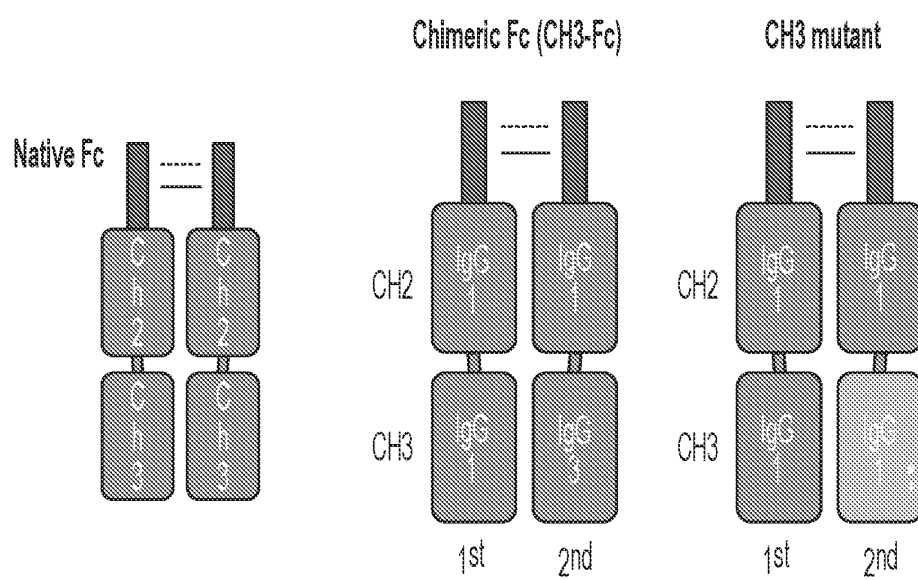


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**FIG. 1**

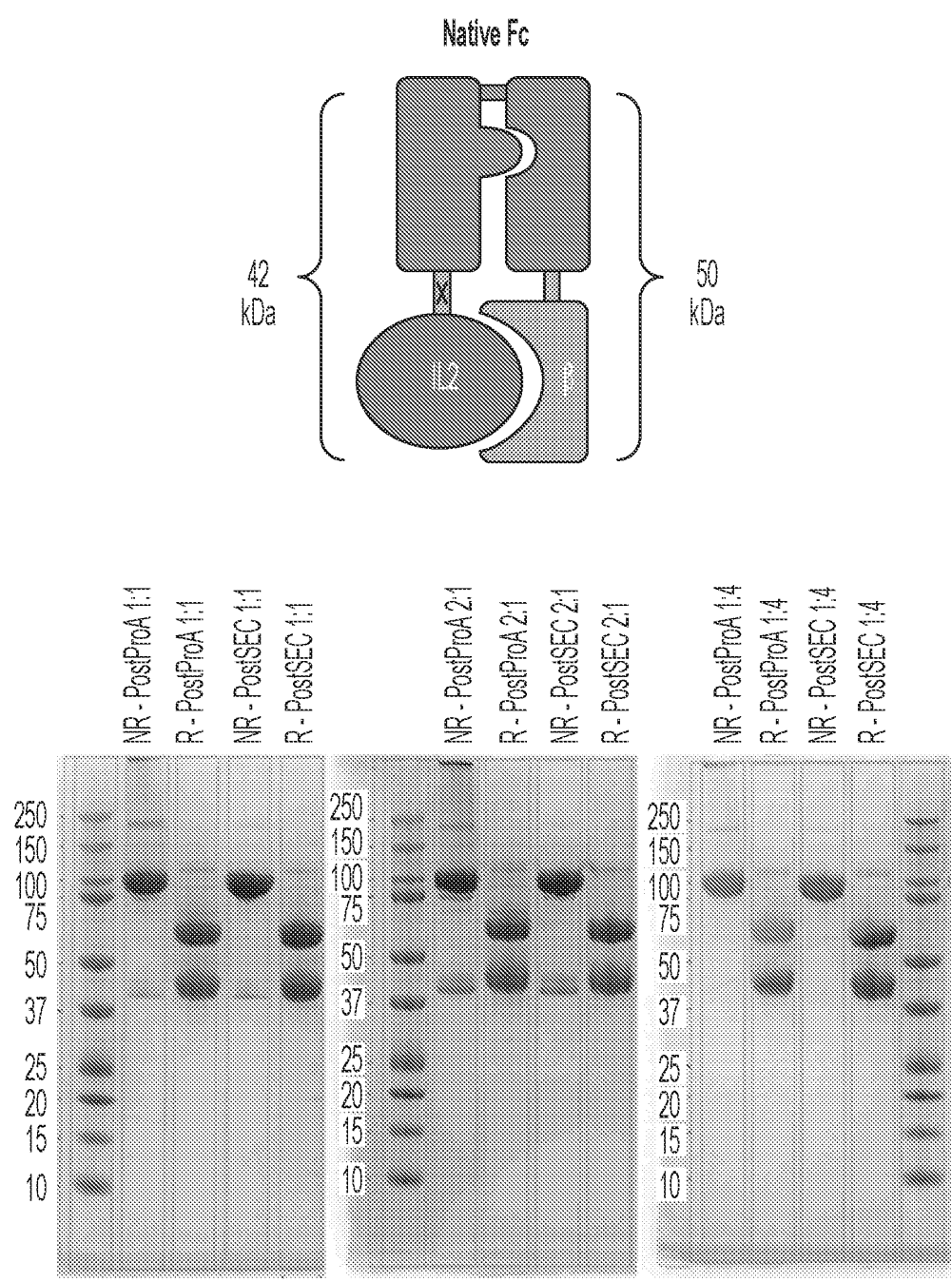


FIG. 2A

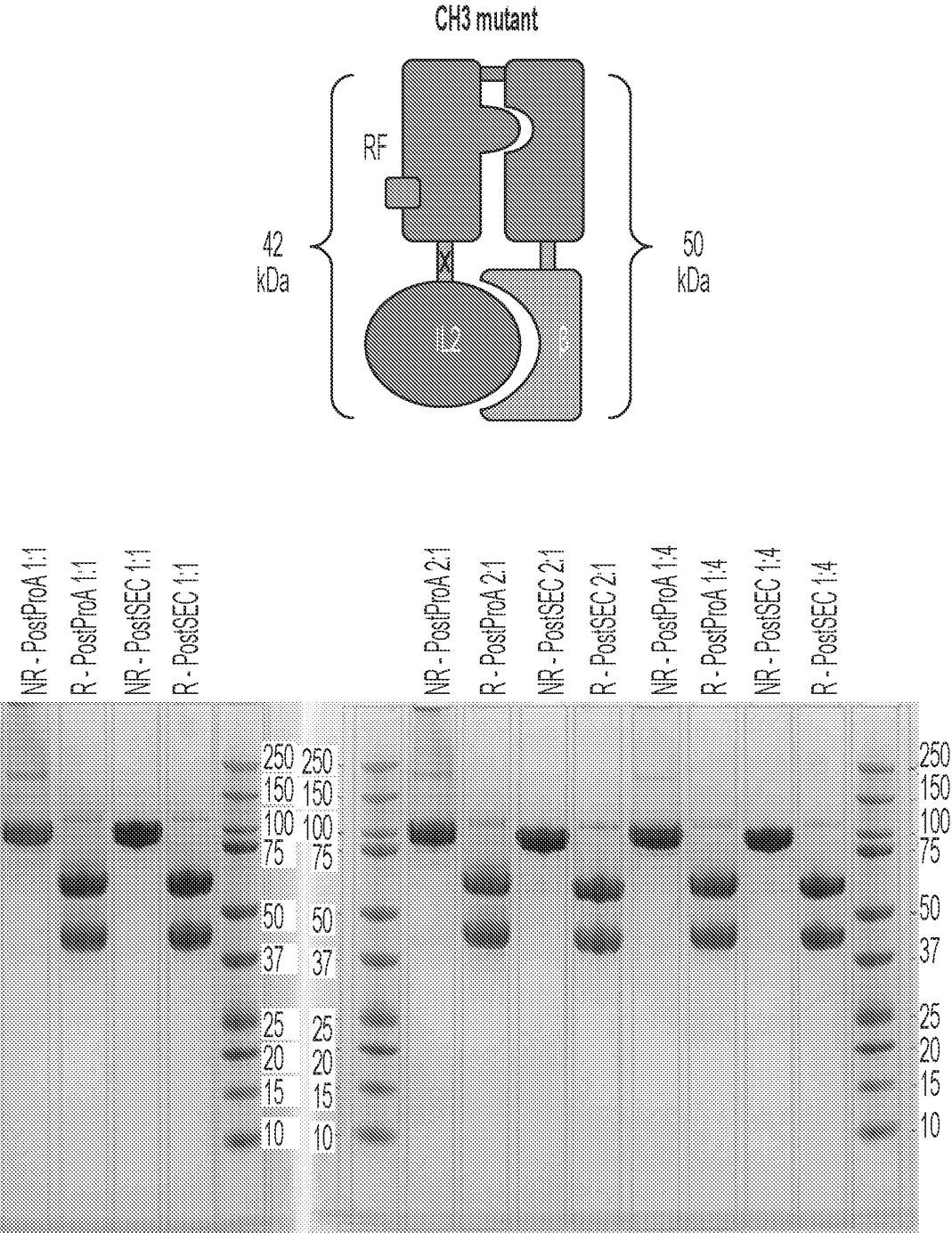


FIG. 2A
CONTINUED

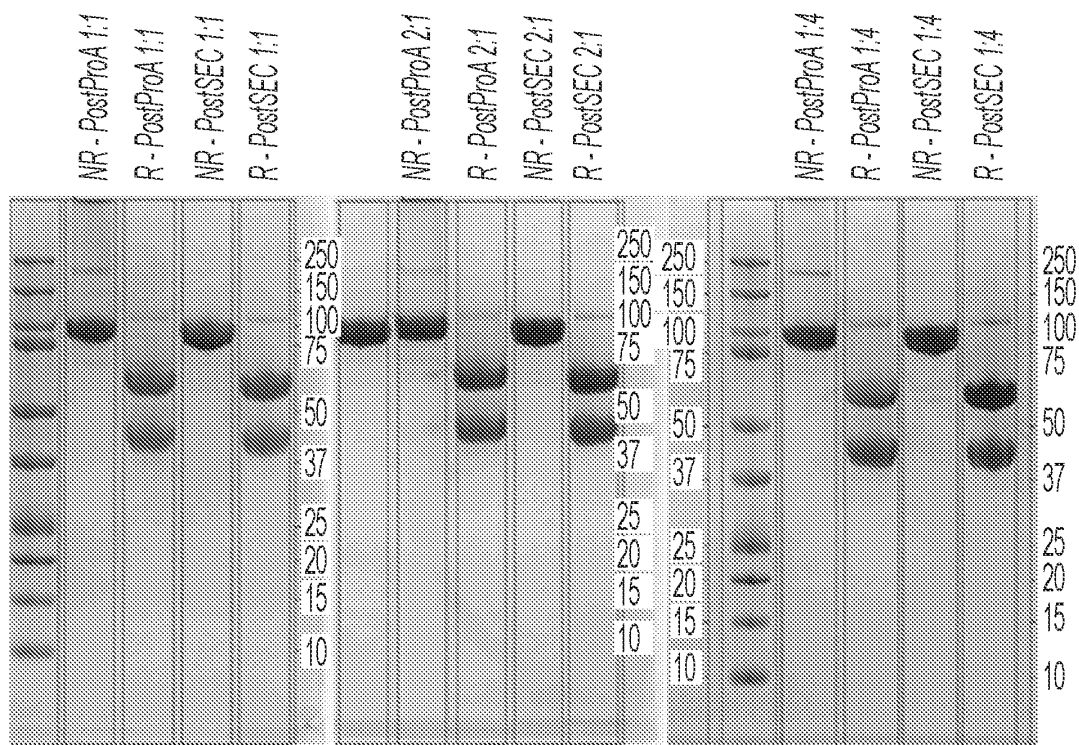
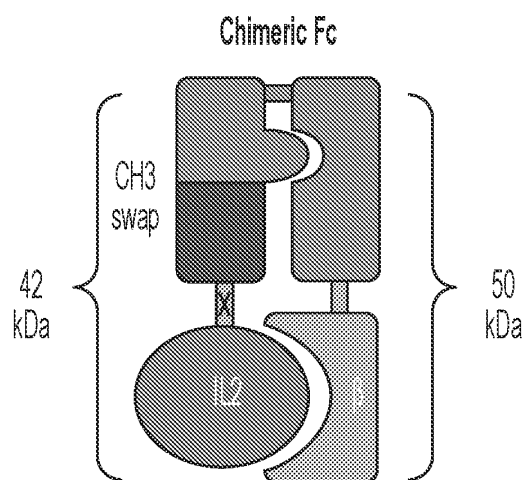


FIG. 2A
CONTINUED

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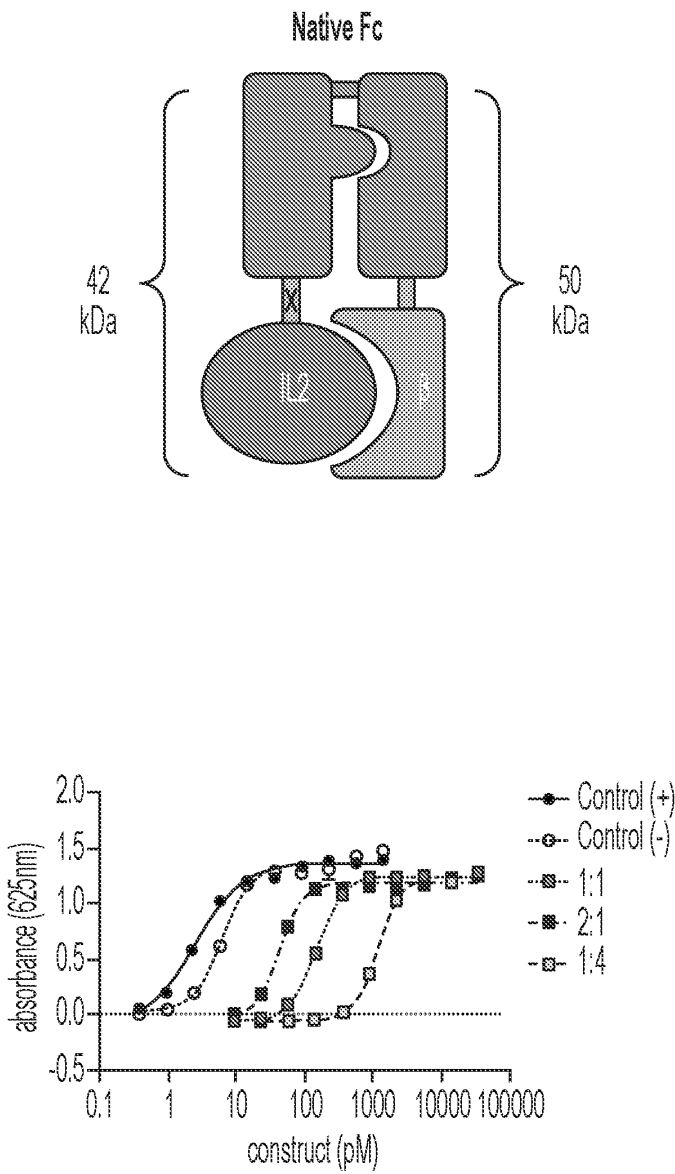


FIG. 2B

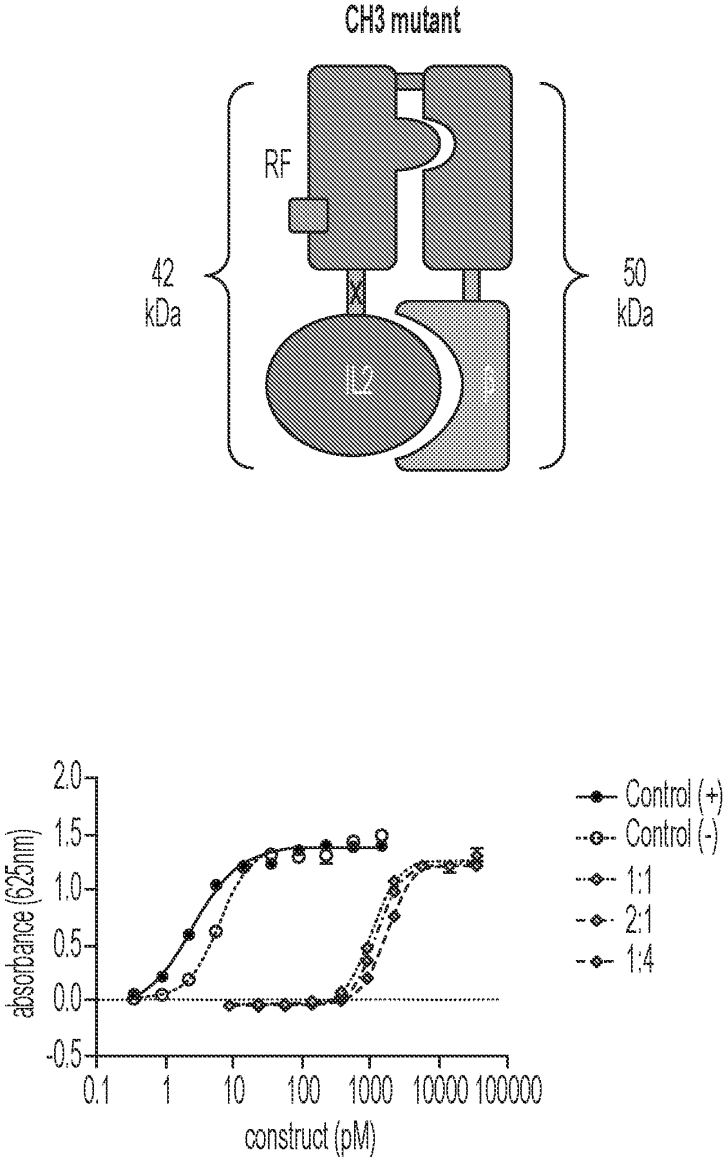


FIG. 2B
CONTINUED

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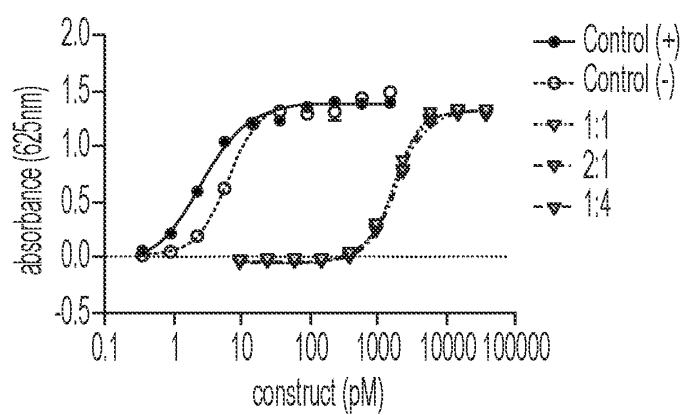
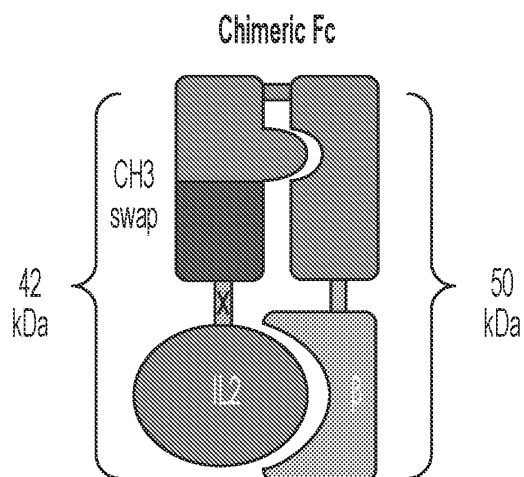
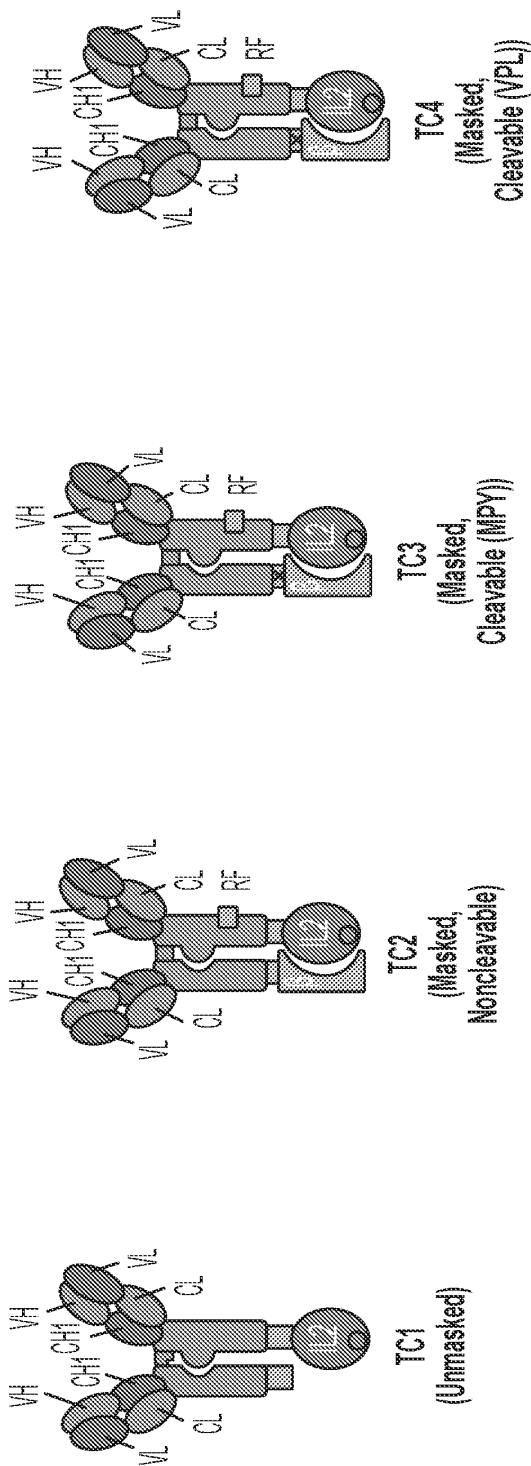


FIG. 2B
CONTINUED



Molecule	SEC	NR CE-SDS	Red CE-SDS	Knob
TC1	84.4%	94.9%	99.3%	Below LoD
TC2	99.0%	98.7%	99.6%	Below LoD
TC3	99.0%	98.8%	99.7%	Below LoD
TC4	98.9%	98.7%	99.2%	Below LoD

FIG. 3

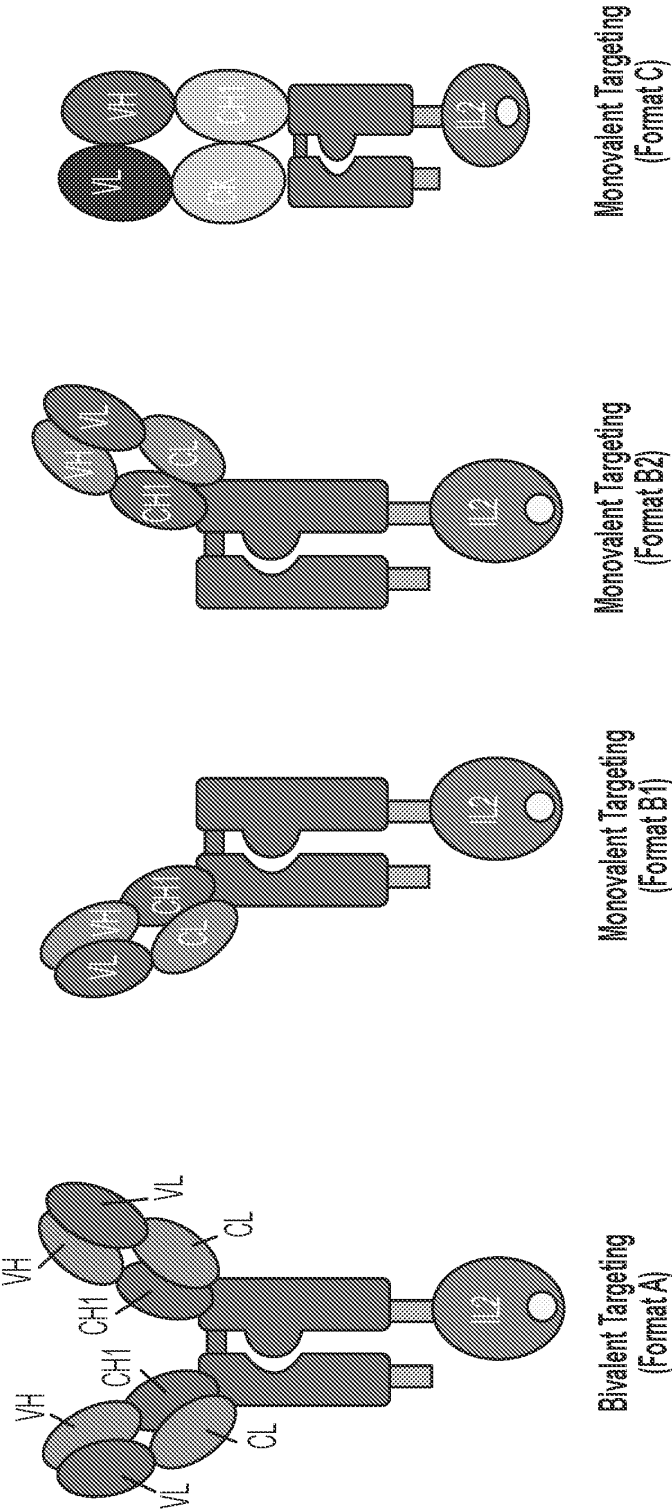
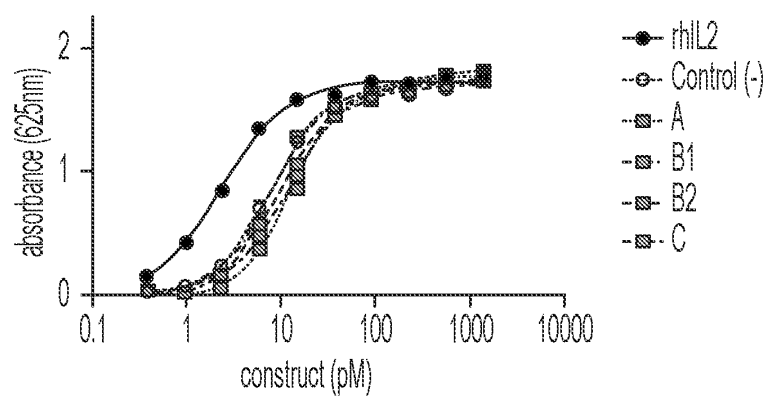


