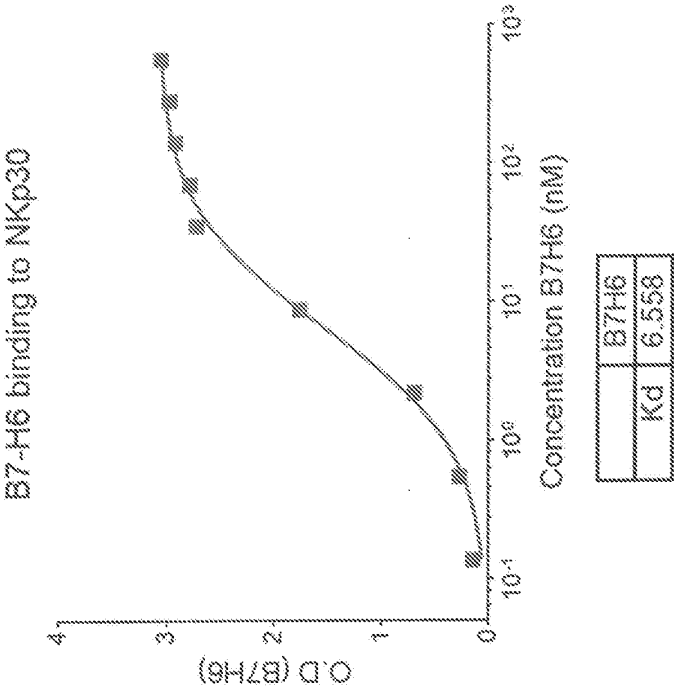


FIG. 26B

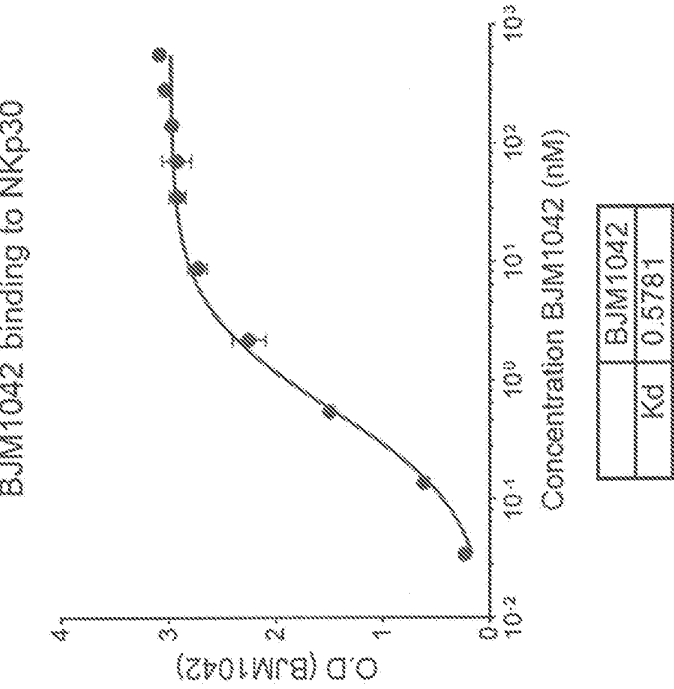


FIG. 26C