FIG. 4A

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**FIG. 4B**

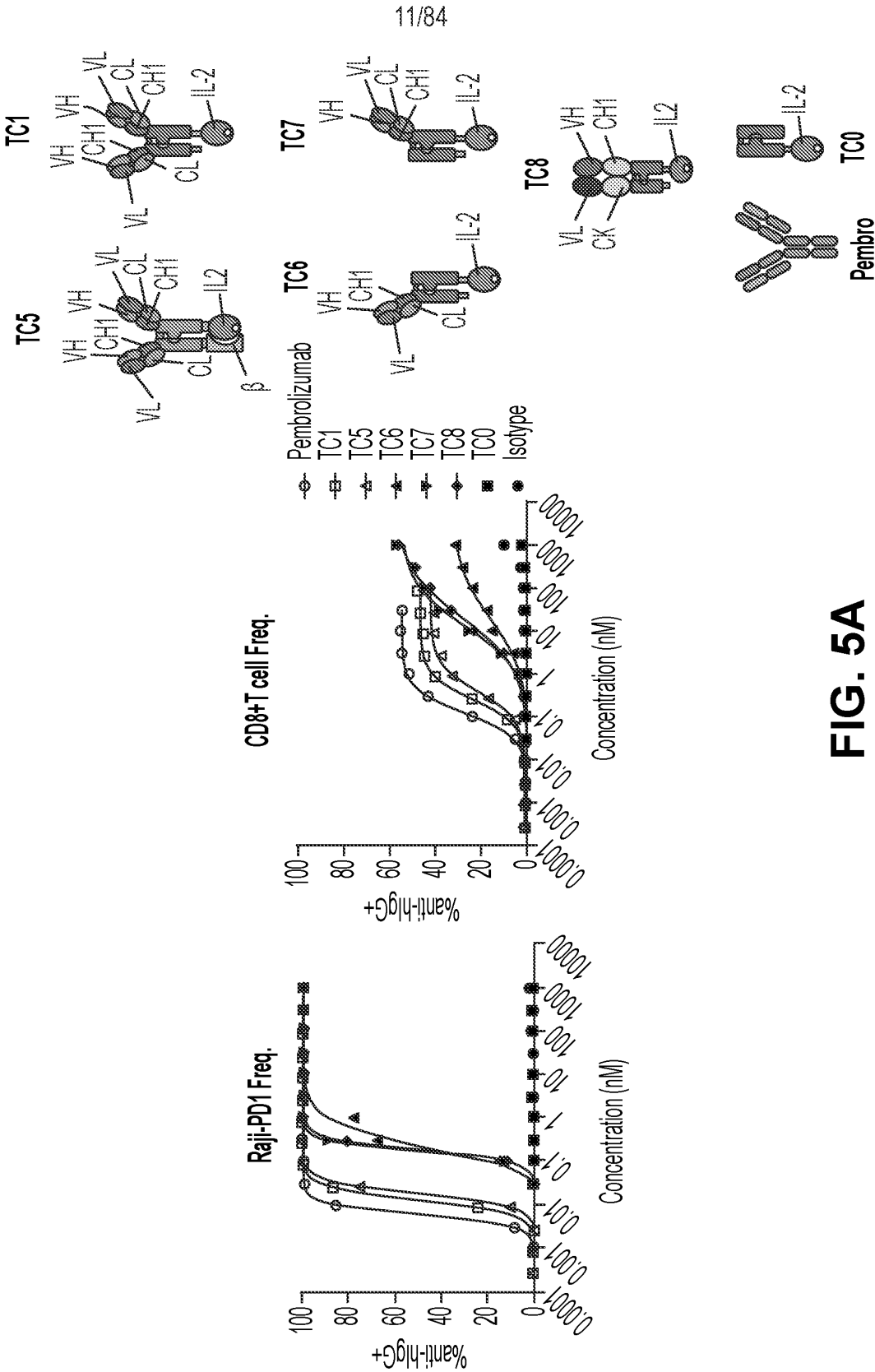


FIG. 5A

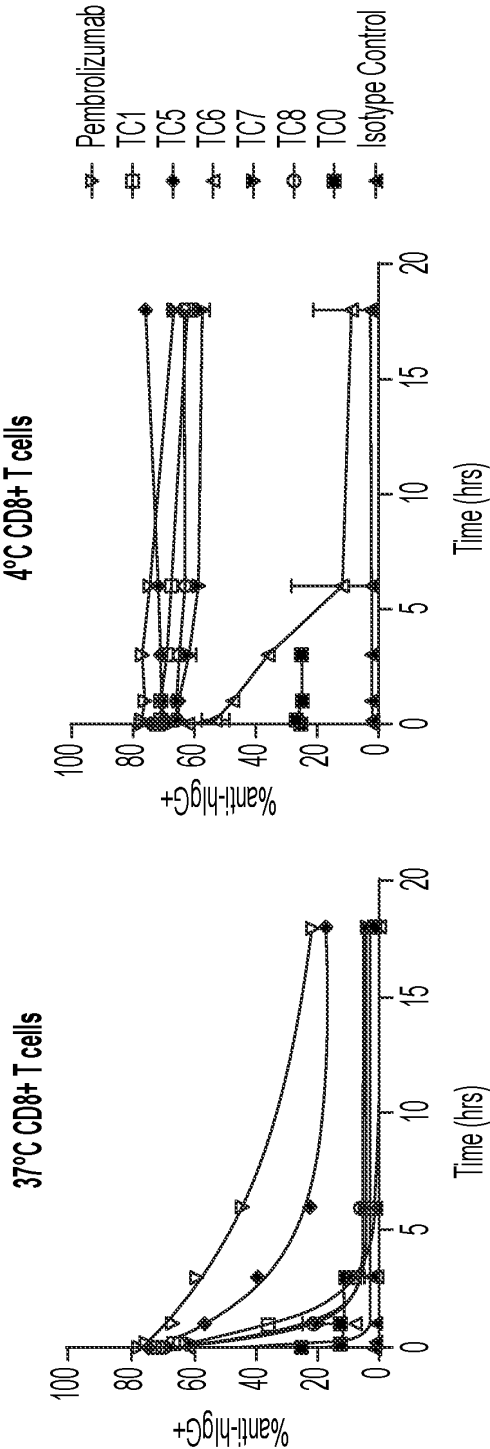


FIG. 5B

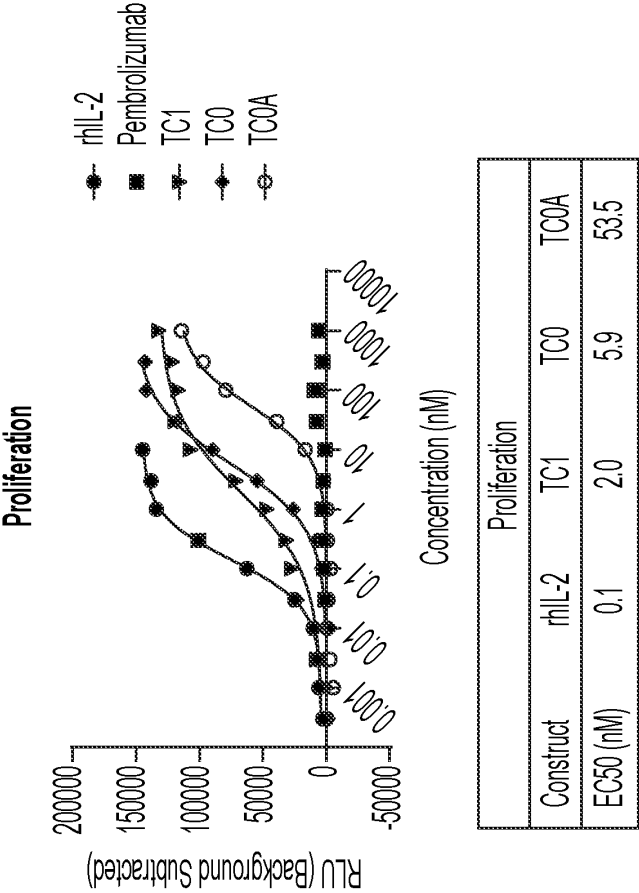


FIG. 5C

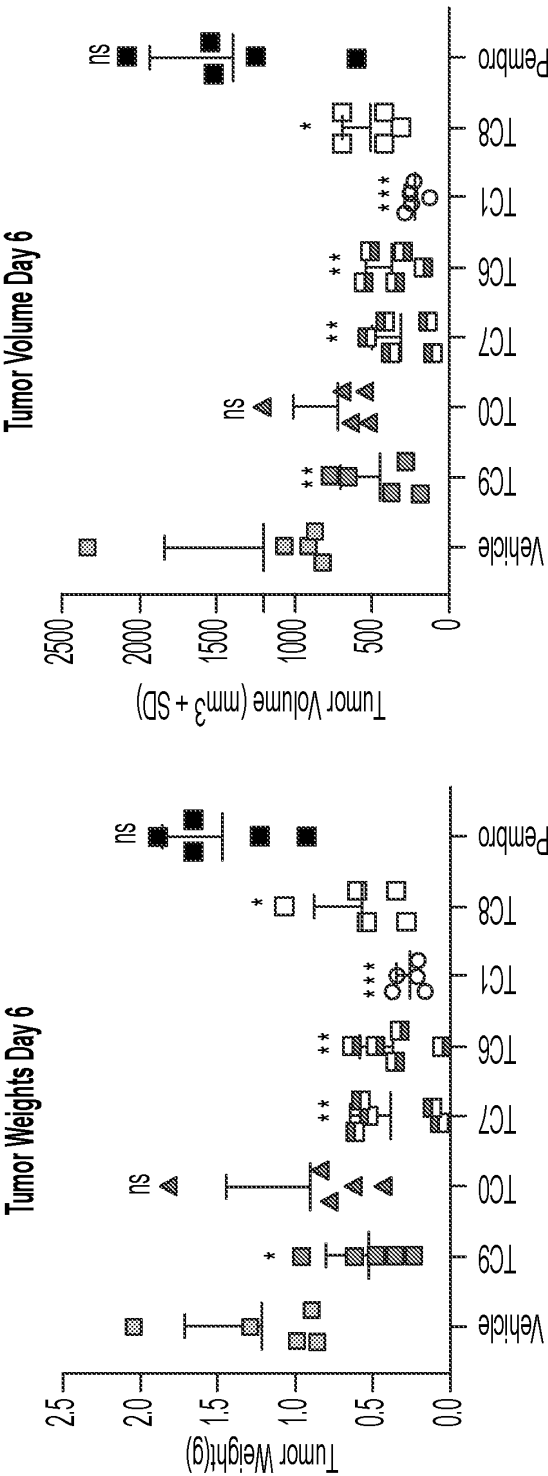


FIG. 6A

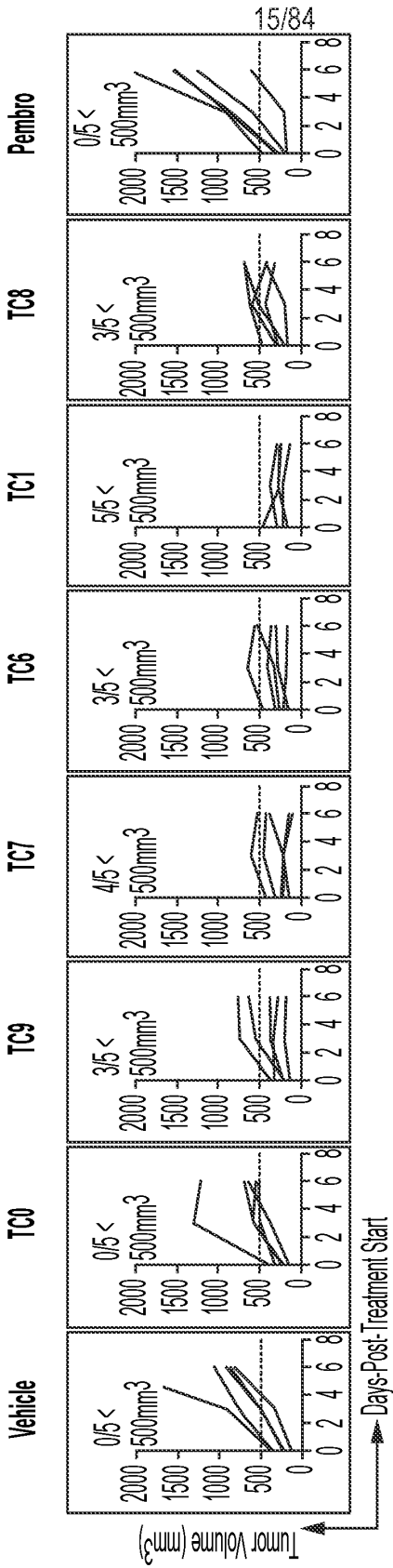


FIG. 6A
CONTINUED

FIG. 6B

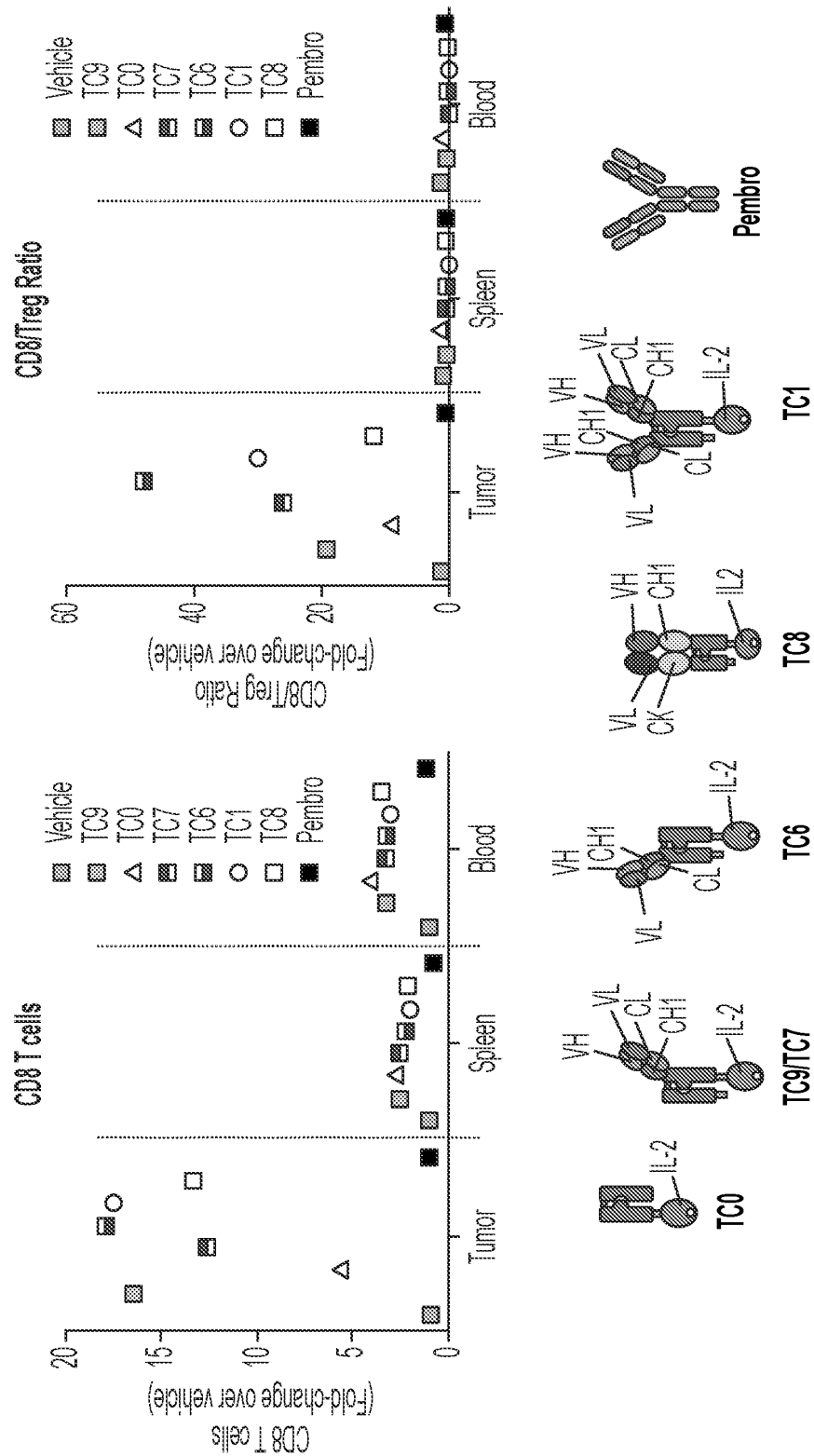


FIG. 6C

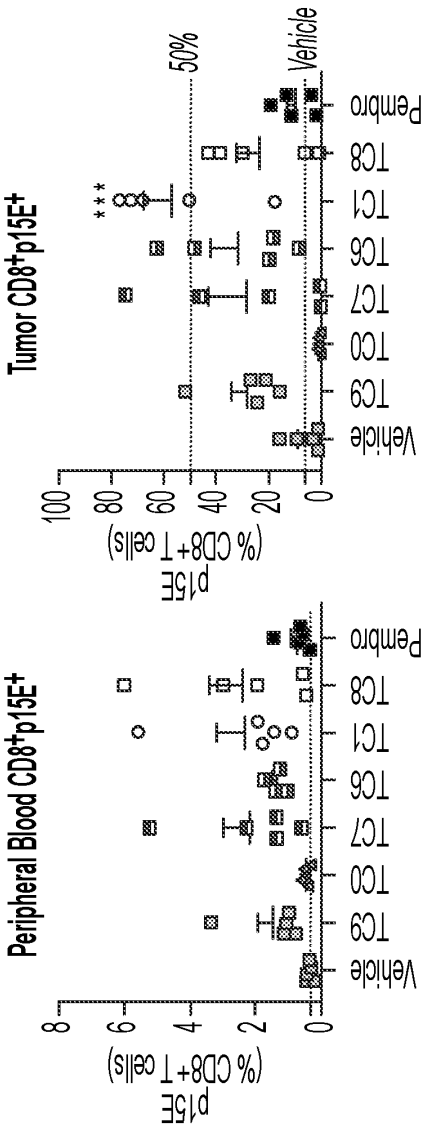


FIG. 6D

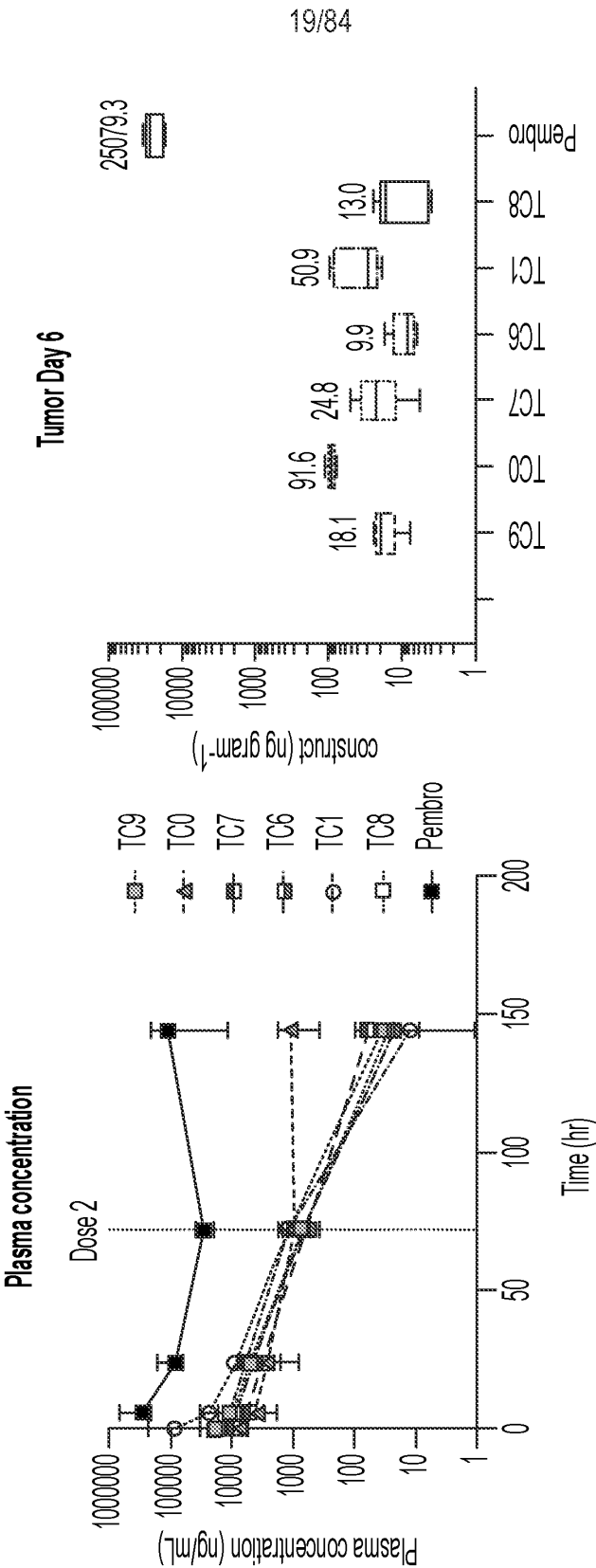


FIG. 6E

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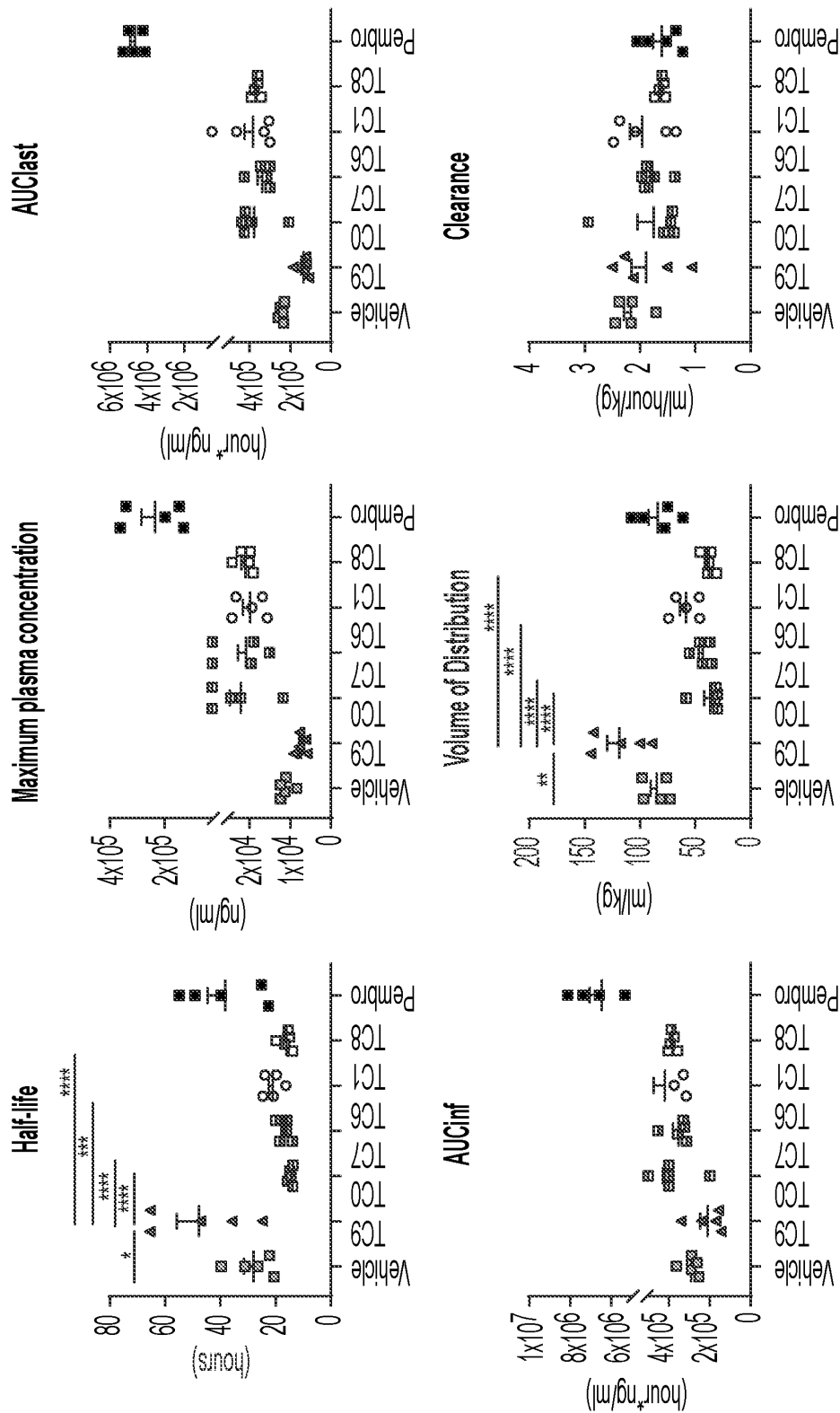


FIG. 6F

Ligand	capture level (RU)	Sample	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Chi2 (RU2)
TC3	78.1	hPD1-his	4.61E+05	3.28E-03	7.11E-09	15.4	0.0504
TC4	74.3	hPD1-his	4.65E+05	3.06E-03	6.58E-09	15	0.0437
TC2	88.4	hPD1-his	4.70E+05	3.09E-03	6.57E-09	17.8	0.0578
TC1	83	hPD1-his	4.53E+05	3.08E-03	6.79E-09	18.5	0.0791
Pembro	84	hPD1-his	3.99E+05	3.14E-03	7.86E-09	20.3	0.0959
huPD1-hFc	53.4	hPD1-mFc	3.38E+05	2.50E-02	7.41E-08	12.2	0.107

FIG. 7A

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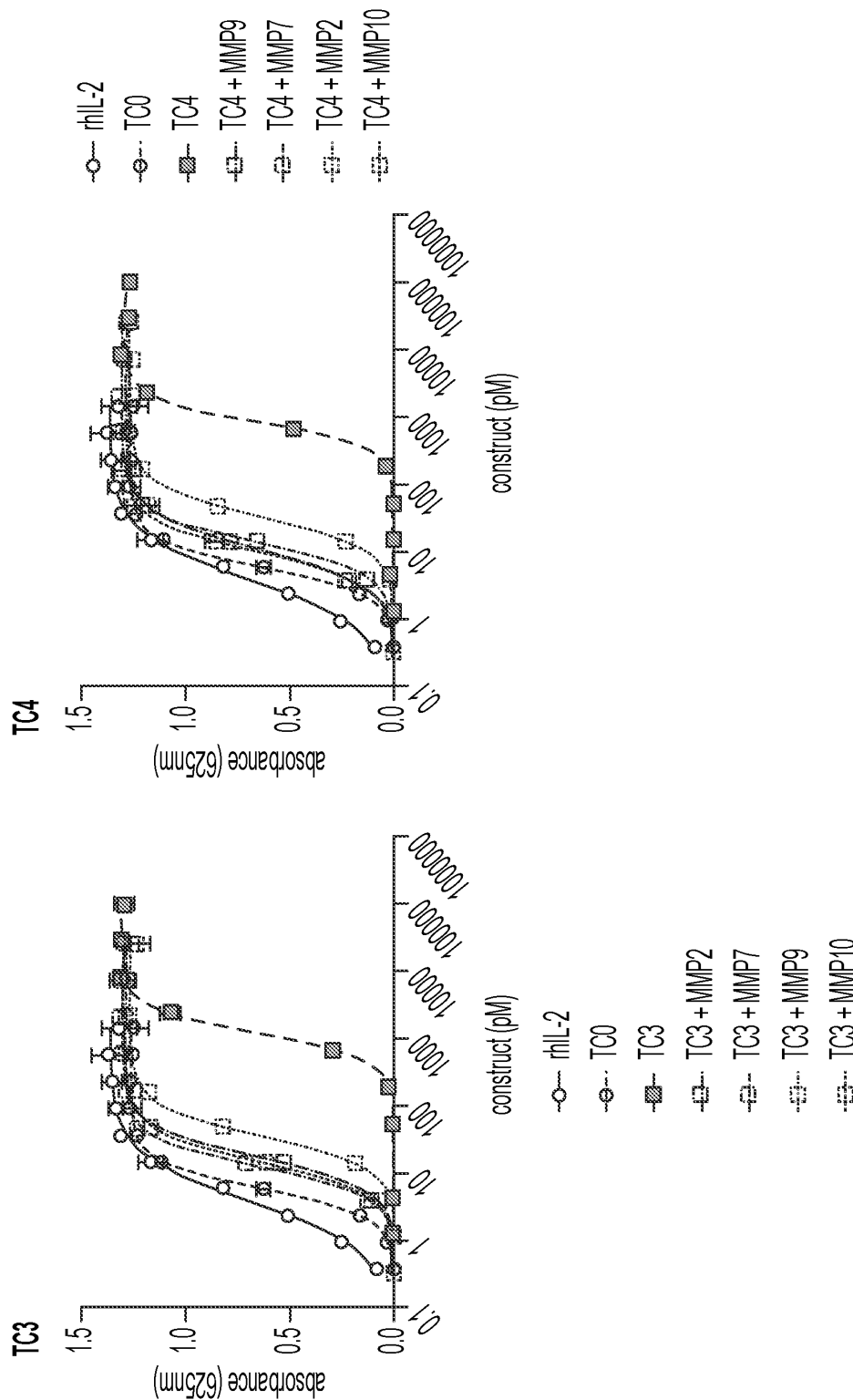


FIG. 7B

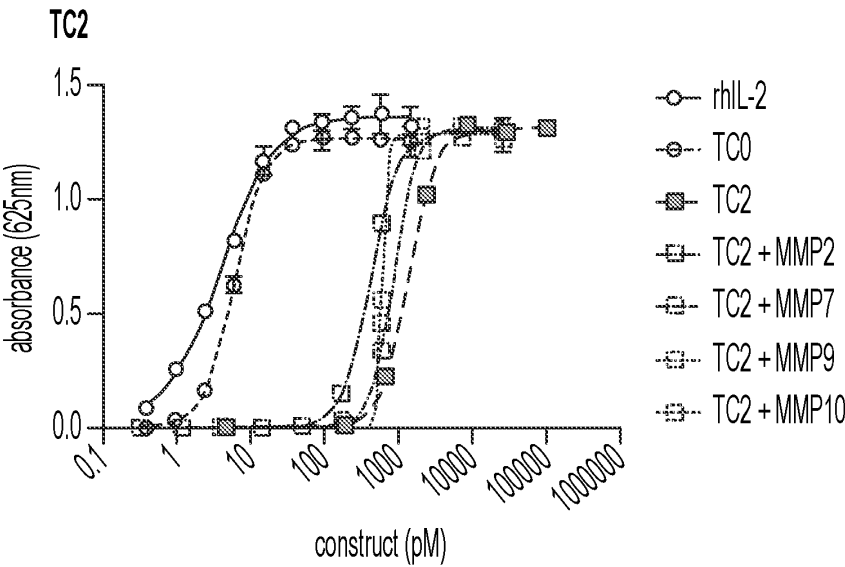
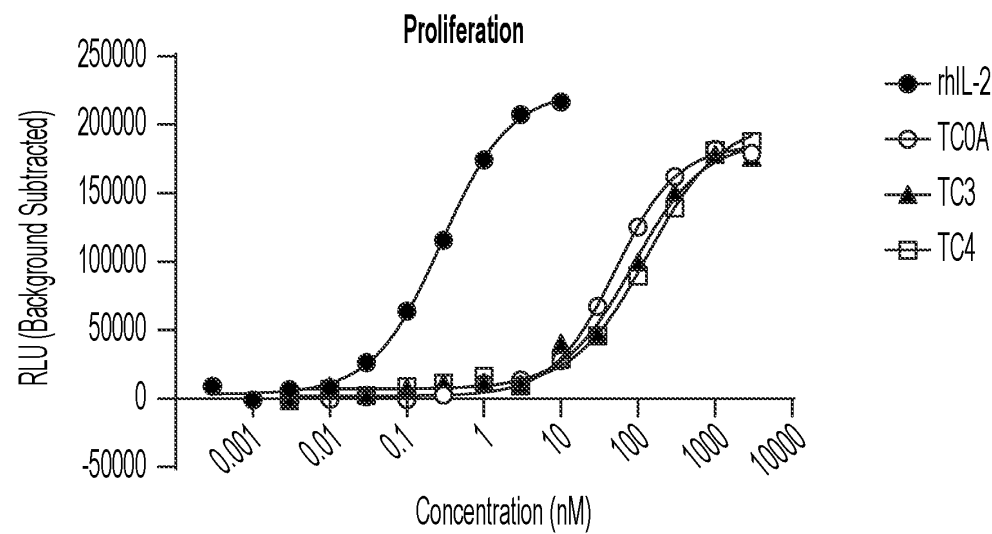
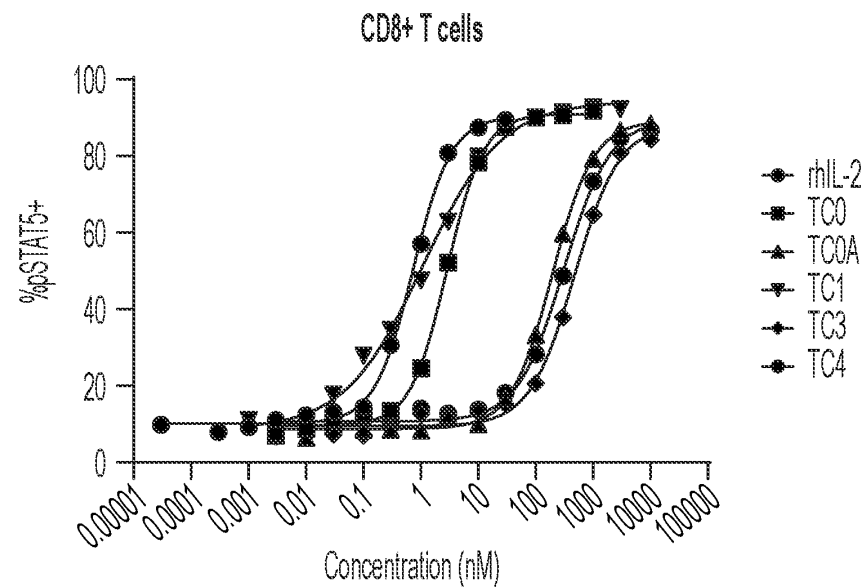


FIG. 7B
CONTINUED



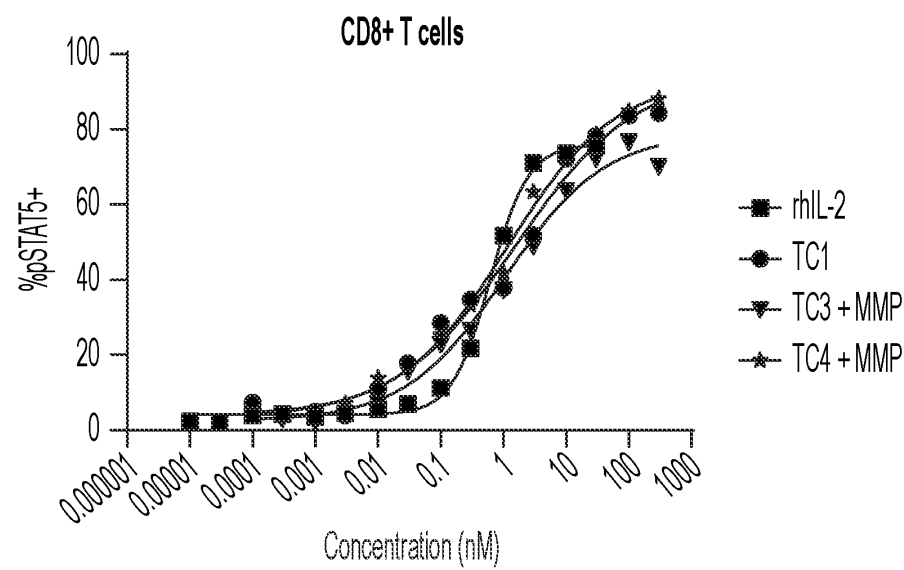
Proliferation				
Construct	rhIL-2	TC0A	TC3	TC4
EC50 (nM)	0.3	50.9	87.0	134.1

FIG. 7C



CD8+ T cells						
Construct	rhIL-2	TC0	TC0A	TC1	TC3	TC4
EC50 (nM)	0.7	2.9	194.4	1.1	475.7	306.5

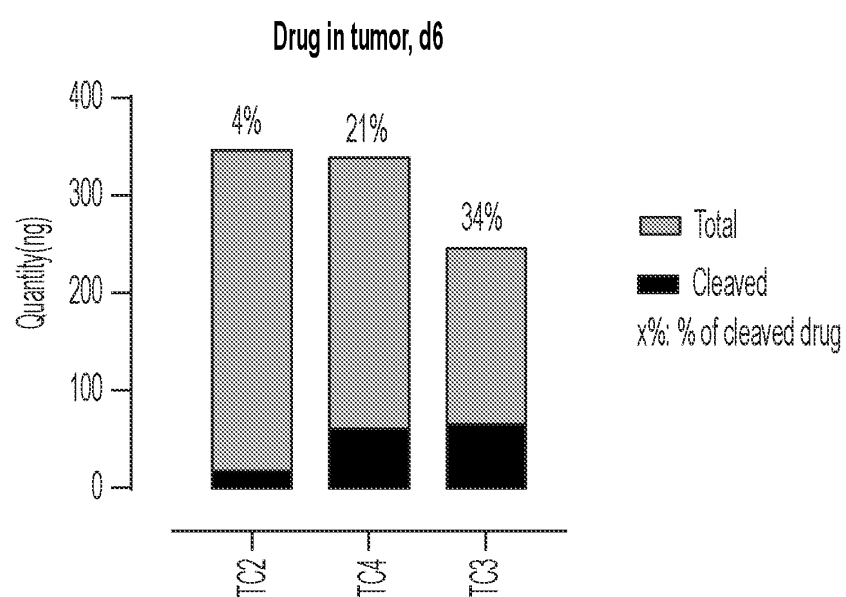
FIG. 7D



CD8+T cells				
Construct	rhIL-2	TC1	TC3 + MMP	TC4 + MMP
EC50 (nM)	0.6	1.5	1.1	1.2