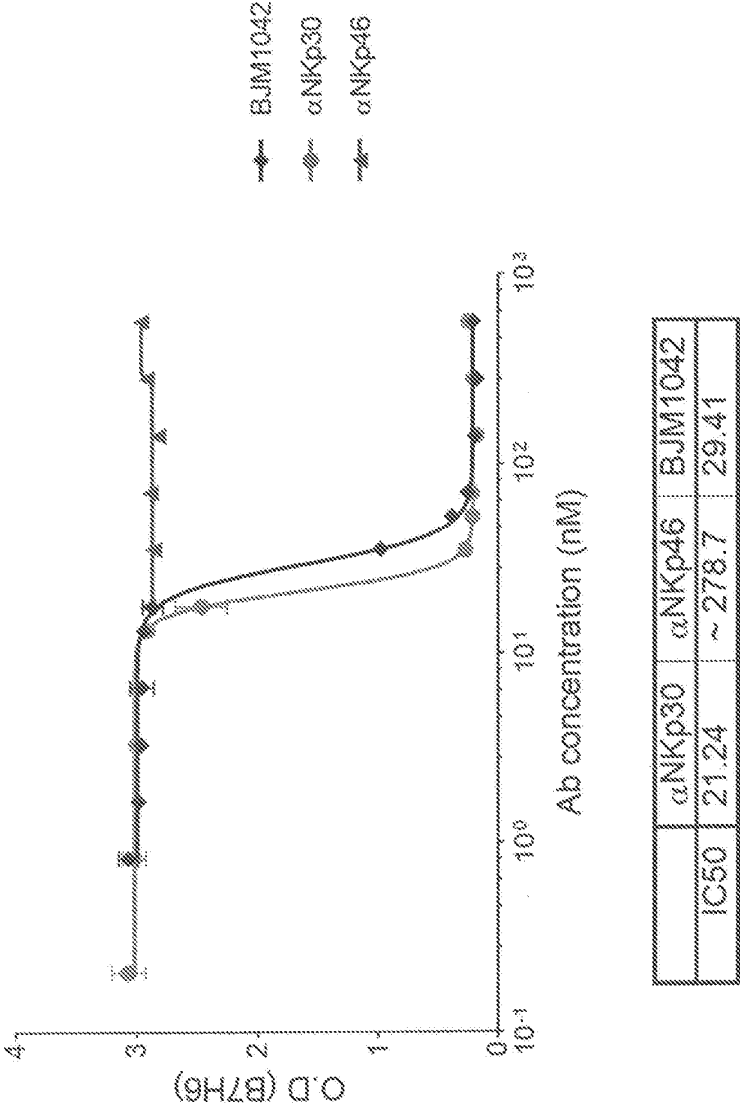


FIG. 27A

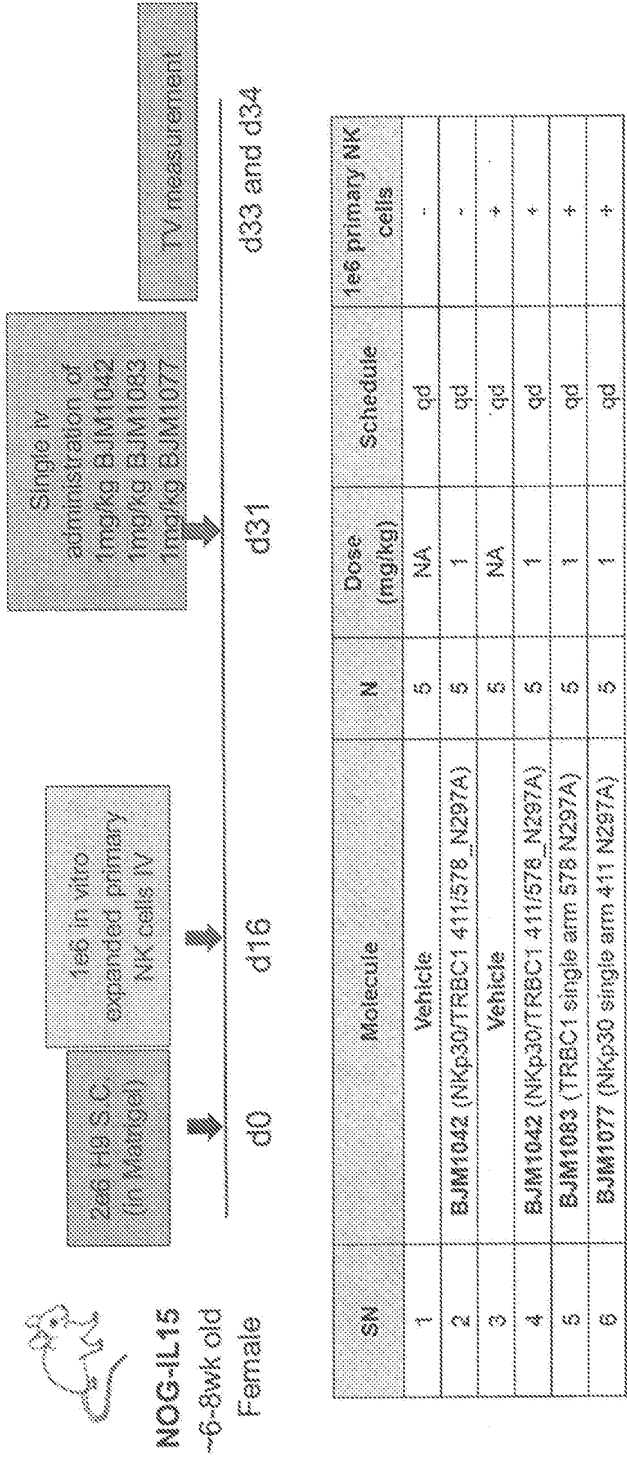


FIG. 27B

Subcutaneous H9 Tumor

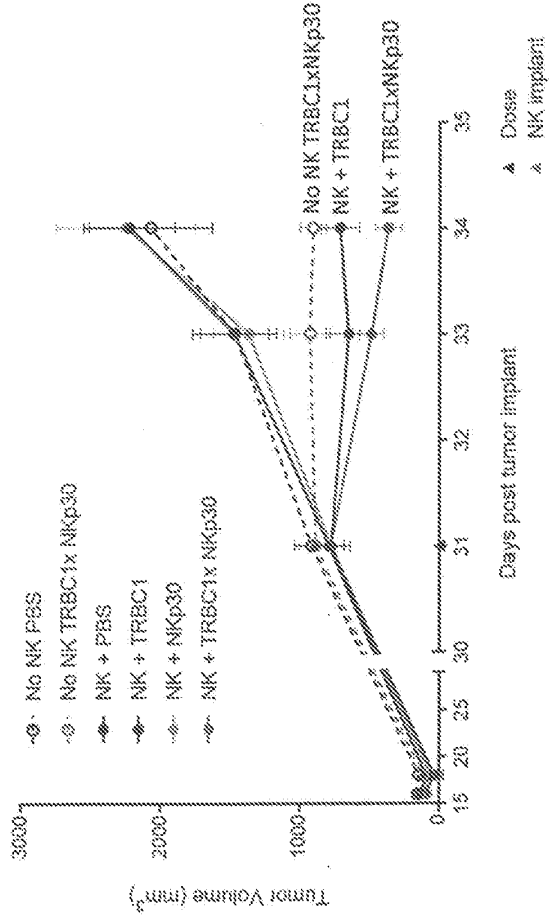


FIG. 27C

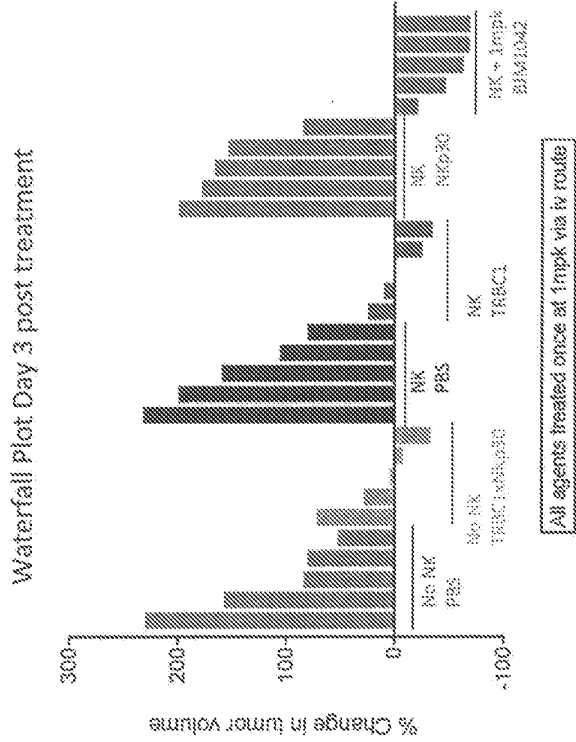
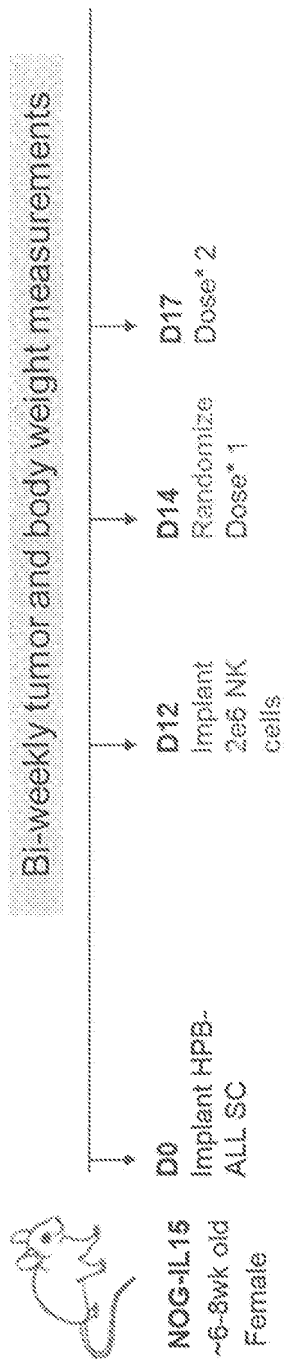