FIG. 7E

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**FIG. 8A**

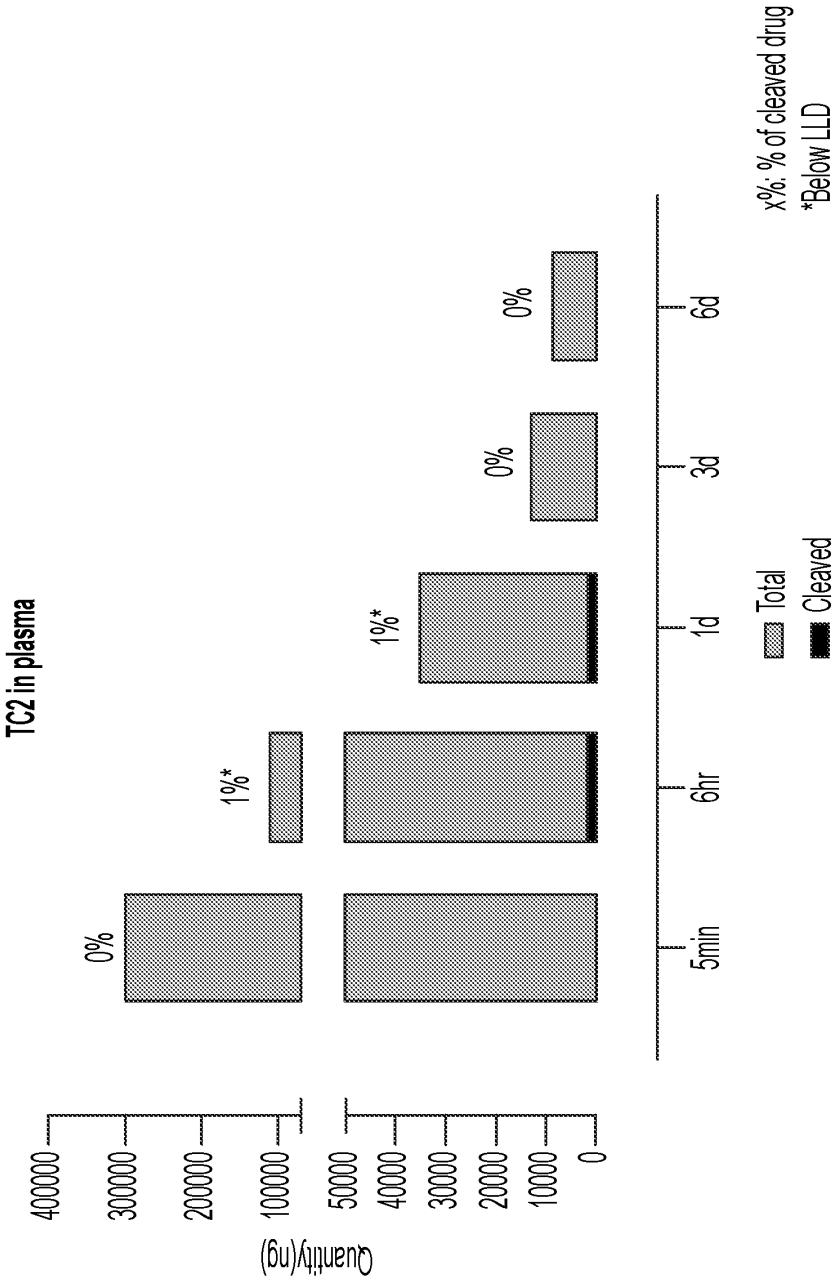


FIG. 8B

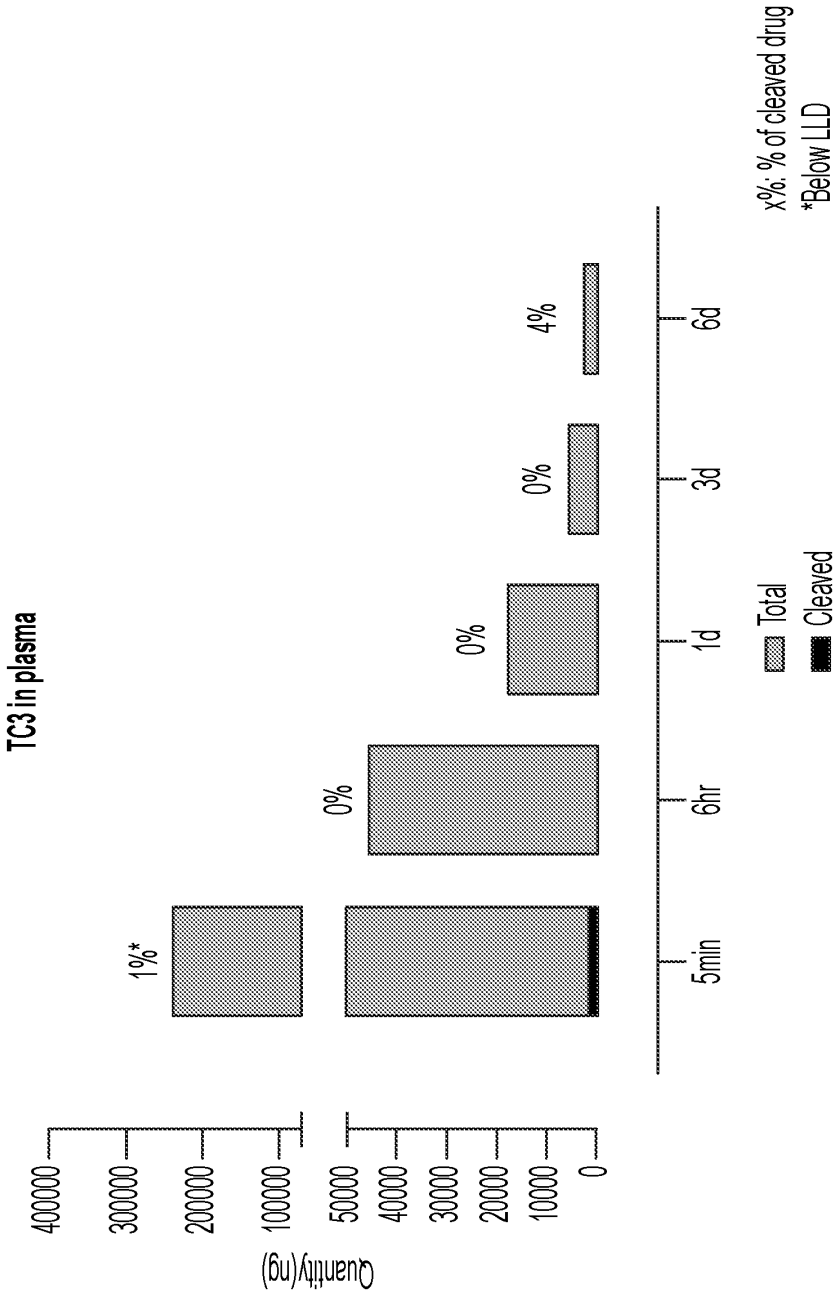


FIG. 8B
CONTINUED

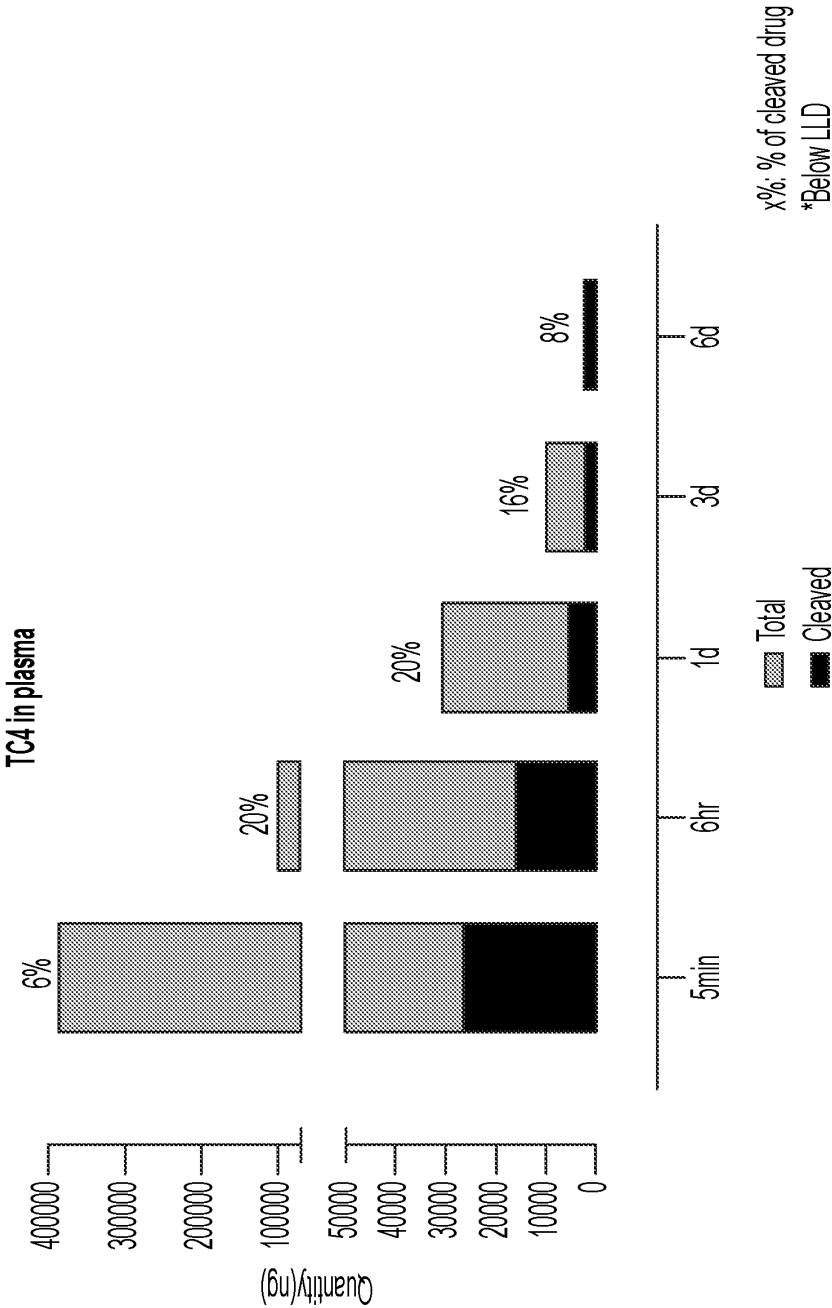


FIG. 8B
CONTINUED

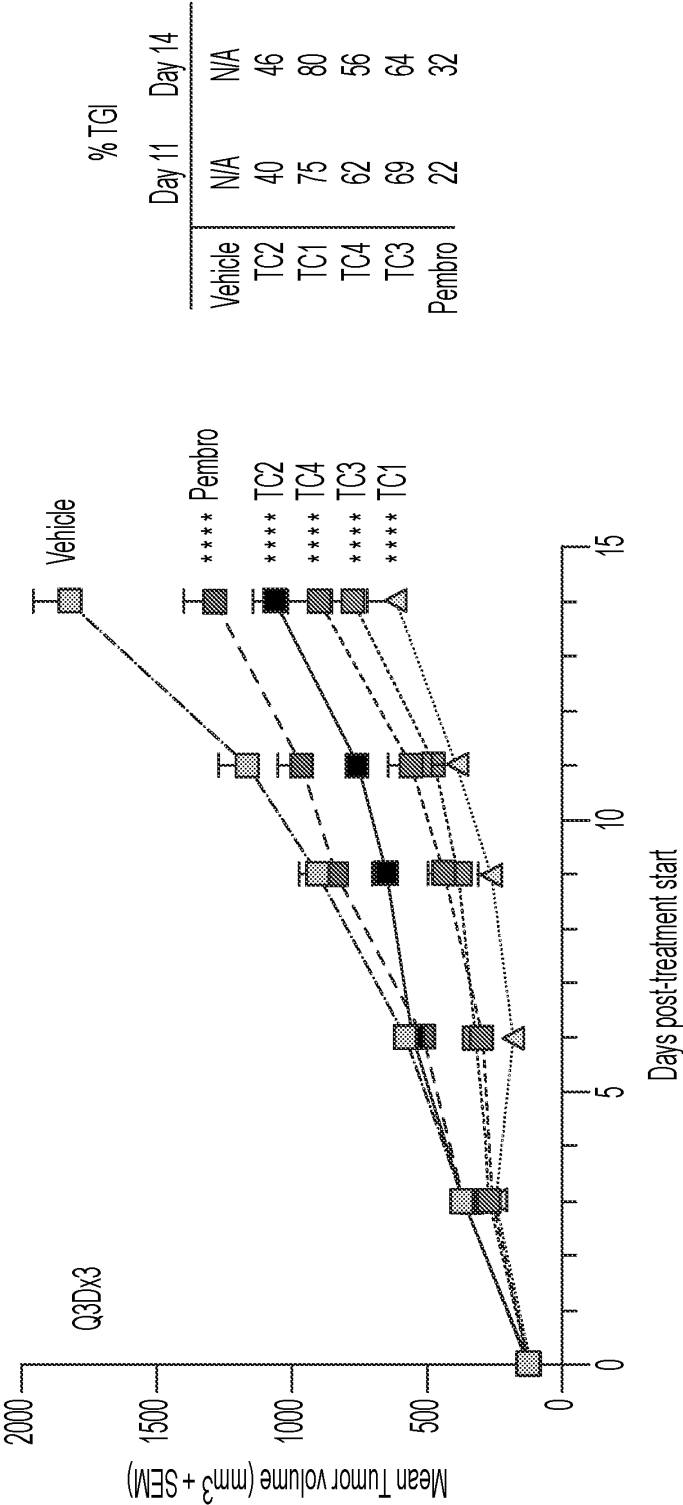


FIG. 9A

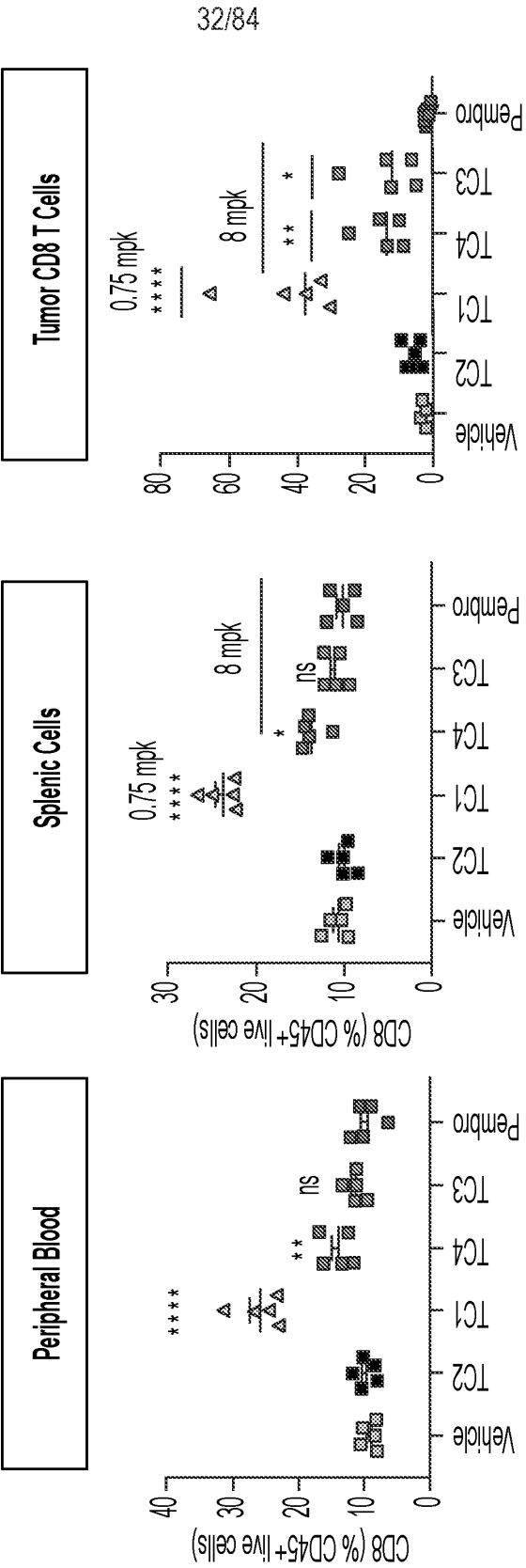


FIG. 9B

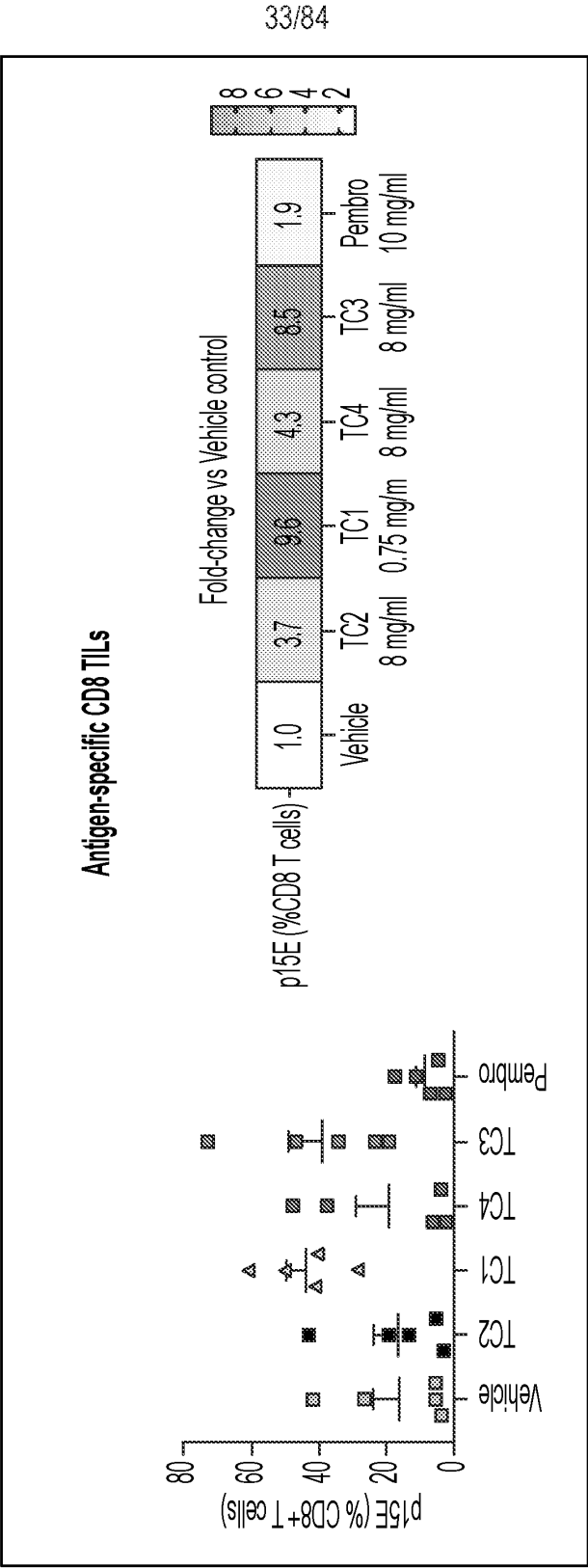


FIG. 9C

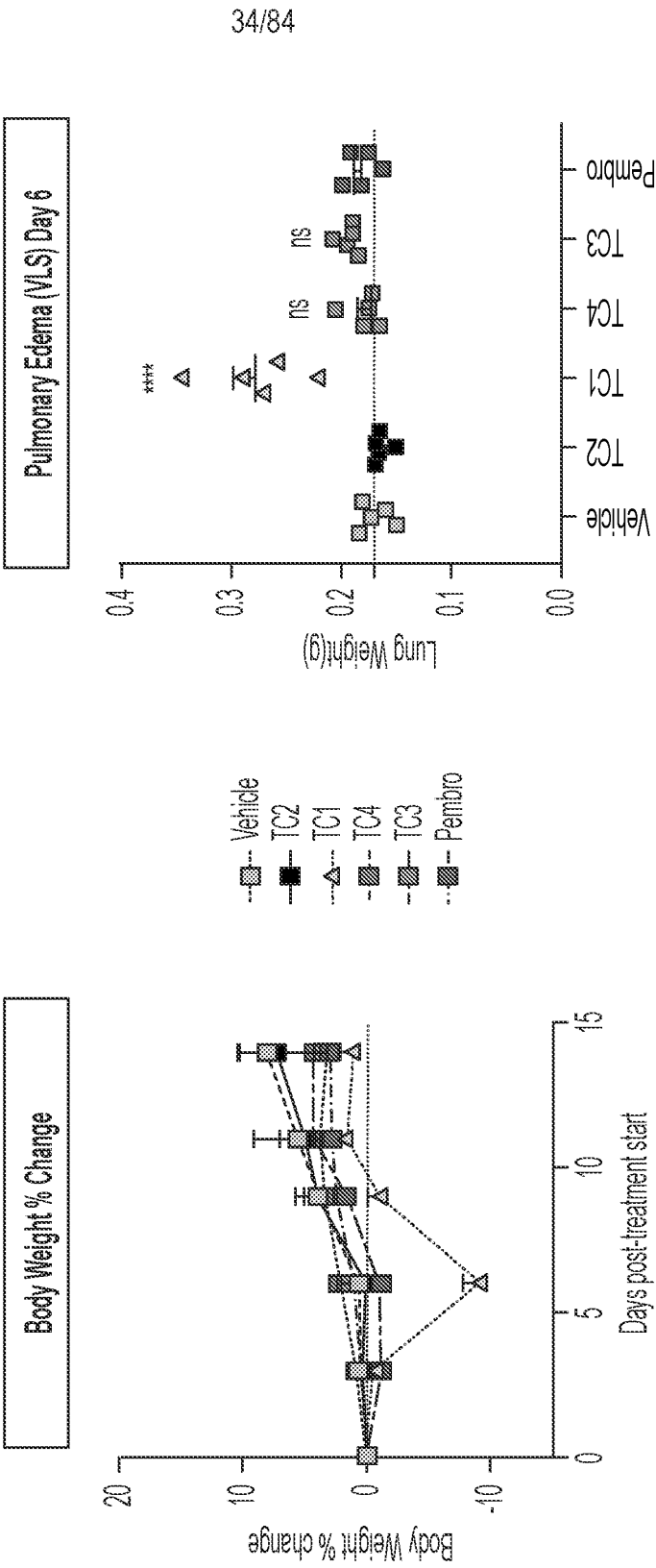


FIG. 9D

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Std Path		Titer (mg/L)	Prot A Yield (0.5L)	SEC-HPLC(%)	2nd step (SEC)		Caliper-SDS
					Final yield	HPLC-SEC	
TC3	MPY_00	76	14.64	98.9	9.16	99.7	98.3
TC13	MPY_02	75	14.87	98.8	4.00	98.8	98
TC14	MPY_03	79	15.77	98.3	9.17	99.7	98.4
TC15	MPY_04	88	25.92	96.2	17.00	98.5	98.3
TC16	MPY_05	103	31.63	91.4	18.88	98.6	98.8
TC17	MPY_06	94	30.15	90.7	17.00	99.6	98.6
TC18	MPY_07	103	31.06	90.5	20.22	99.6	98.6
TC19	MPY_08	91	27.33	93.1	17.02	98.6	98.4
TC4	VPL_00	118	30.25	96.1	21.66	98.8	98.5
TC21	VPL_02	108	27.46	95.8	18.05	99.7	98.8
TC22	VPL_03	86	19.83	96.1	11.81	99.7	98.4
TC23	VPL_04	77	17.56	96.1	9.10	99.7	98.8
TC24	VPL_05	141	36.6	97.5	23.70	99.7	98.4
TC25	VPL_06	135	40.25	96.7	24.05	99.1	98.8
TC26	VPL_07	142	43.33	94	26.00	99.5	98.5
TC27	VPL_08 (MPY)	123	37.73	88.6	23.63	99.2	98.7
TC28	NC	77	20.56	93.5	9.1	98.5	98.9
TC29	Parental	82	22.47	98.5	12.8	98.4	98.4

FIG. 10A

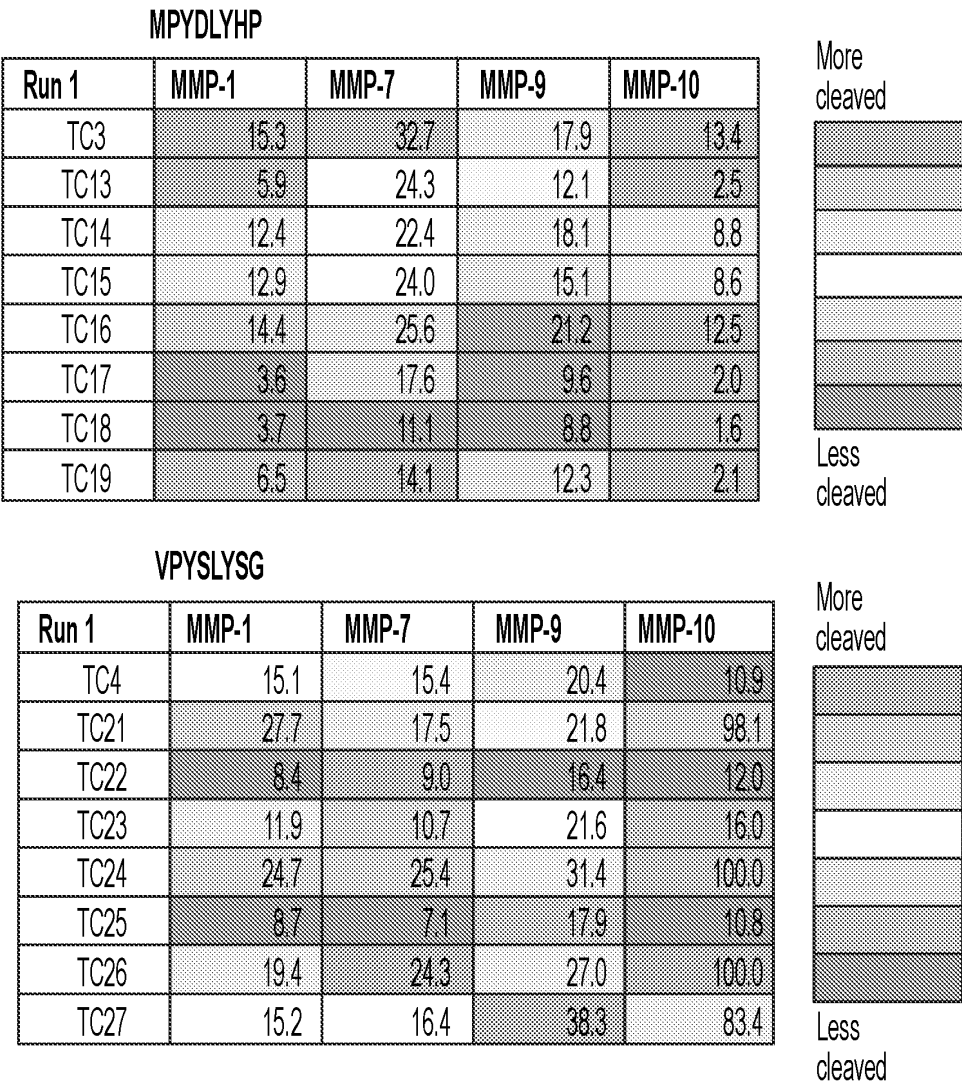


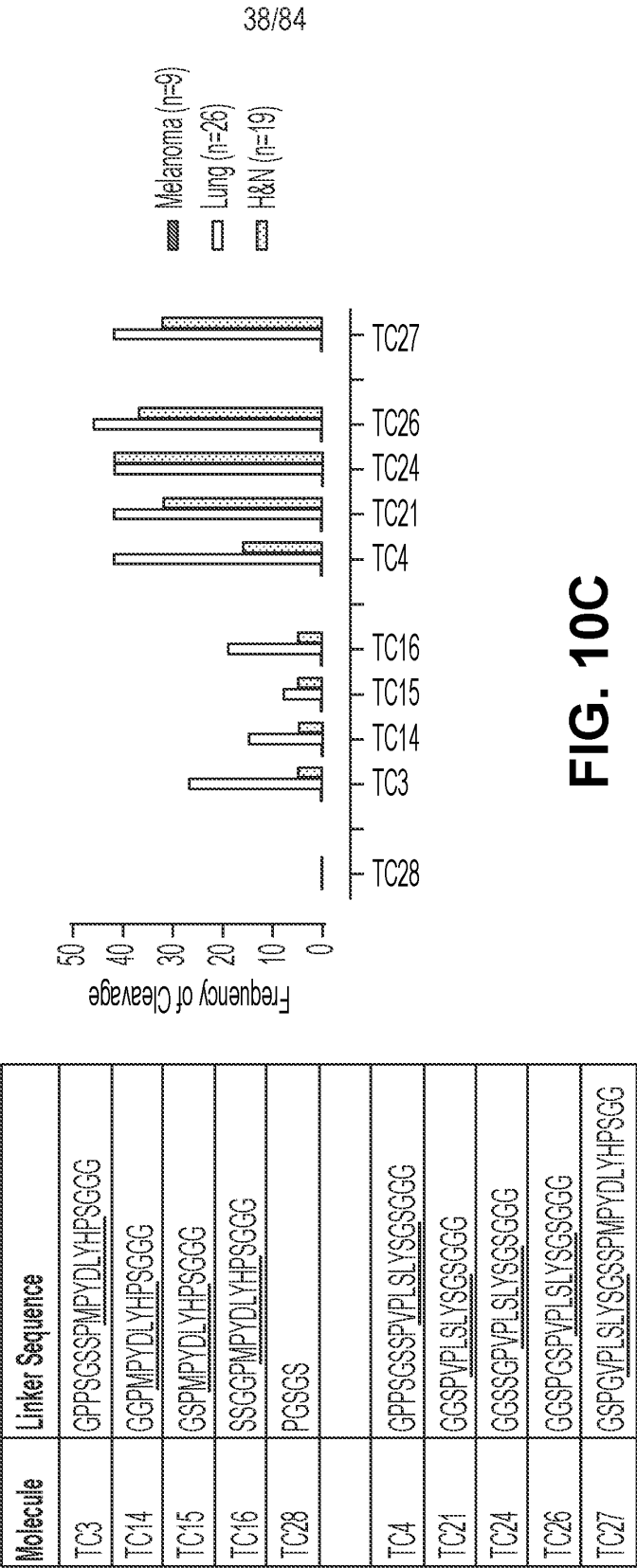
FIG. 10B

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Run 2	MMP-1	MMP-7	MMP-9	MMP-10
TC3	12.9	4.4	12.8	12.8
TC13	7.2	4.6	7.2	3.2
TC14	18.9	4.7	14.6	12.0
TC15	18.8	4.2	12.3	10.7
TC16	11.8	4.7	16.7	12.1
TC17	4.5	3.1	7.7	2.2
TC18	2.5	2.1	7.0	2.1
TC19	5.7	2.5	7.7	1.9

Run 2	MMP-1	MMP-7	MMP-9	MMP-10
TC4	9.0	5.2	37.1	10.6
TC21	16.4	5.8	46.3	100.0
TC22	5.5	3.6	33.7	10.6
TC23	7.7	3.0	36.5	13.2
TC24	18.9	7.0	58.5	100.0
TC25	5.8	2.8	26.6	11.4
TC26	16.6	5.2	39.6	100.0
TC27	8.4	3.8	53.9	81.2

FIG. 10B
CONTINUED



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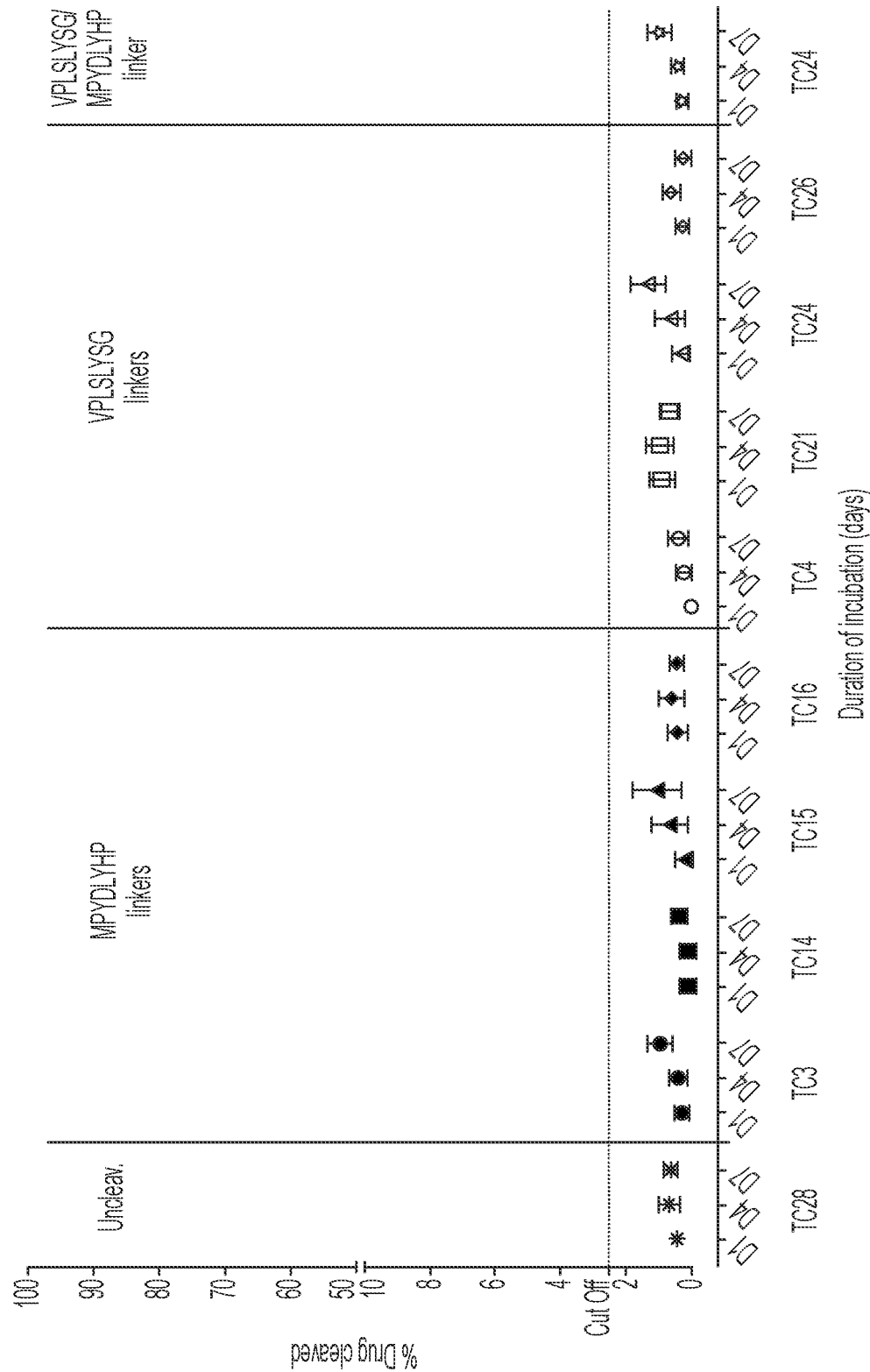
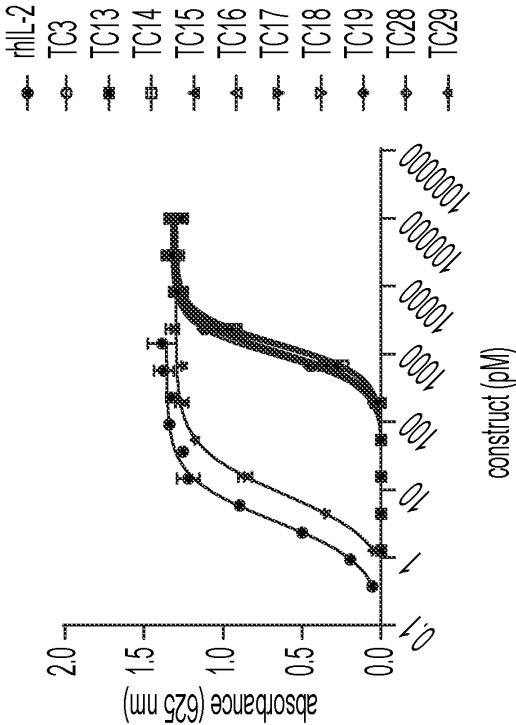


FIG. 10D

	EC50 (pM)	Fold-Change (Against rhIL-2)	Fold-Masking (Against TC29)
rhIL-2	3.43		
TC3	1317	384.0	155.1
TC13	1324	386.0	156.0
TC14	1464	426.8	172.5
TC15	1130	329.4	133.1
TC16	1112	324.2	131.0
TC17	1010	294.5	119.0
TC18	1084	316.0	127.7
TC19	921.9	268.8	108.6
TC28	1045	304.7	123.1
TC29	8.489	2.5	1.0

FIG. 11A



	EC50 (pM)	Fold-Change (Against rhIL-2)	Fold-Masking (Against TC29)
rhIL-2	3.43		
TC4	744.8	217.1	87.7
TC21	1145	333.8	134.9
TC22	1350	393.6	159.0
TC23	877.3	255.8	103.3
TC24	1287	375.2	151.6
TC25	1230	358.6	144.9
TC26	957.1	279.0	112.7
TC27	880.9	256.8	103.8
TC28	1045	304.7	123.1
TC29	8489	2.5	1.0