FIG. 28A



SN	Cell line	NK cells	n	Strain	Treatment	Schedule	Dose
1	5e6 HPB-ALL SC	2e6 IV	4	NOG-IL-15	PBS	Q3D x 2	NA
2	5e6 HPB-ALL SC	2e6 IV	5	NOG-IL-15	BJM1042	Q3D x 2	0.5mg/kg
3	5e6 HPB-ALL SC	2e6 IV	4	NOG-IL-15	BJM1083	Q3D x 2	0.5mg/kg
4	5e6 HPB-ALL SC	2e6 IV	4	NOG-IL-15	BJM1077	Q3D x 2	0.5mg/kg

FIG. 28B

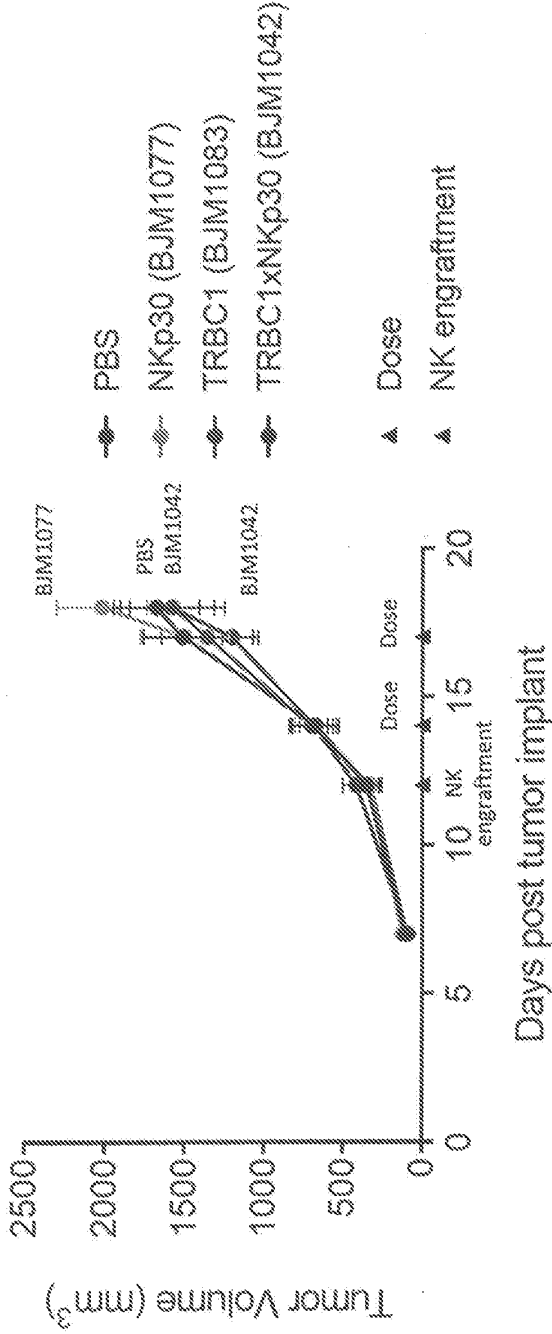


FIG. 29A

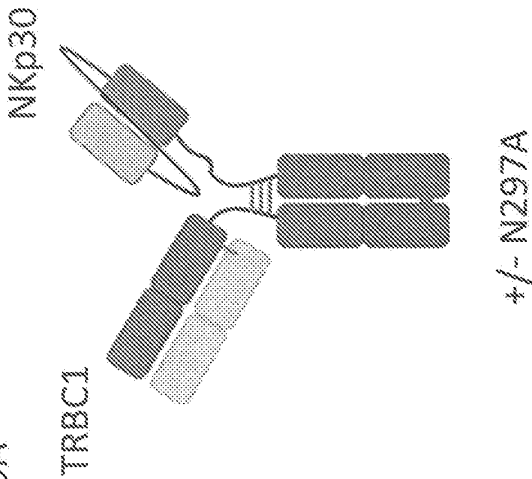


FIG. 29B

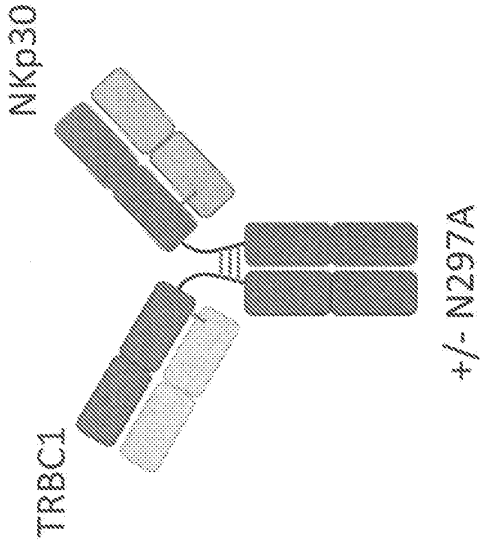


FIG. 29C

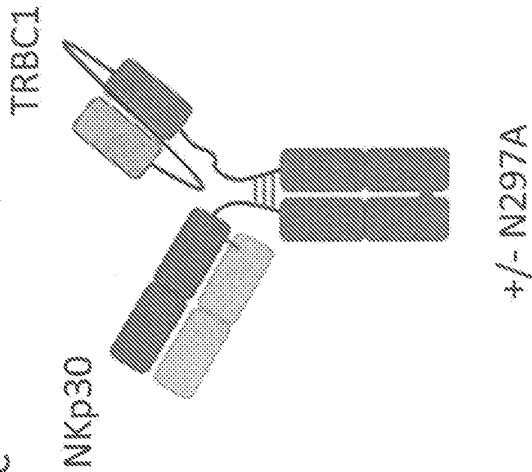


FIG. 29D

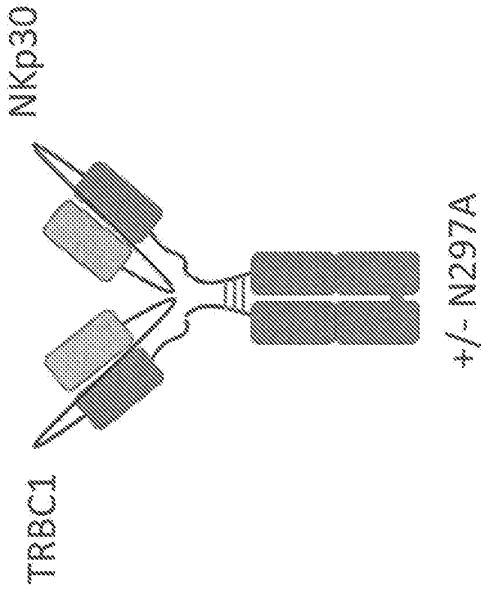


FIG. 30A

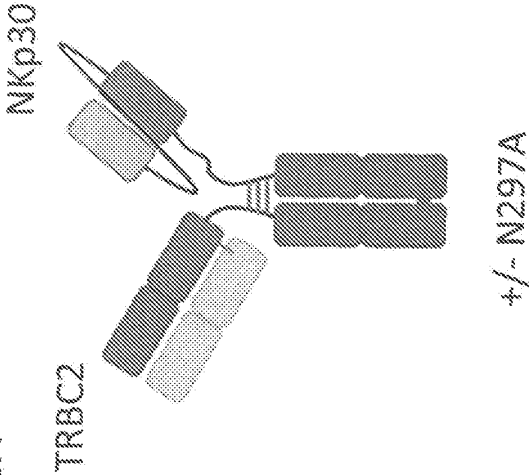


FIG. 30B

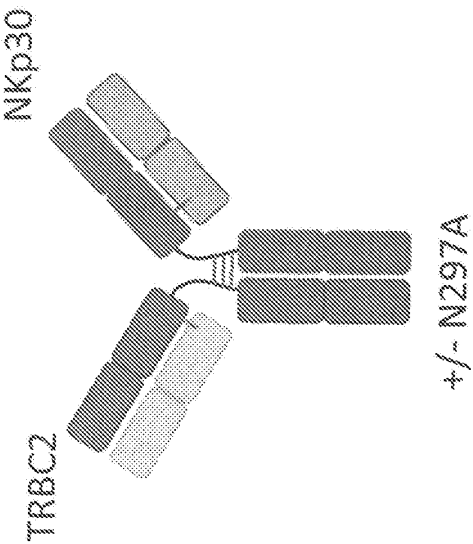


FIG. 30C

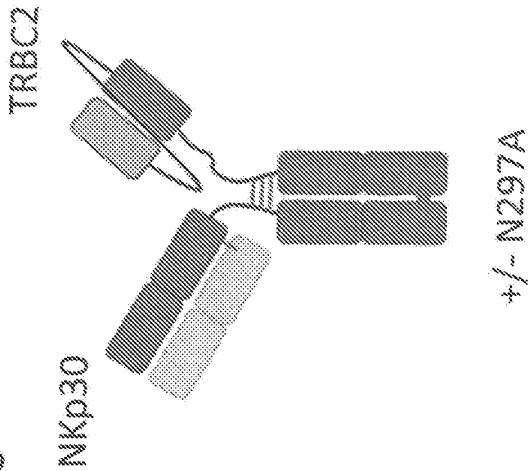


FIG. 30D