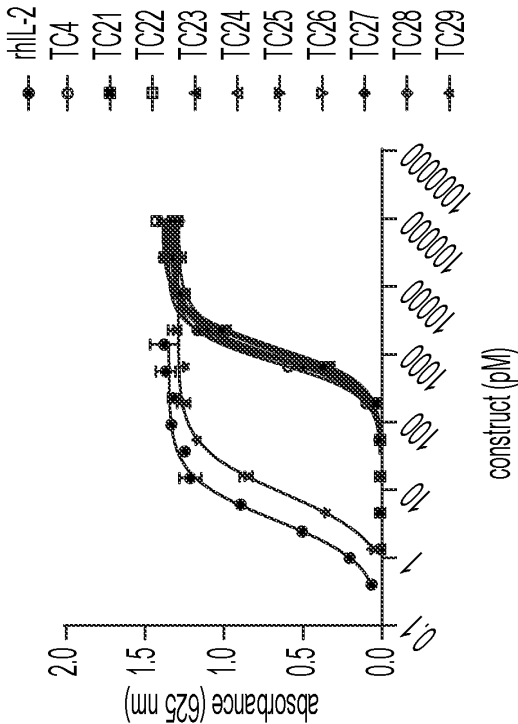


FIG. 11B

	EC ₅₀ (pM)	Fold-Change (Against rhIL-2)	Fold-Masking (Against TC29)
rhIL-2	3.43		
TC3 + MMP	5.772	1.7	0.5
TC13 + MMP	7.211	2.1	0.6
TC14 + MMP	7.492	2.2	0.6
TC15 + MMP	6.582	1.9	0.5
TC16 + MMP	7.952	2.3	0.6
TC17 + MMP	9.044	2.6	0.7
TC18 + MMP	9.527	2.8	0.8
TC19 + MMP	7.866	2.3	0.6
TC28 + MMP	334.7	97.6	26.7
TC29 + MMP	12.53	3.7	1.0

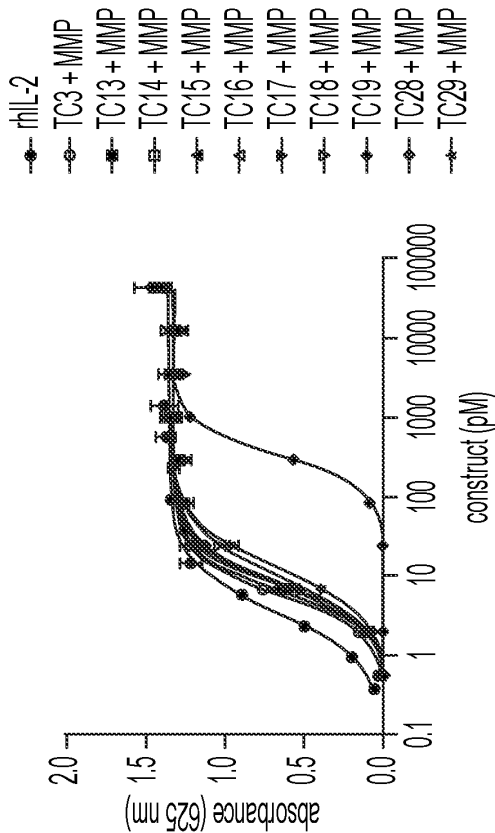


FIG. 11C

	EC50 (pM)	Fold-Change (Against rhIL-2)	Fold-Masking (Against TC29)
rhIL-2	3.43		
TC4 + MMP	6.372	1.9	0.5
TC21 + MMP	7.678	2.2	0.6
TC22 + MMP	9.315	2.7	0.7
TC23 + MMP	7.543	2.2	0.6
TC24 + MMP	7.494	2.2	0.6
TC25 + MMP	7.679	2.2	0.6
TC26 + MMP	7.726	2.3	0.6
TC27 + MMP	8.068	2.4	0.6
TC28 + MMP	334.7	97.6	26.7
TC29 + MMP	12.53	3.7	1.0

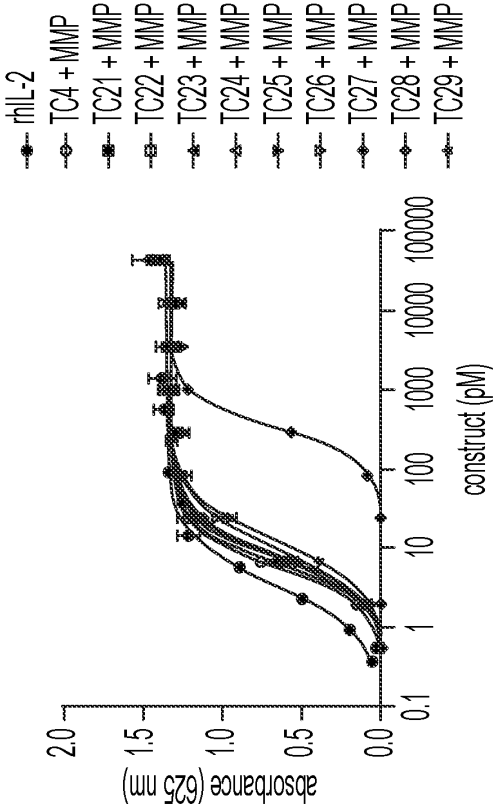


FIG. 11D

	EC ₅₀ (pM)	Fold-Change (Against rhIL-2)	Fold-Masking (Against TC29)
rhIL-2	4.6	N/A	0.4
TC3 + MMP1	55.1	12.1	5.2
TC3 + MMP1	138.6	30.5	13.1
TC14 + MMP1	67.9	14.9	6.4
TC15 + MMP1	65.0	14.3	6.1
TC16 + MMP1	58.2	12.8	5.5
TC17 + MMP1	206.5	45.4	19.5
TC18 + MMP1	202.8	44.6	19.2
TC19 + MMP1	121.9	26.8	11.5
TC28 + MMP1	2057.0	452.0	194.4
TC29 + MMP1	10.6	2.3	N/A

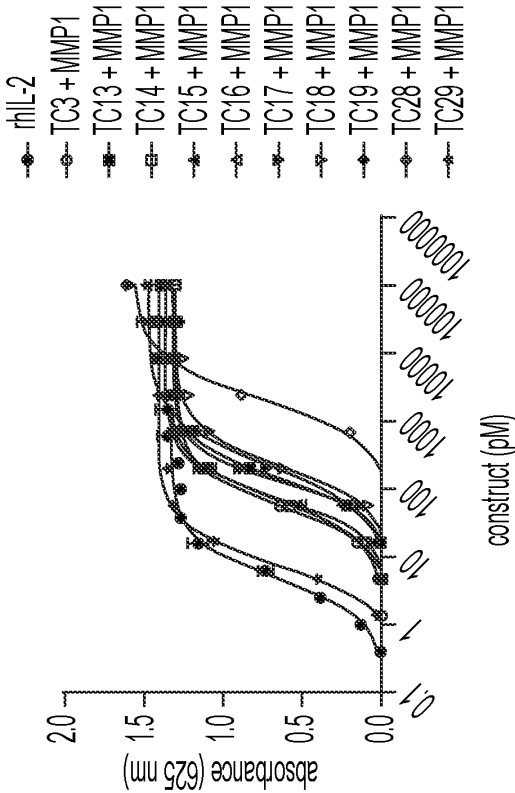
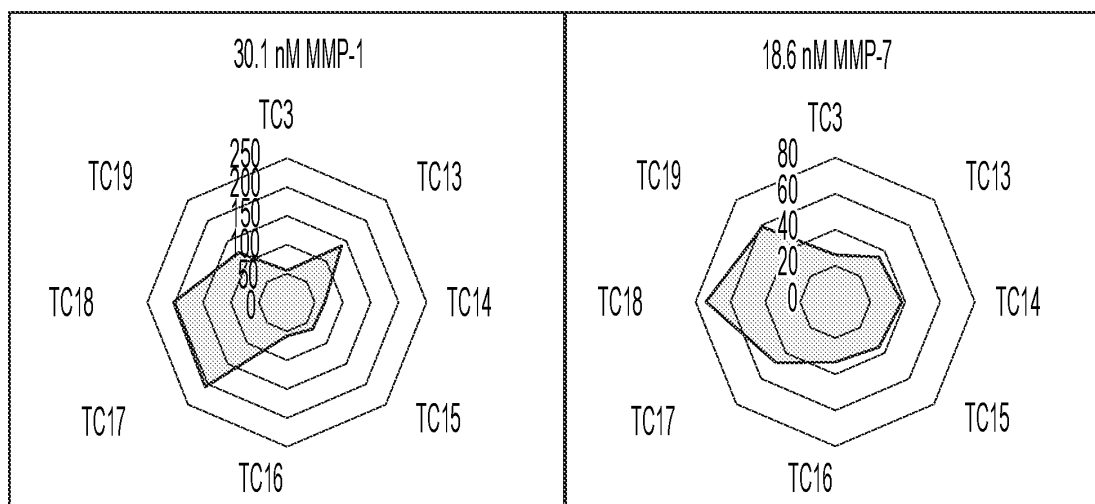
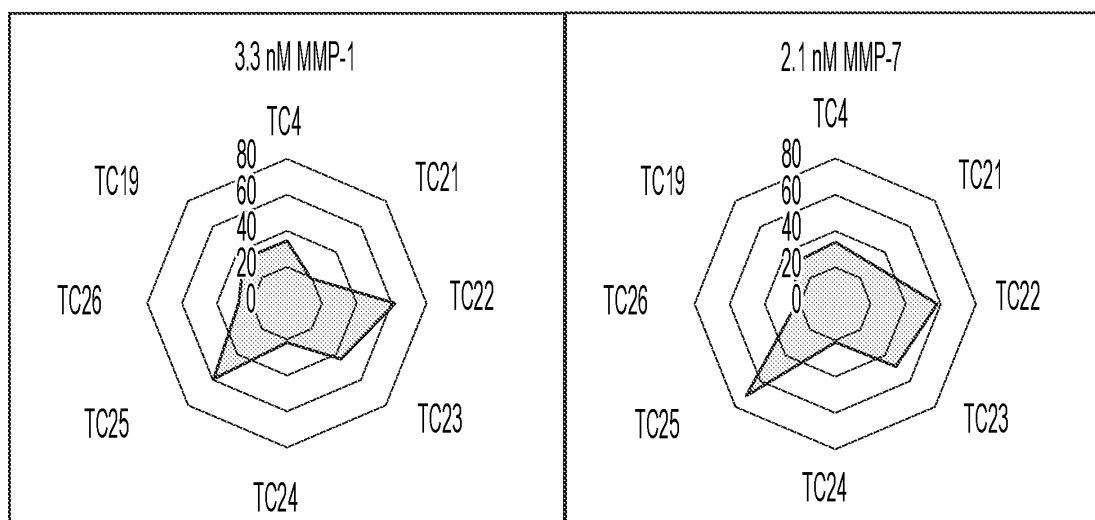
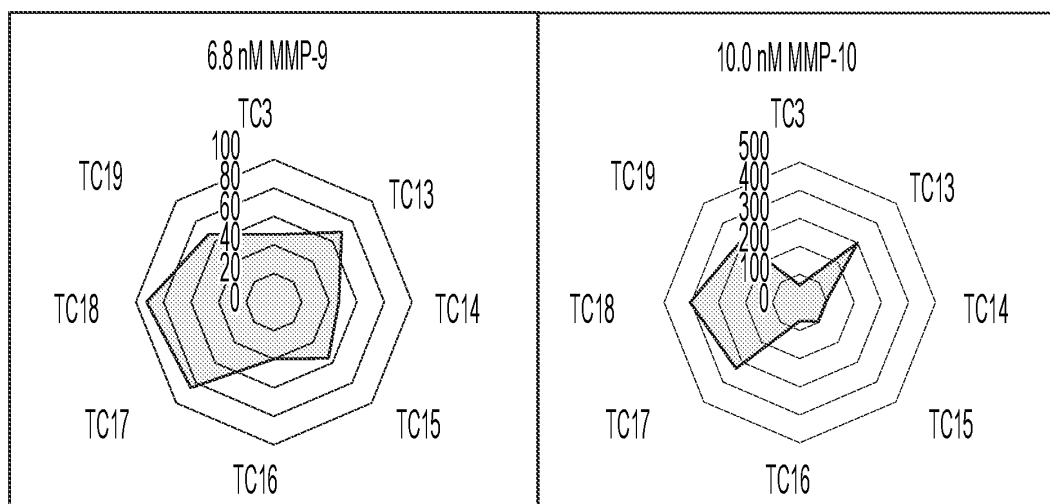
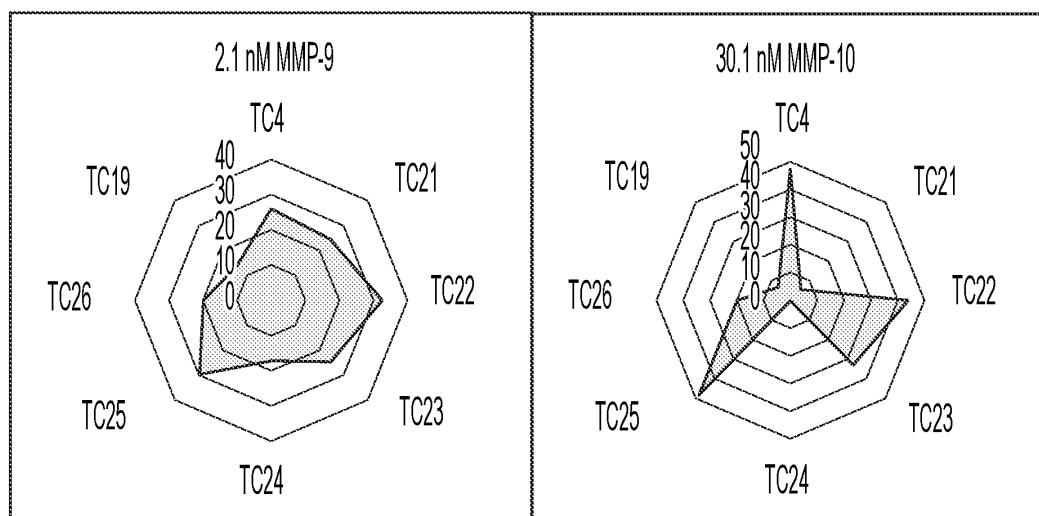


FIG. 11E

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MPYDLYHP containing Targeted Cytokines**VPLSLYSG containing Targeted Cytokines****FIG. 11F**

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MPYDLYHP containing Targeted Cytokines**VPLSLYSG containing Targeted Cytokines****FIG. 11F**
CONTINUED

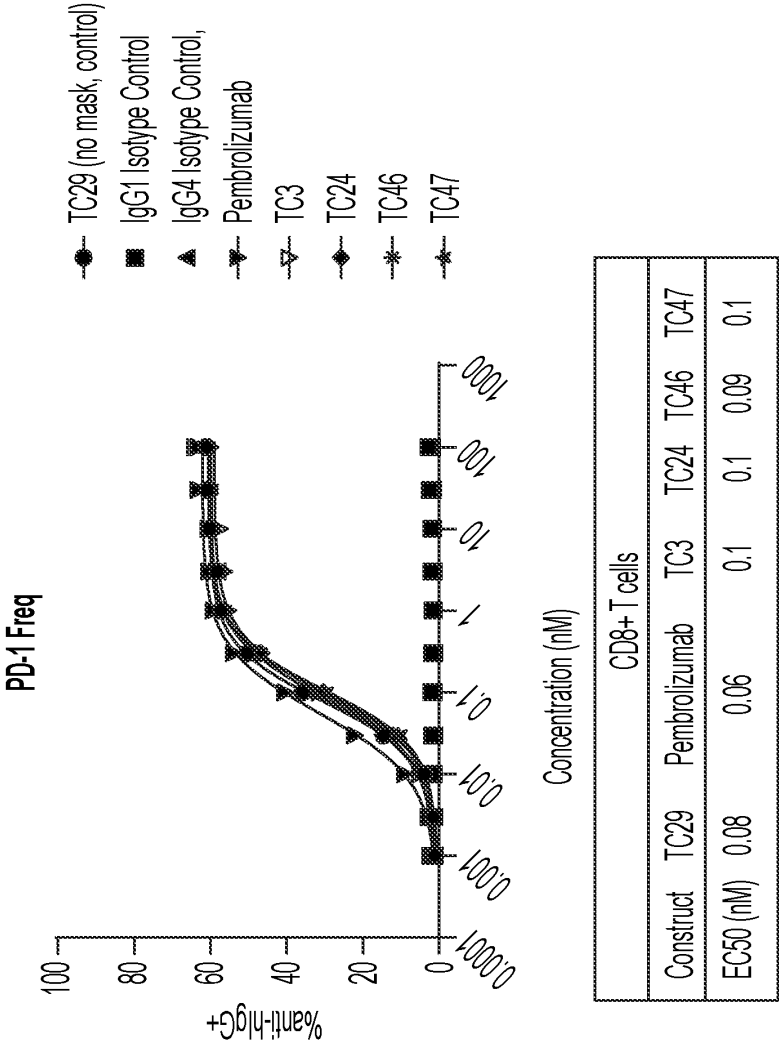


FIG. 12

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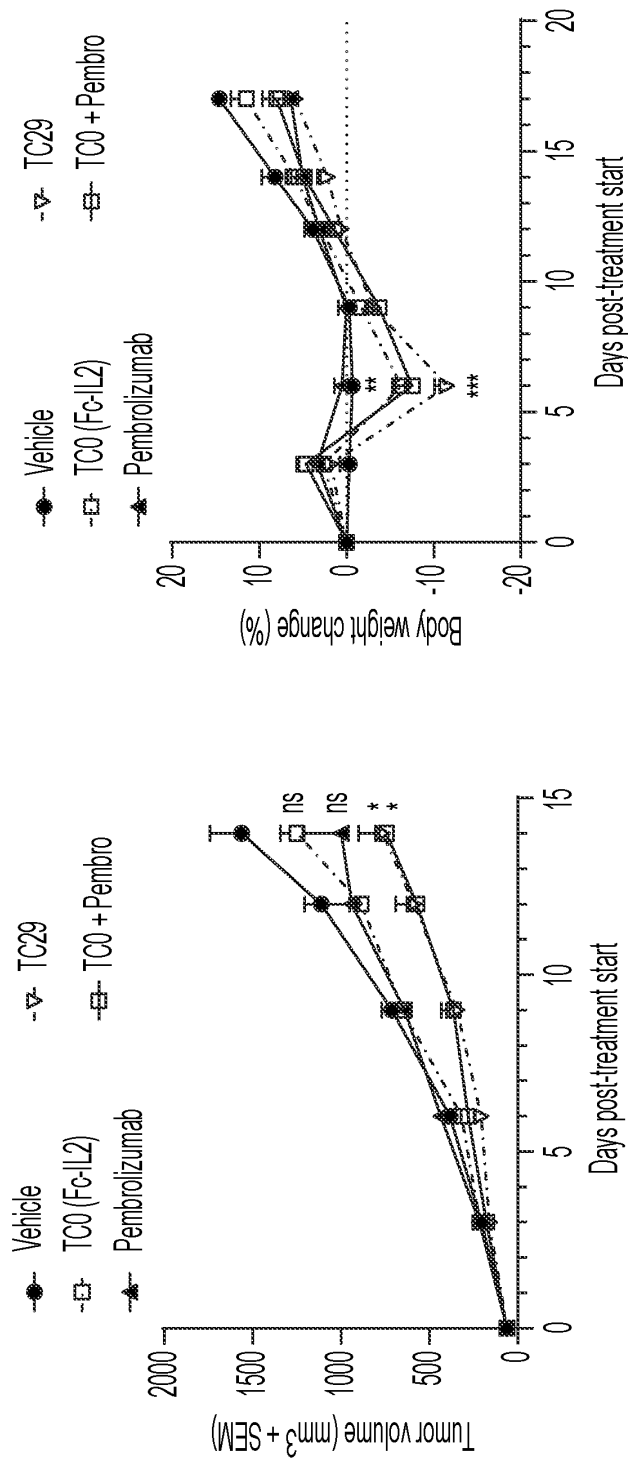


FIG. 13A

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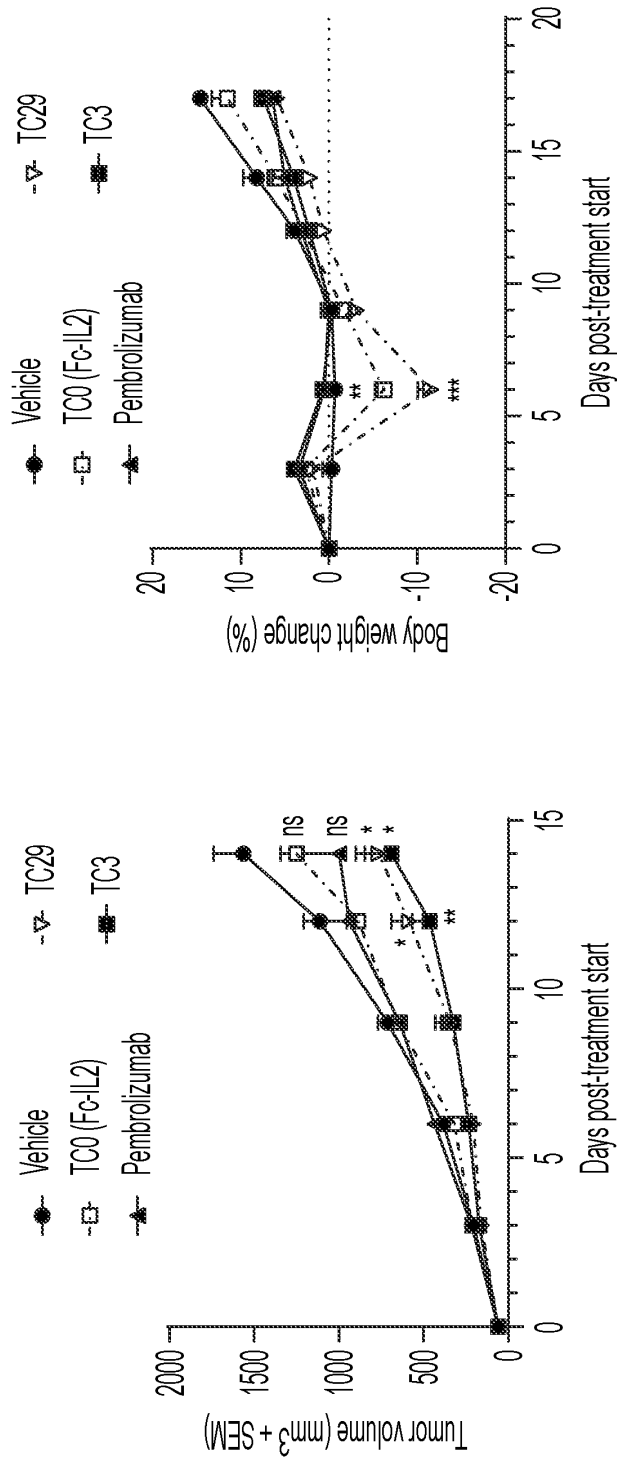


FIG. 13B

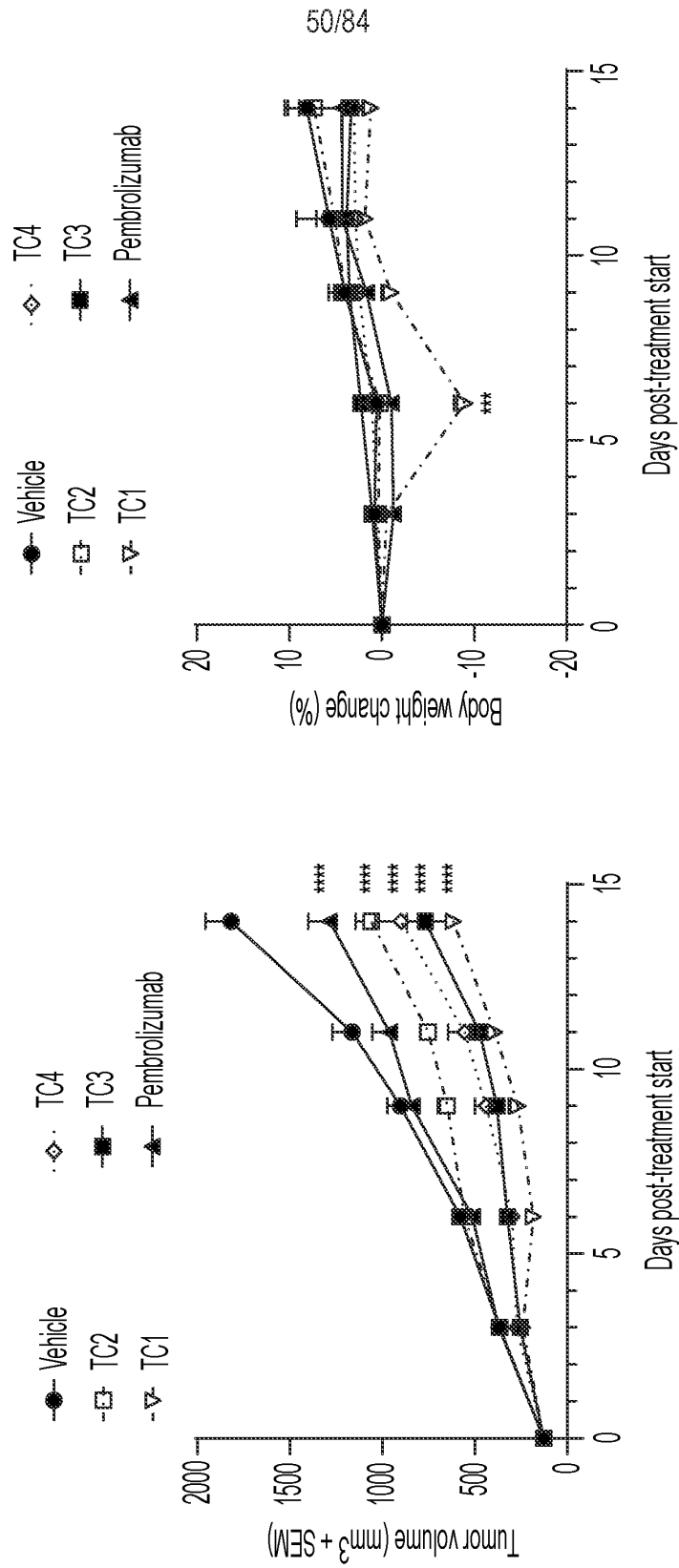


FIG. 14A

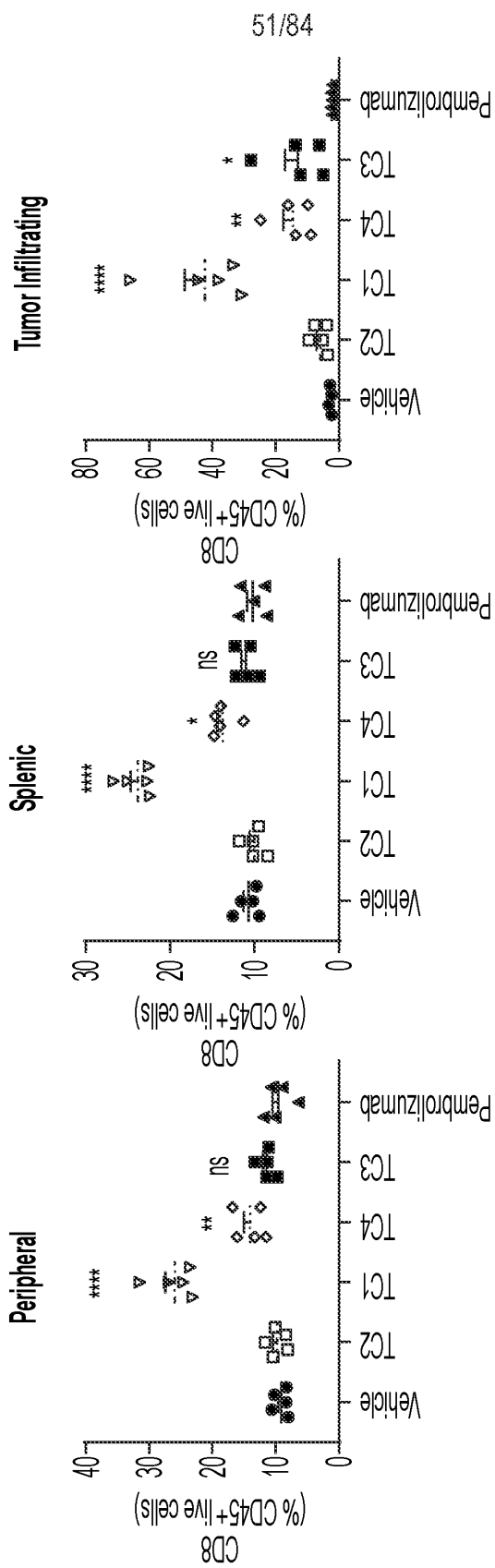


FIG. 14B

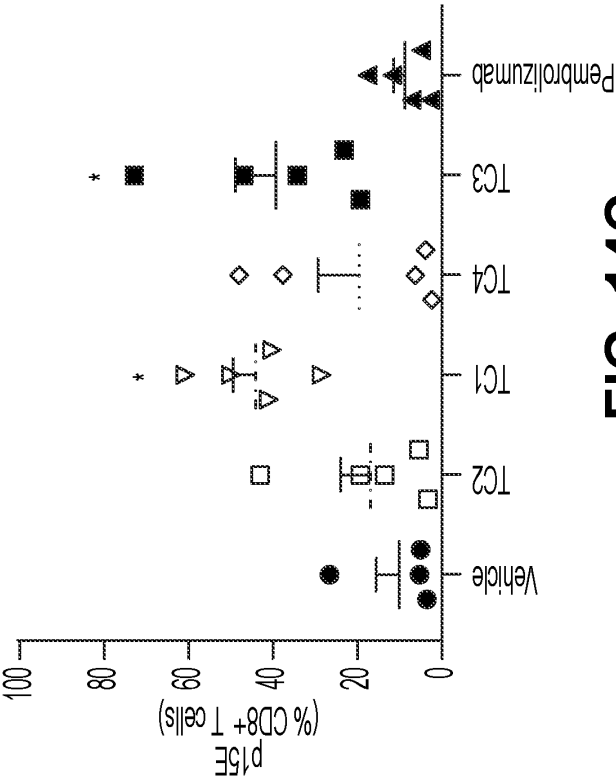


FIG. 14C

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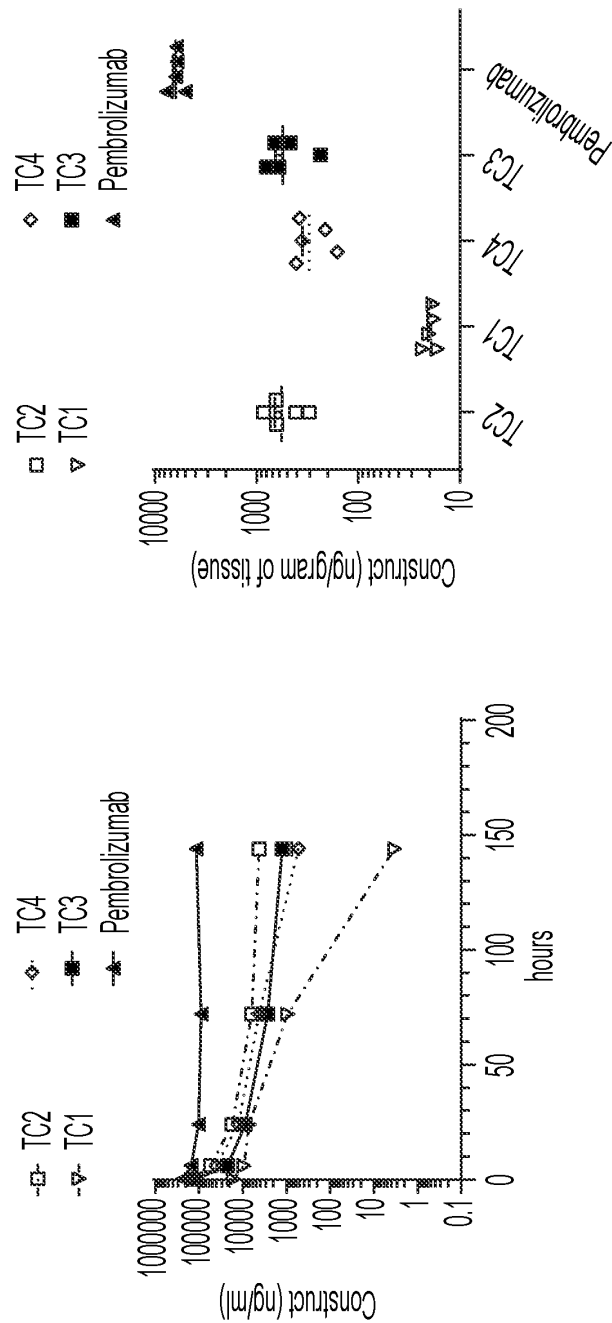


FIG. 14D

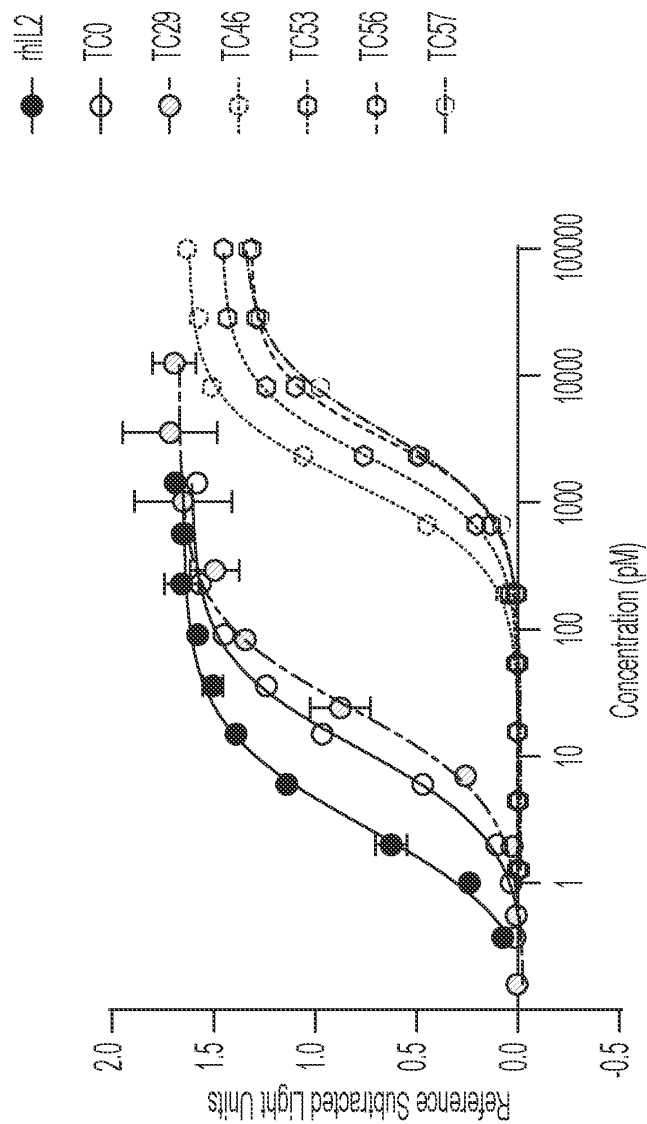


FIG. 15

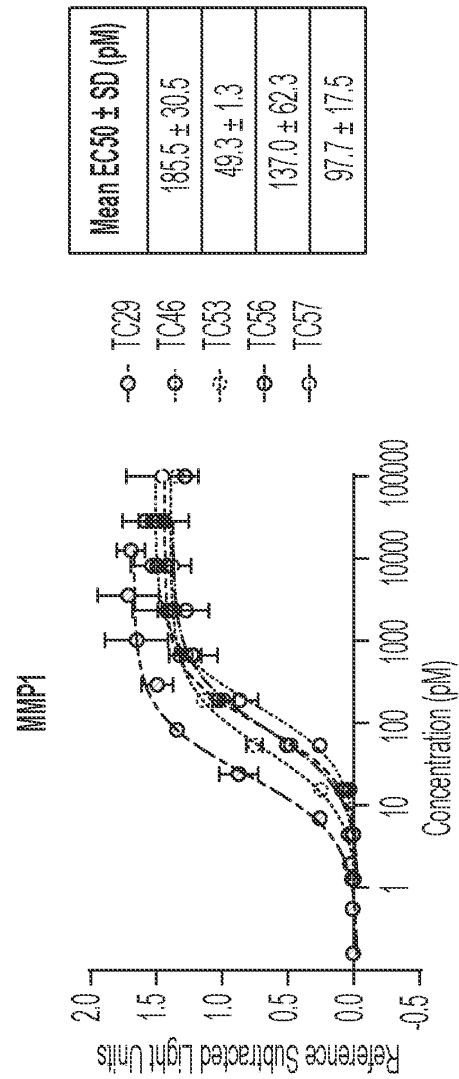


FIG. 16A

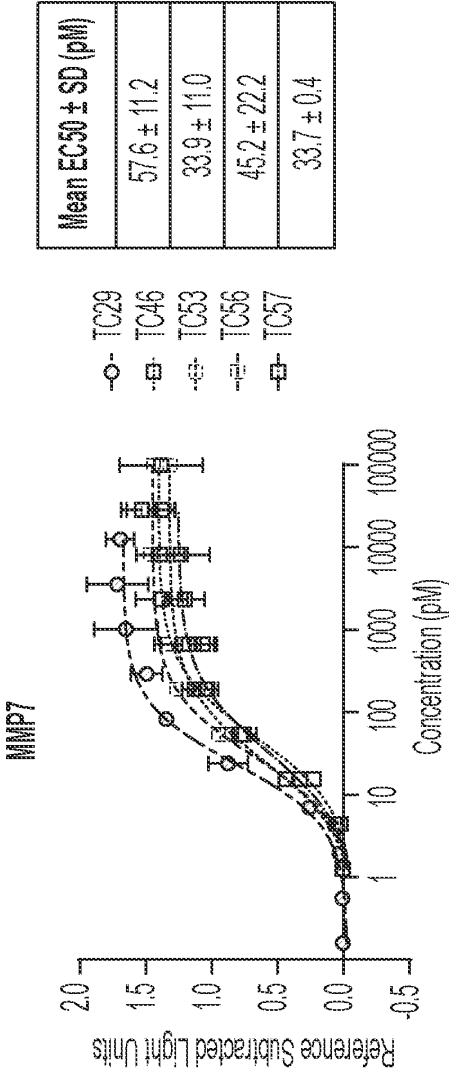


FIG. 16B

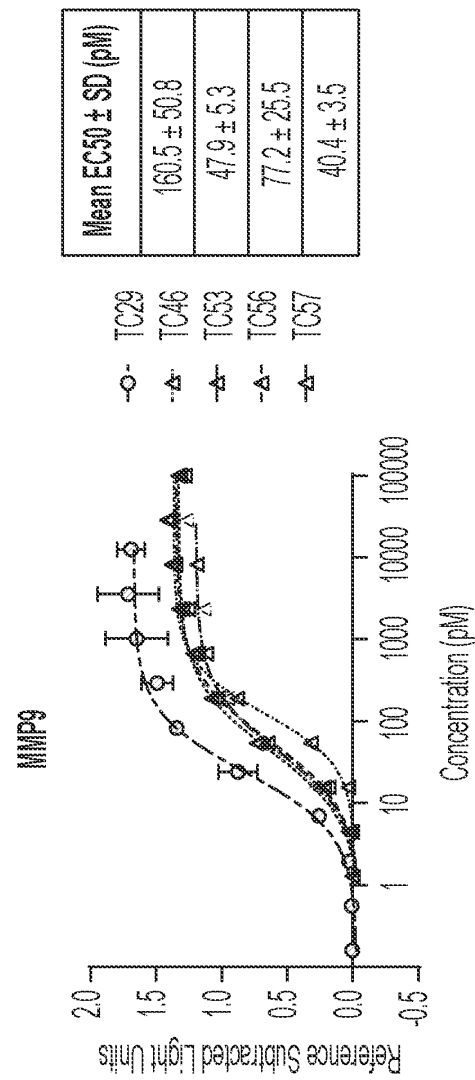


FIG. 16C

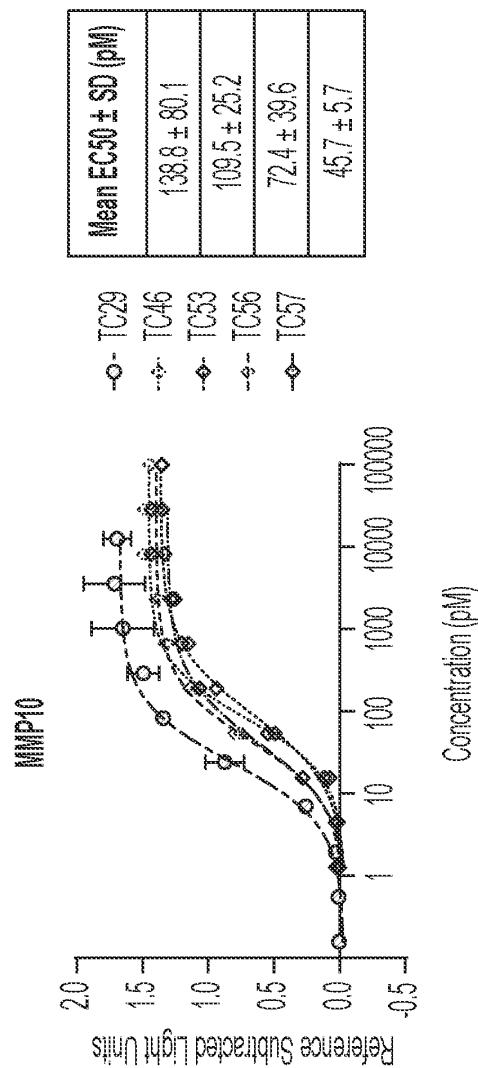


FIG. 16D

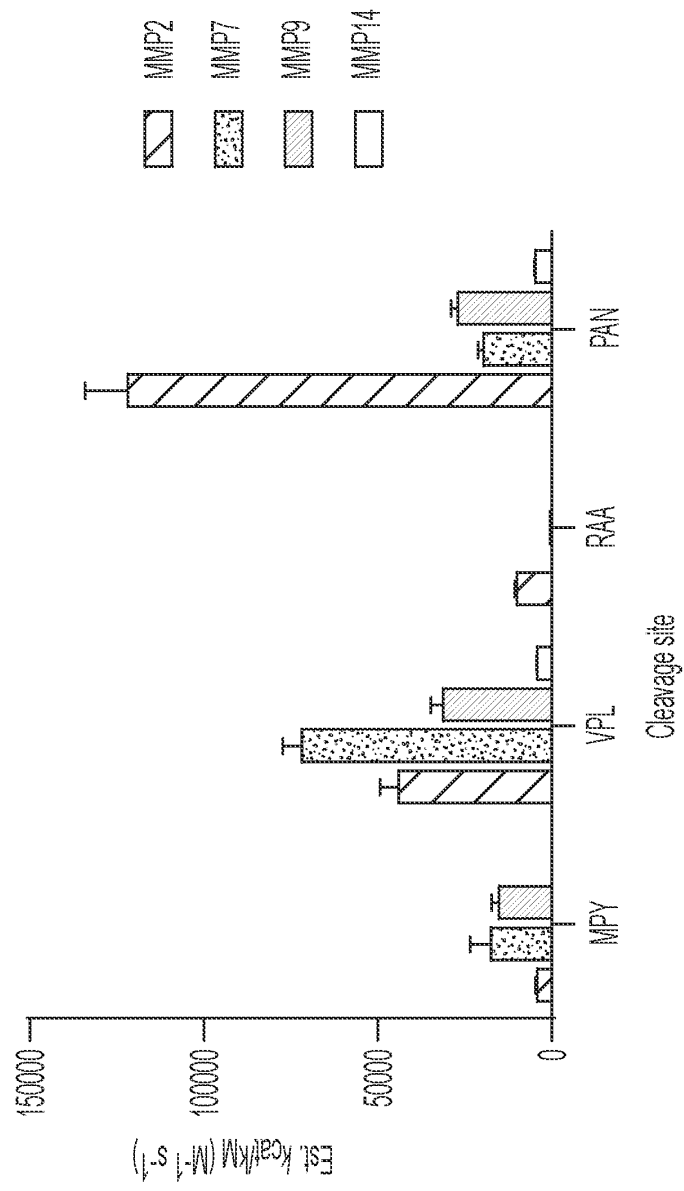


FIG. 17

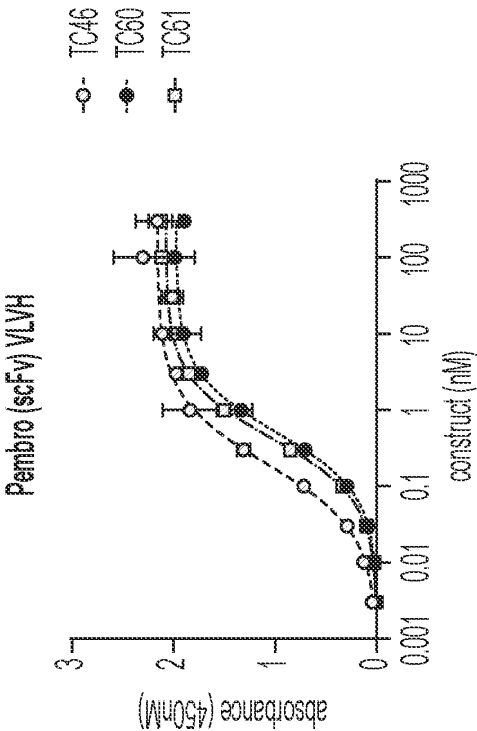


FIG. 18A

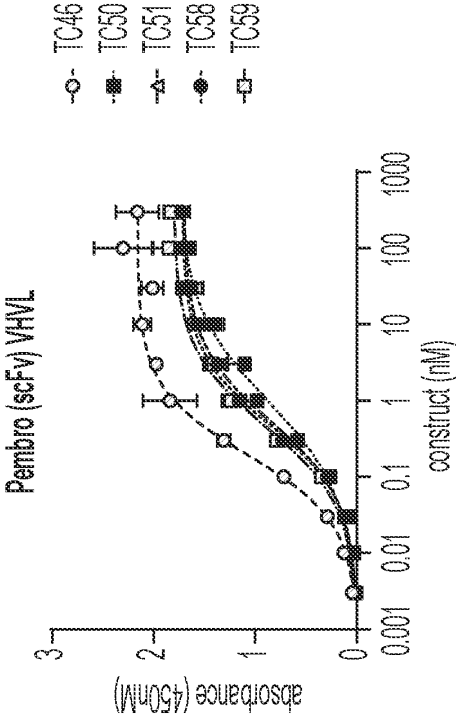


FIG. 18B

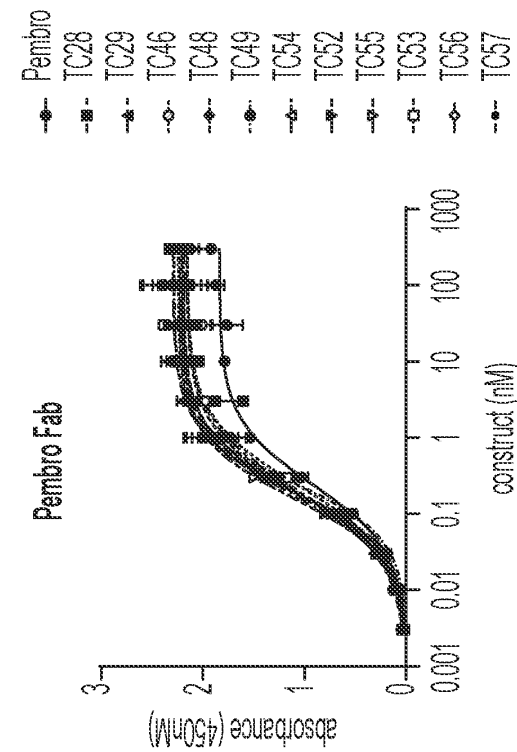


FIG. 18C

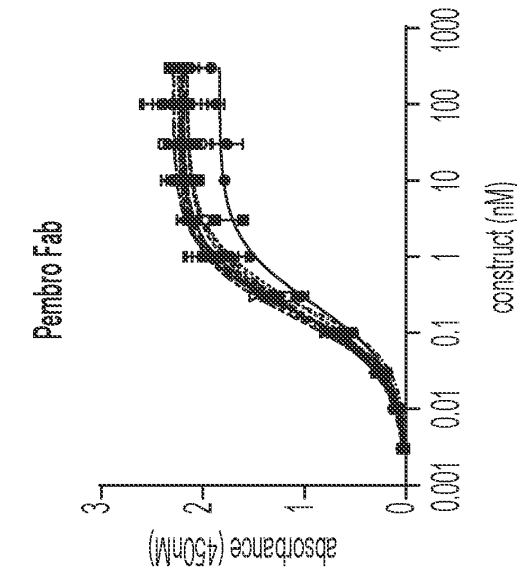


FIG. 18D

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Construct	K _d (nM)
TC50	0.79 ± 0.24
TC51	0.61 ± 0.07
TC58	0.40 ± 0.07
TC59	0.37 ± 0.09
TC60	0.42 ± 0.08
TC61	0.37 ± 0.05
TC62	0.76 ± 0.12
TC63	0.84 ± 0.09
Pembrolizumab	0.20 ± 0.04
TC28	0.18 ± 0.02
TC29	0.16 ± 0.03
TC46	0.18 ± 0.01
TC48	0.20 ± 0.04
TC49	0.17 ± 0.03
TC54	0.18 ± 0.03
TC52	0.17 ± 0.04
TC55	0.15 ± 0.02
TC53	0.20 ± 0.06
TC56	0.16 ± 0.04
TC57	0.16 ± 0.04
MC6 (not targeted)	--

FIG. 18E

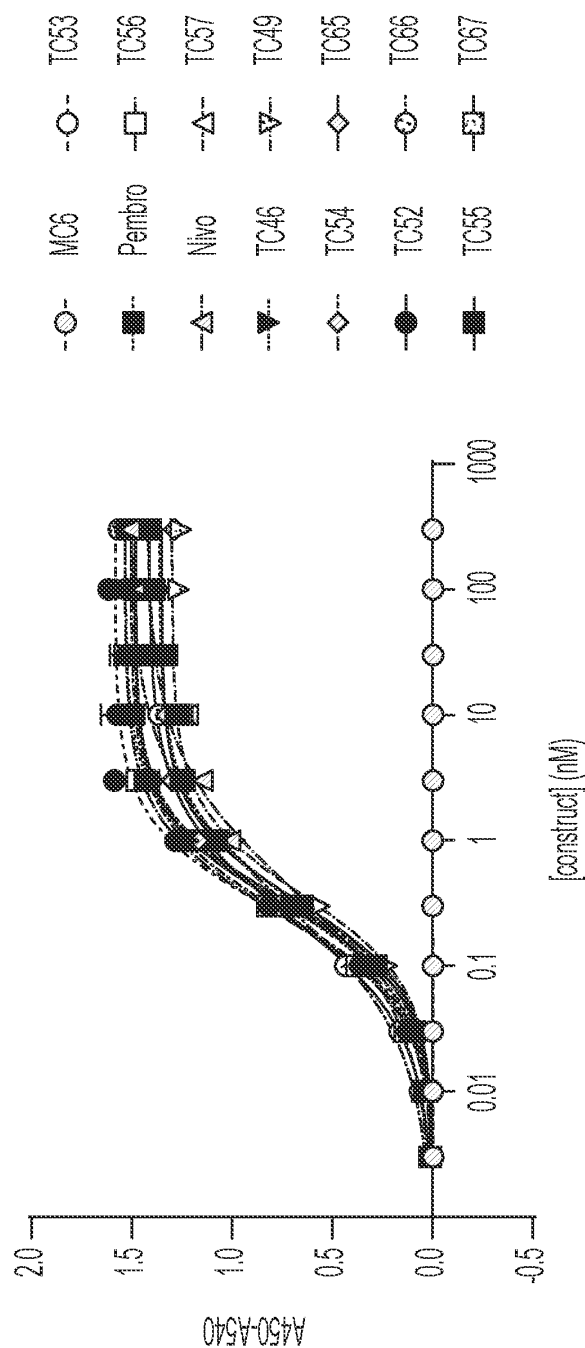


FIG. 18F

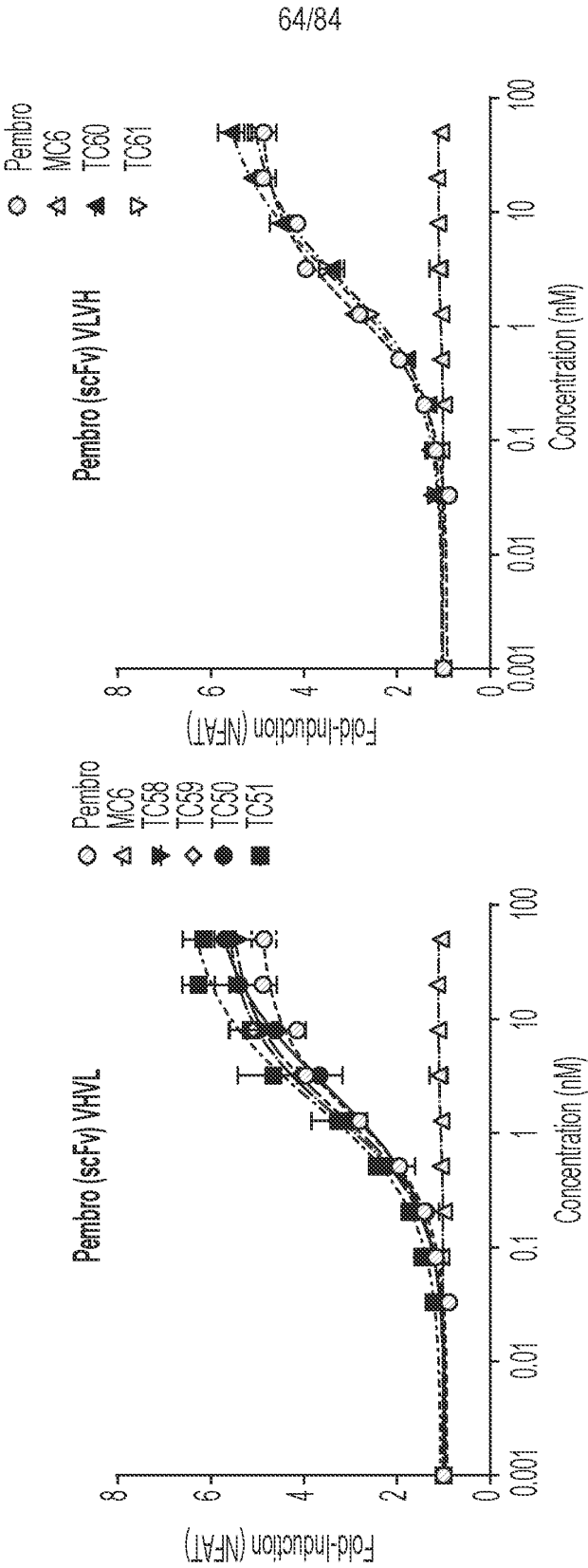


FIG. 19A

FIG. 19B

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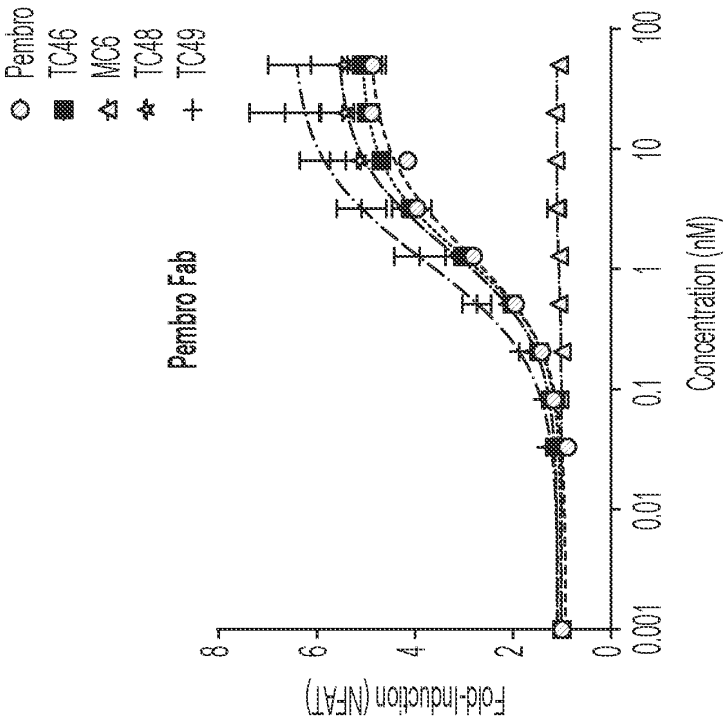


FIG. 19D

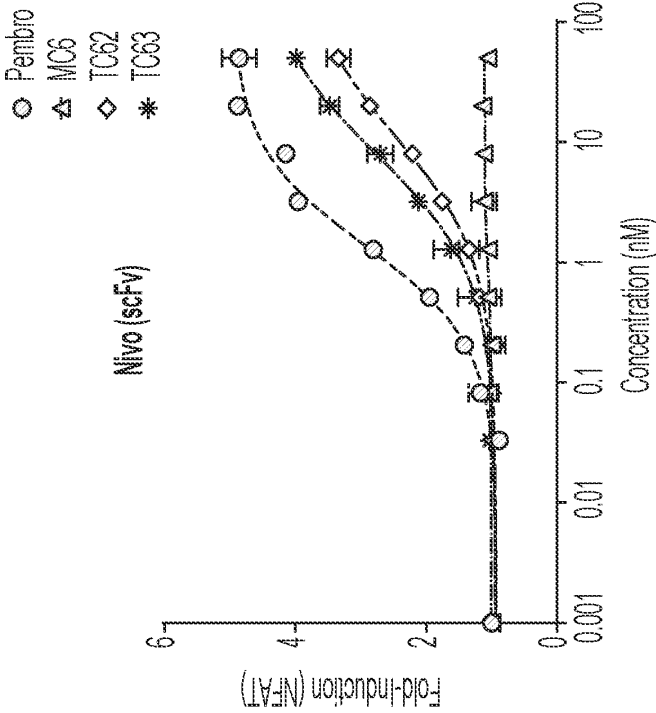


FIG. 19C

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Construct	EC ₅₀ (nM)
Pembro	1.39
MC6	--
TC58	1.54
TC59	1.45
TC50	2.58
TC51	1.89
TC60	2.99
TC61	2.33
TC62	11.3
TC63	8.12
TC46	1.34
TC48	1.40
TC49	1.17

FIG. 19E

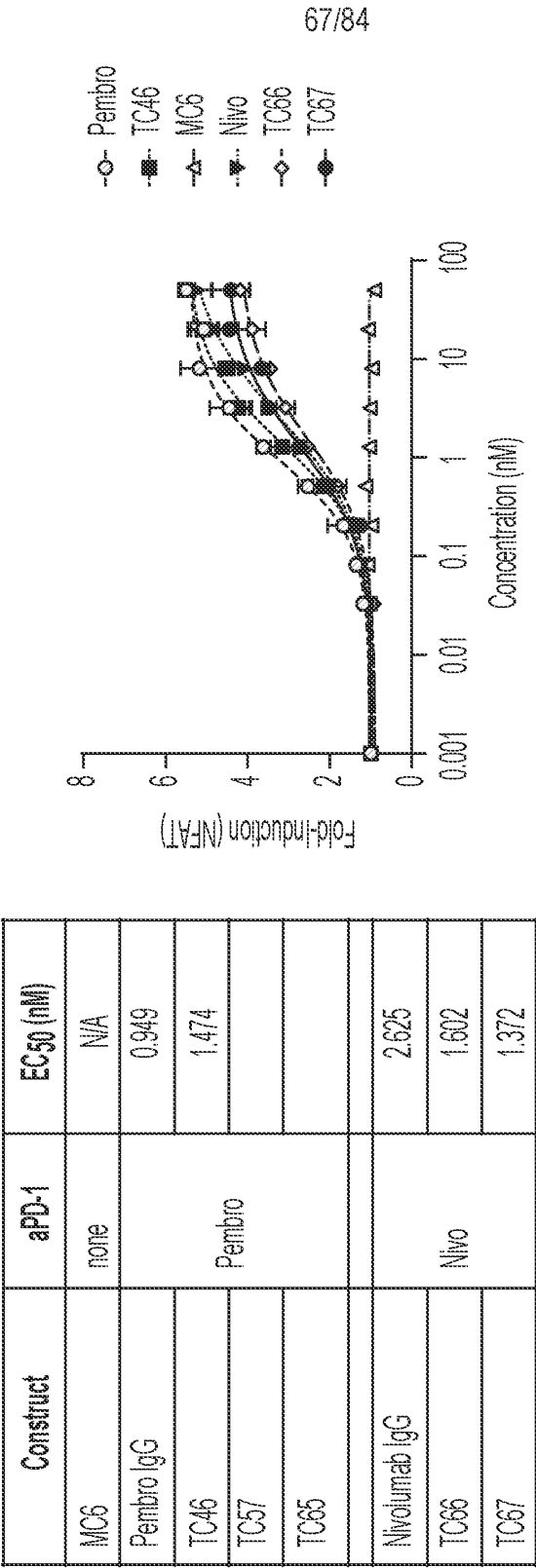


FIG. 19F

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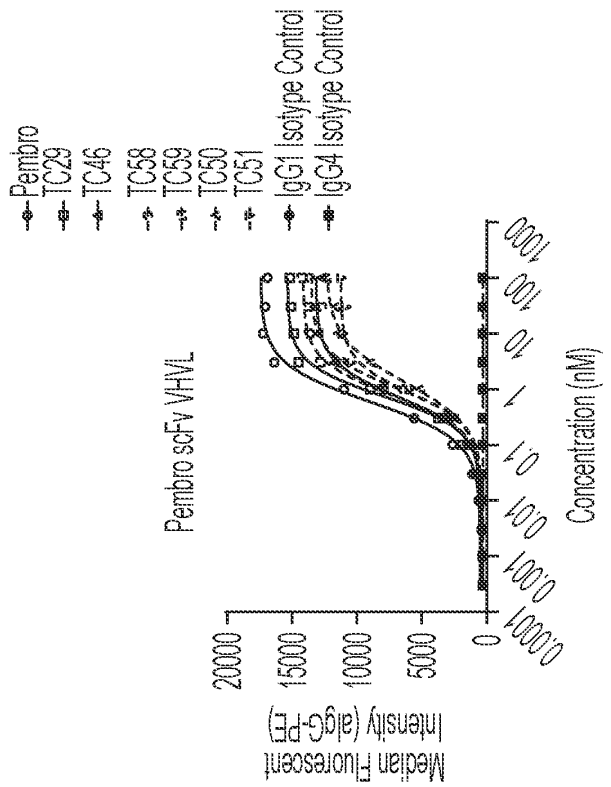


FIG. 20B

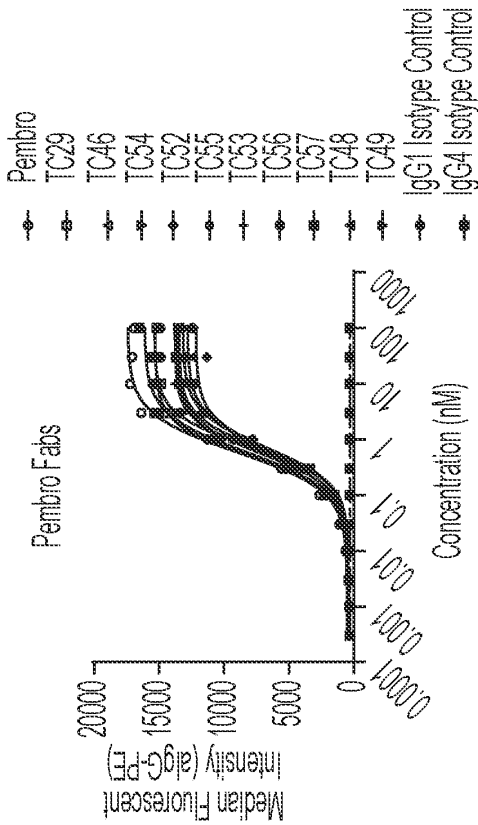


FIG. 20A

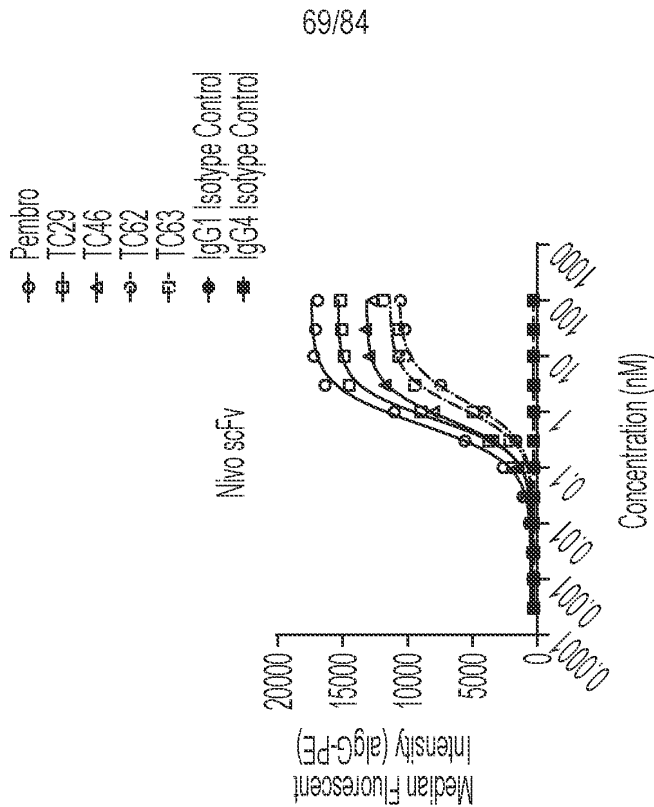


FIG. 20D

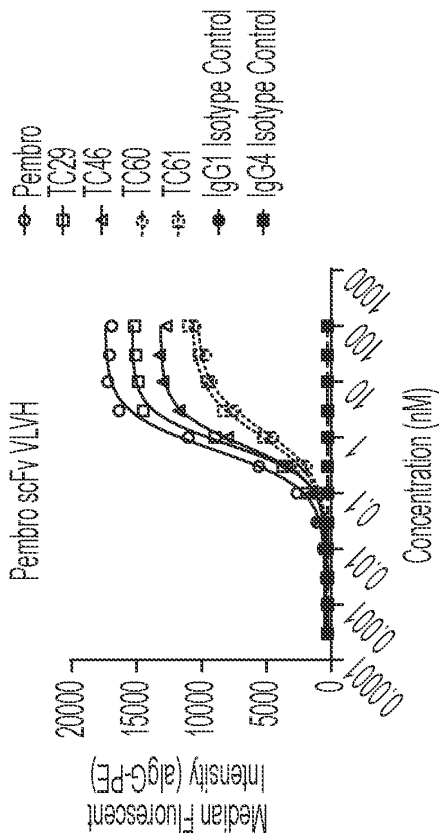
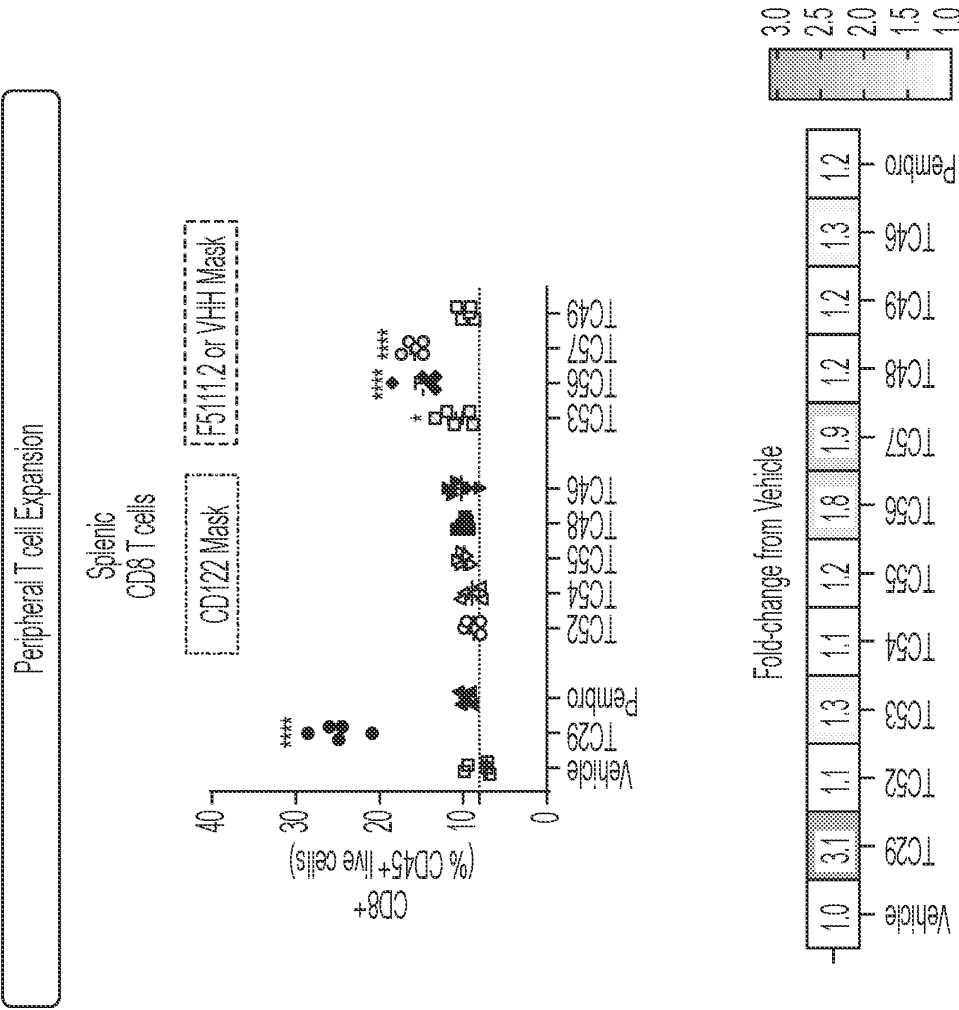


FIG. 20C

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Construct	EC50 (nM)	Standard Deviation
Pembro FAB		
Pembrolizumab	0.6	0.0
TC29	0.7	0.0
TC46	0.8	0.1
TC54	0.9	0.2
TC52	0.8	0.2
TC55	0.7	0.1
TC53	0.7	0.3
TC56	0.6	0.1
TC57	0.7	0.1
TC48	0.8	0.1
TC49	0.6	0.0
Pembro scFv (VHVL)		
TC58	1.2	0.1
TC59	1.0	0.2
TC50	1.3	0.2
TC51	1.0	0.1
Pembro scFv (VLVH)		
TC60	1.7	0.4
TC61	1.3	0.2
Nivo scFv		
TC62	1.8	0.4
TC63	1.5	0.4

FIG. 20E



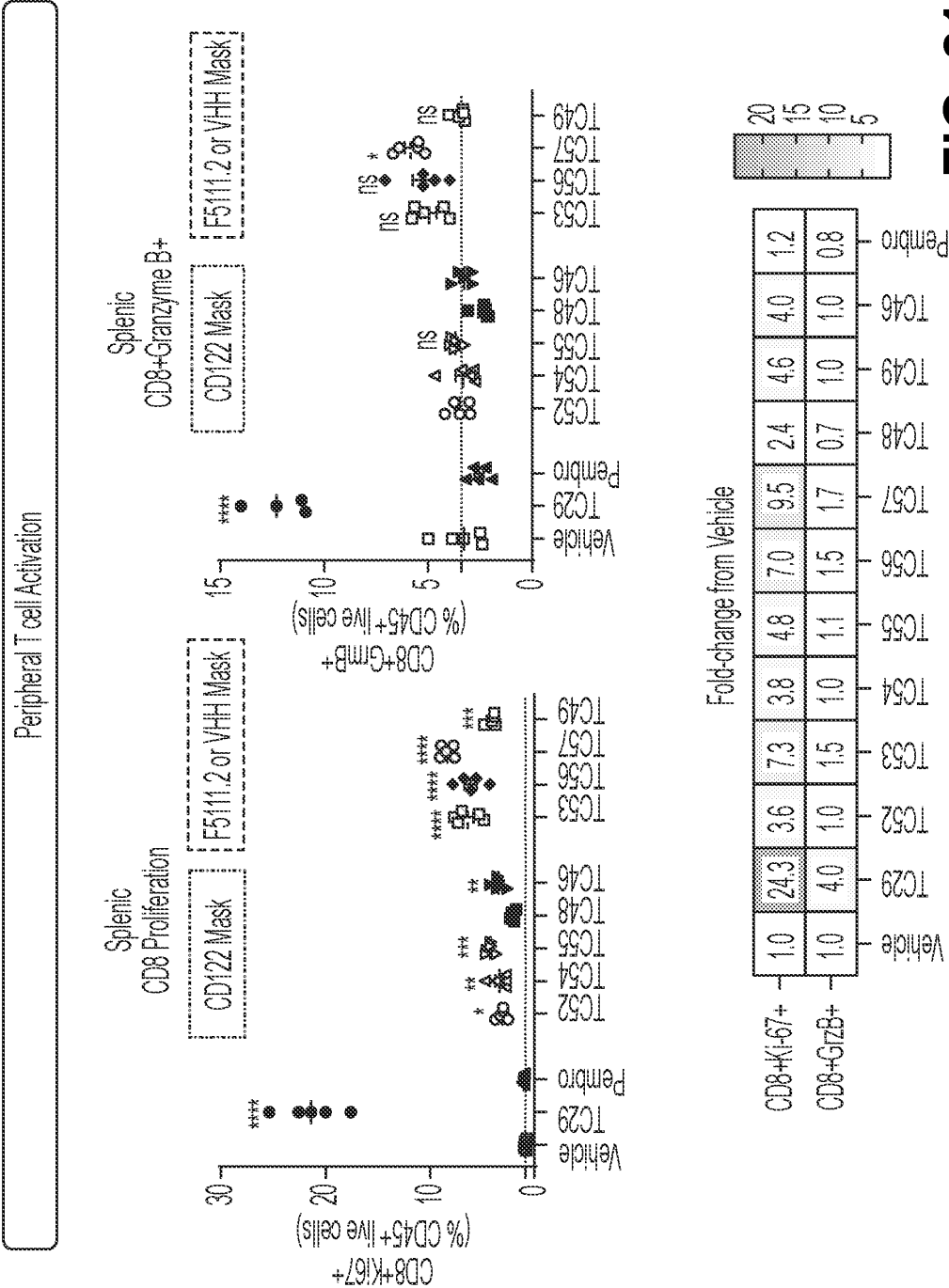


FIG. 21B

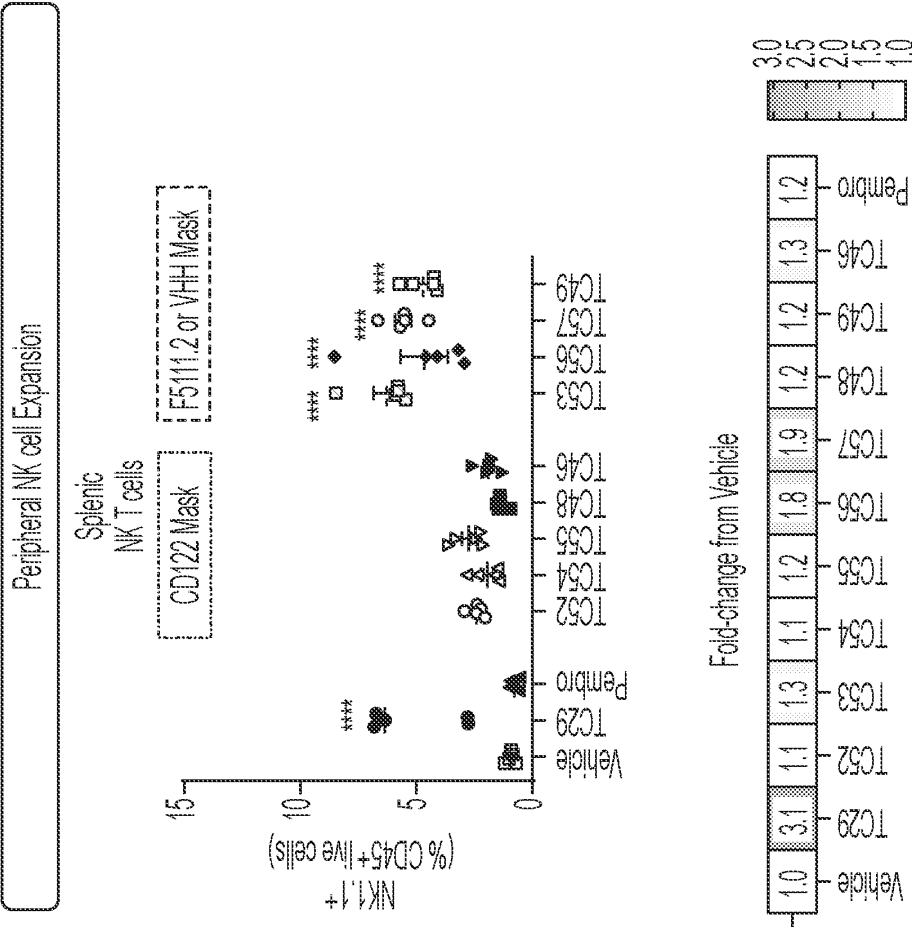


FIG. 21C

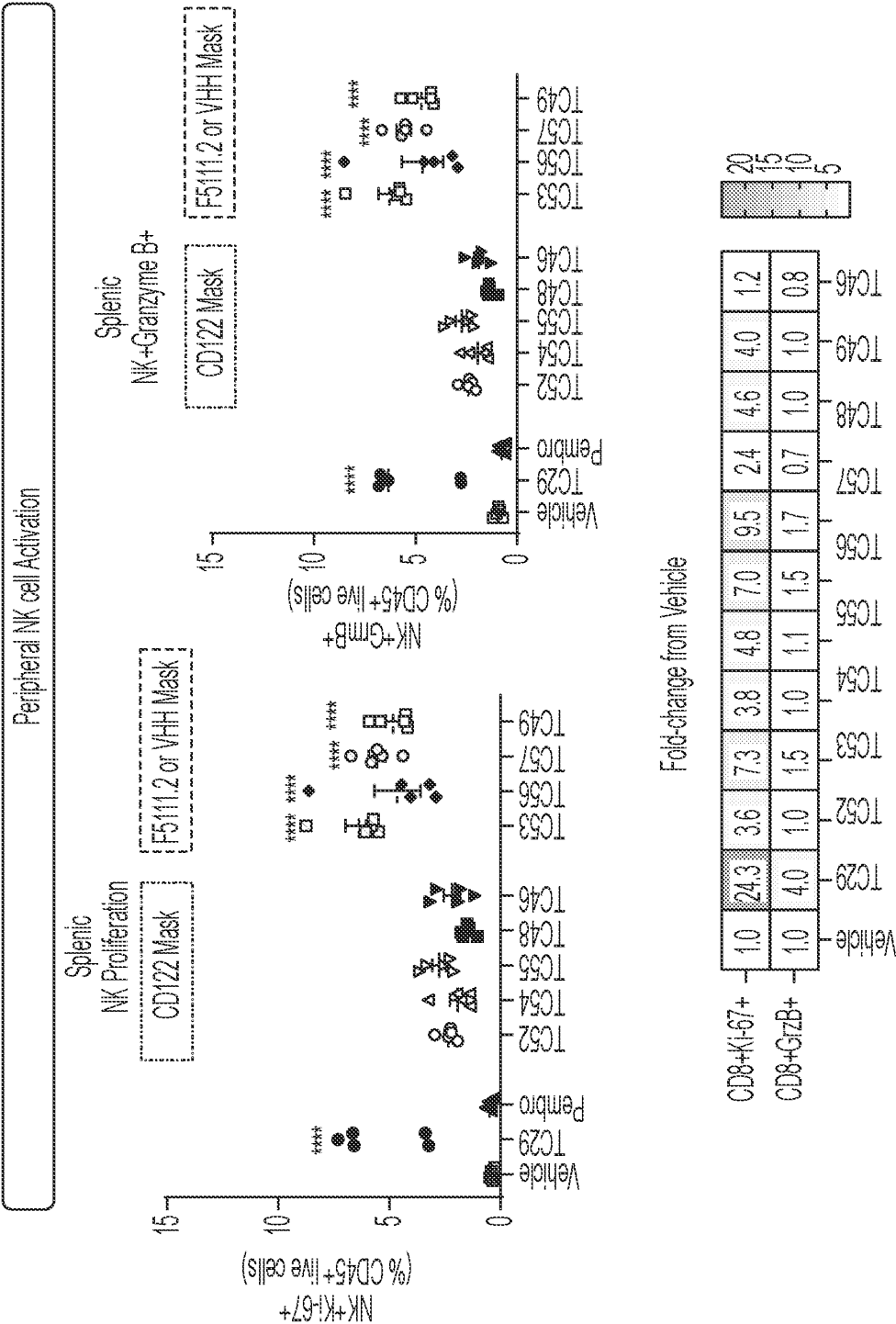


FIG. 21D

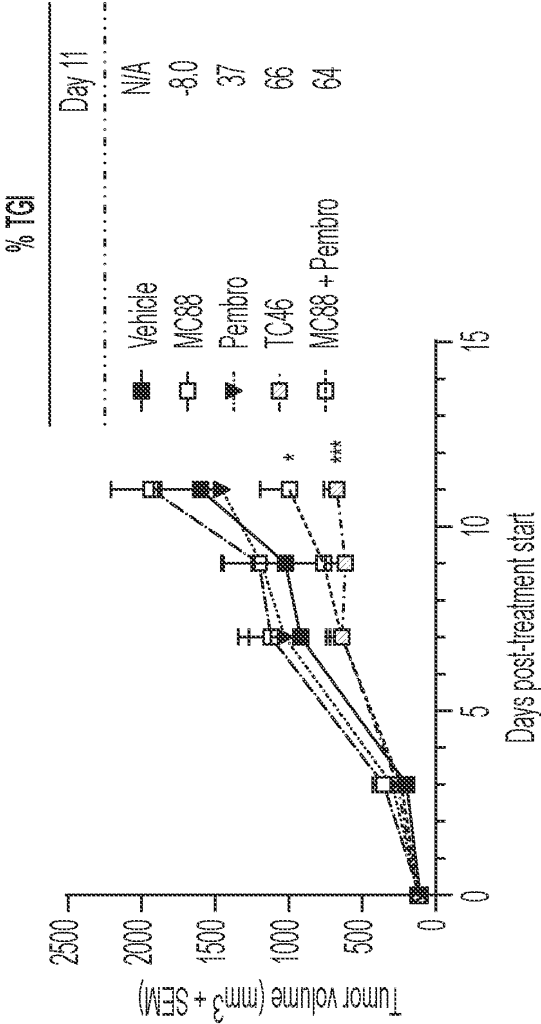
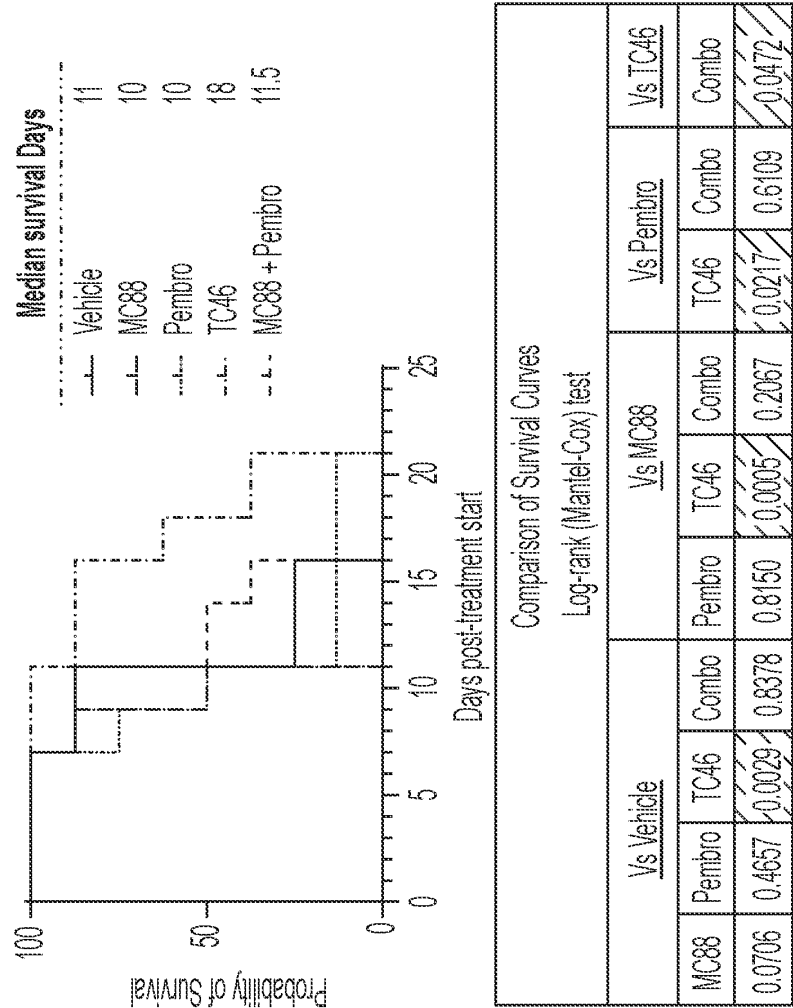


FIG. 22A



Shades field indicate statistical significance

FIG. 22B

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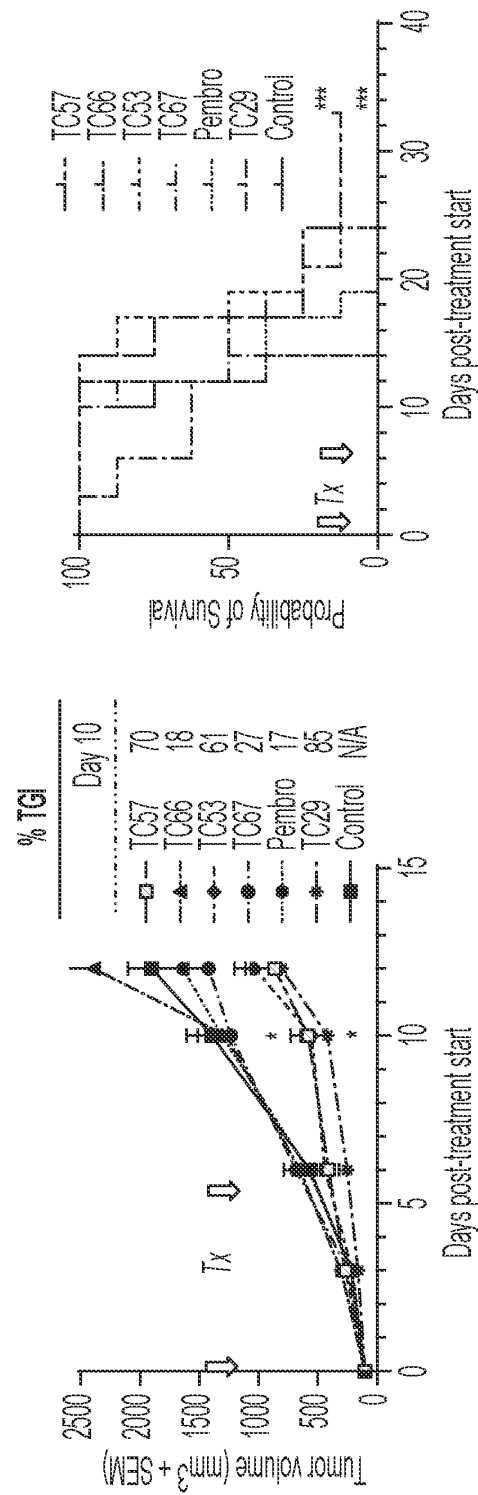


FIG. 23B

FIG. 23A

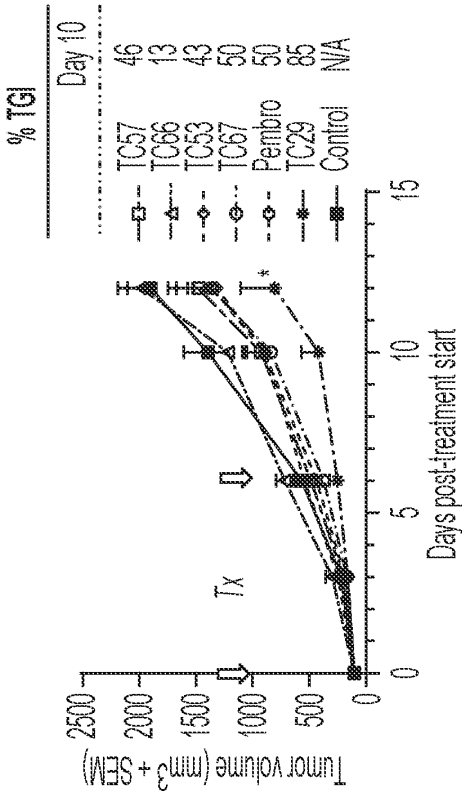


FIG. 23D

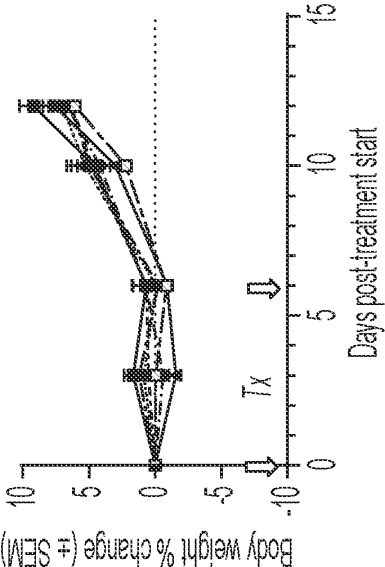


FIG. 23C

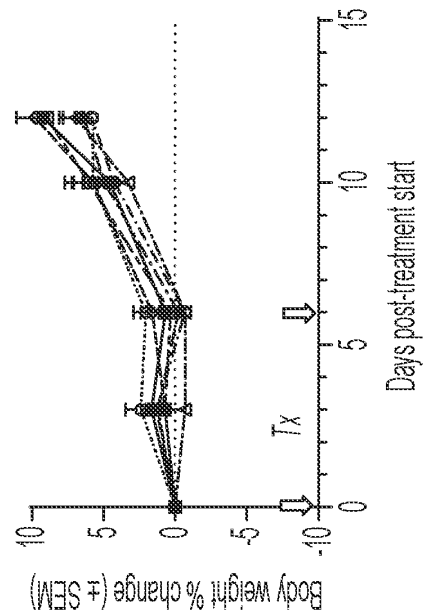


FIG. 23F

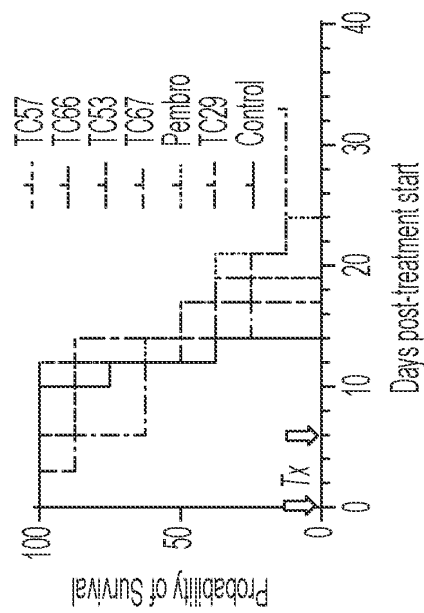


FIG. 23E

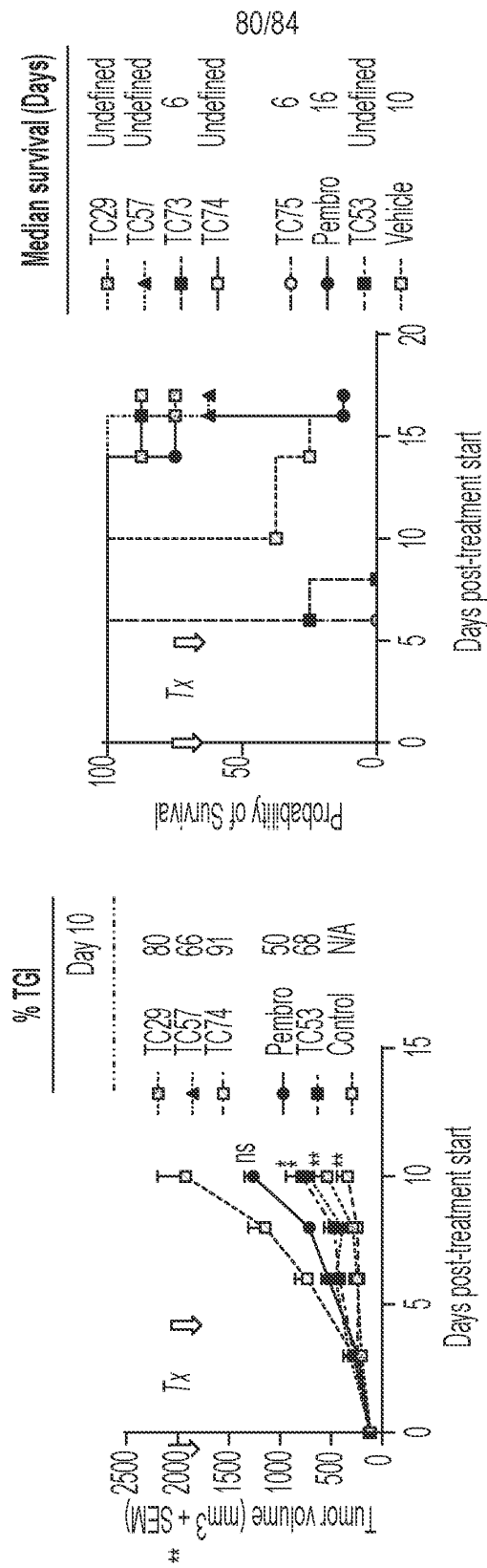


FIG. 24B

FIG. 24A

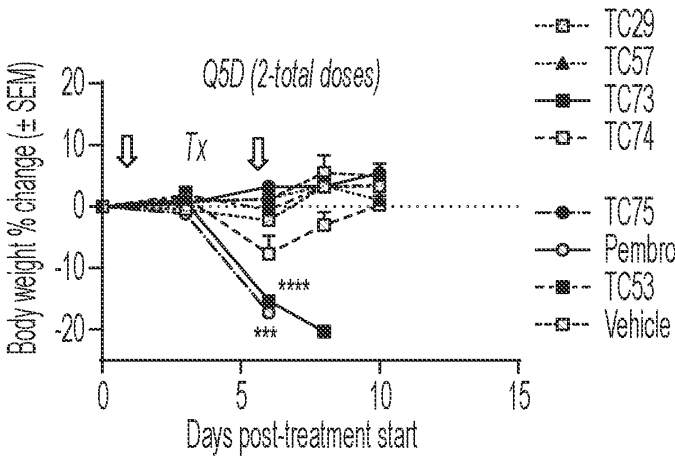


FIG. 24C

VHH Mask

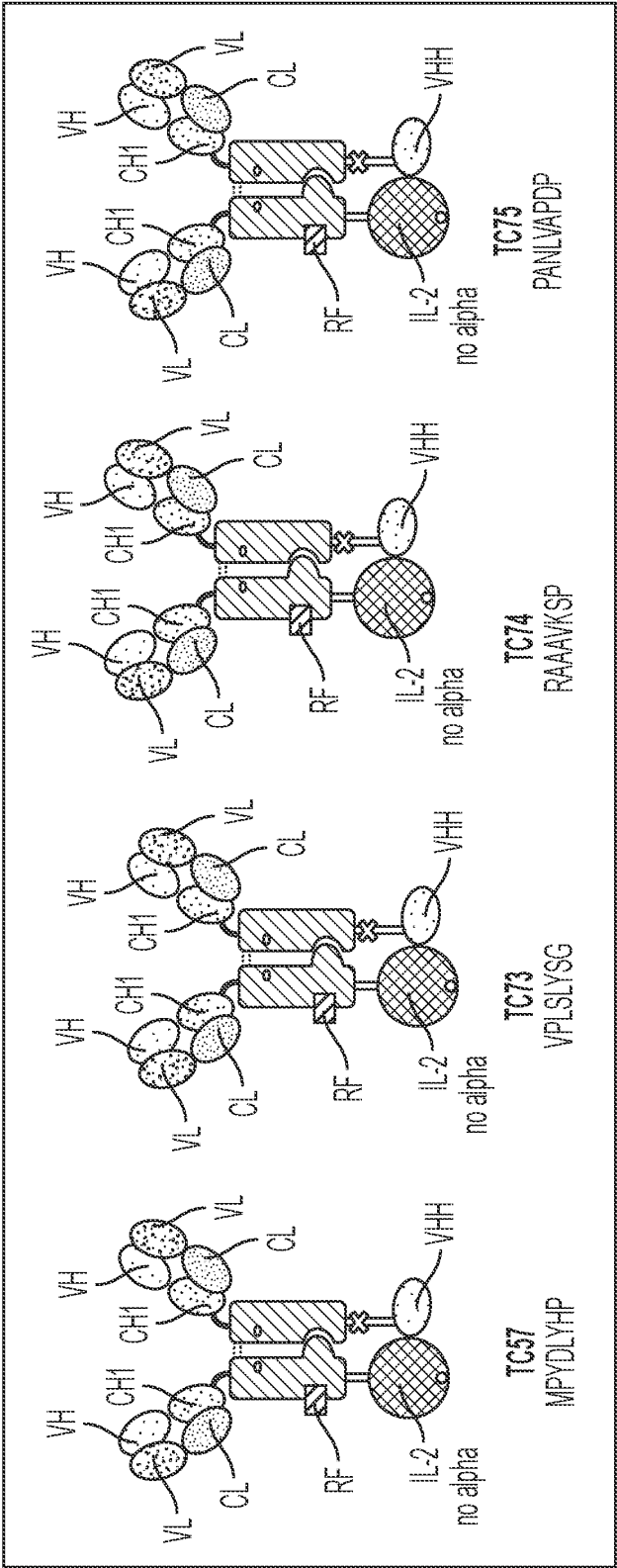


FIG. 24D

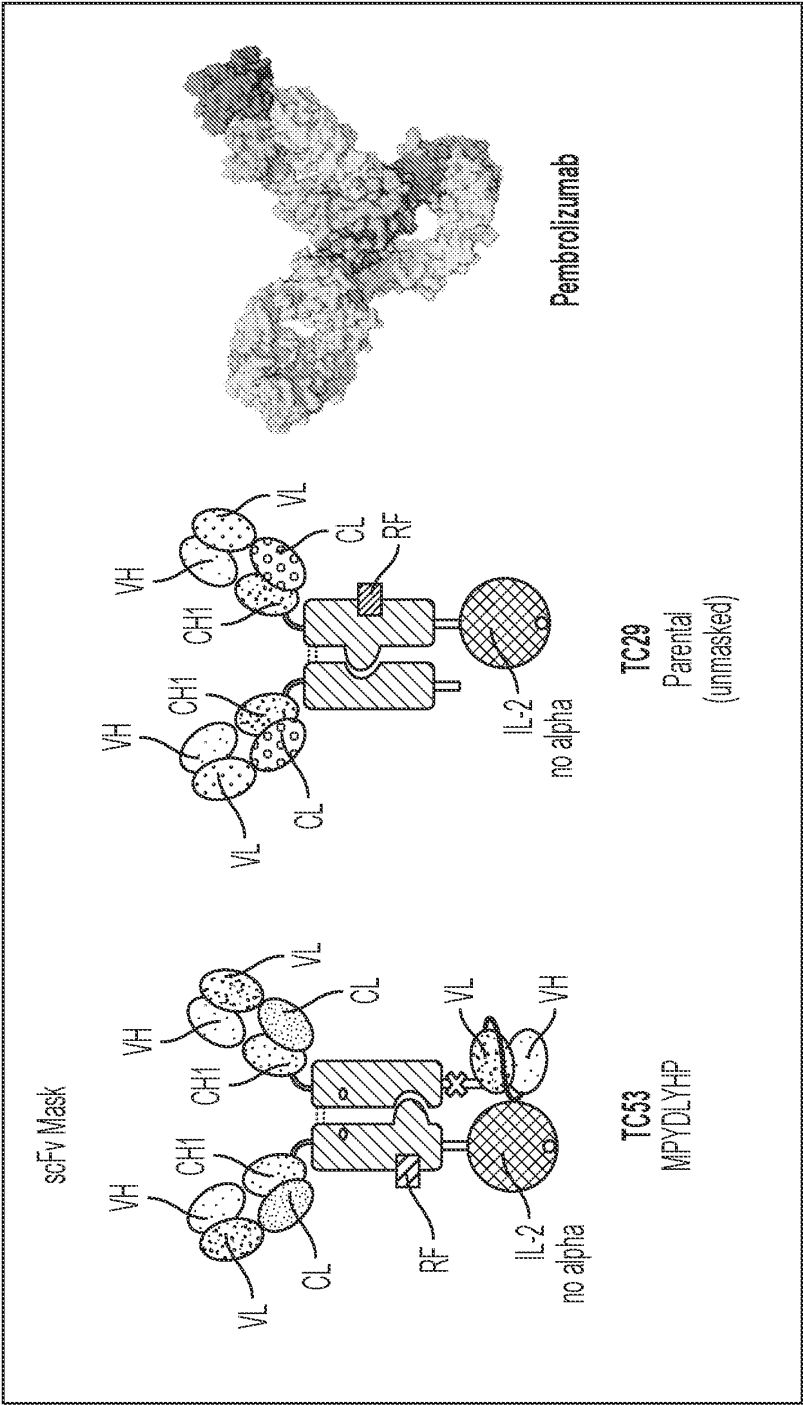


FIG. 24E

