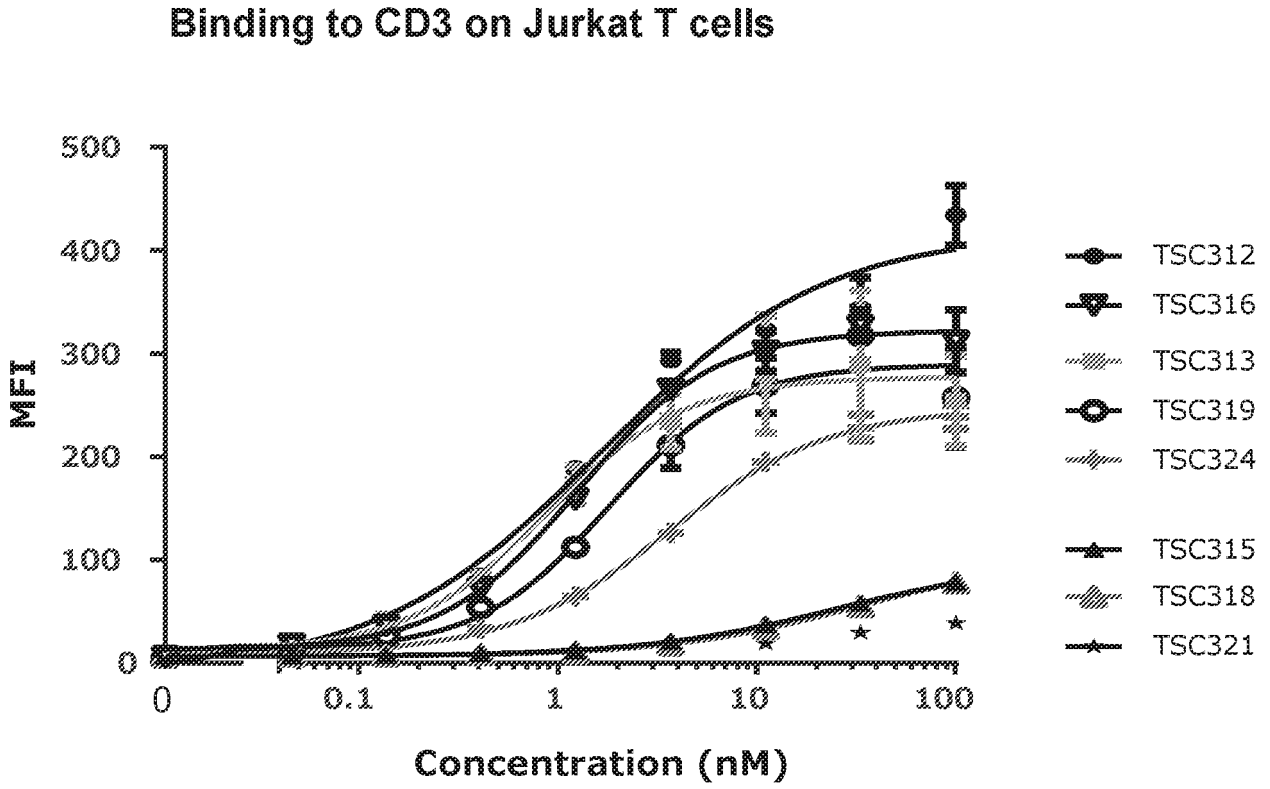
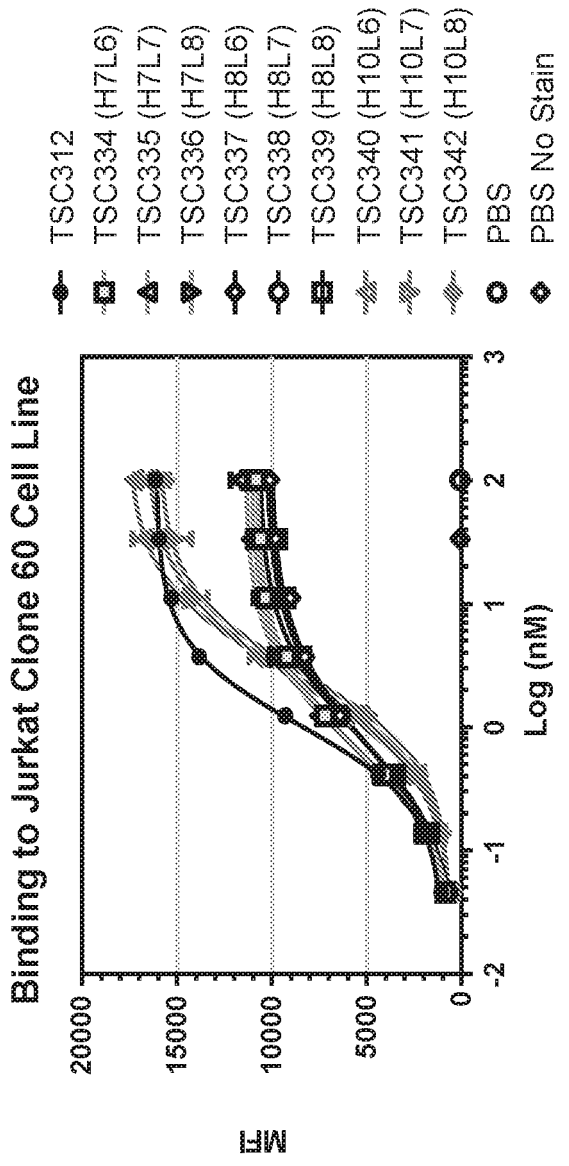
Figure 1



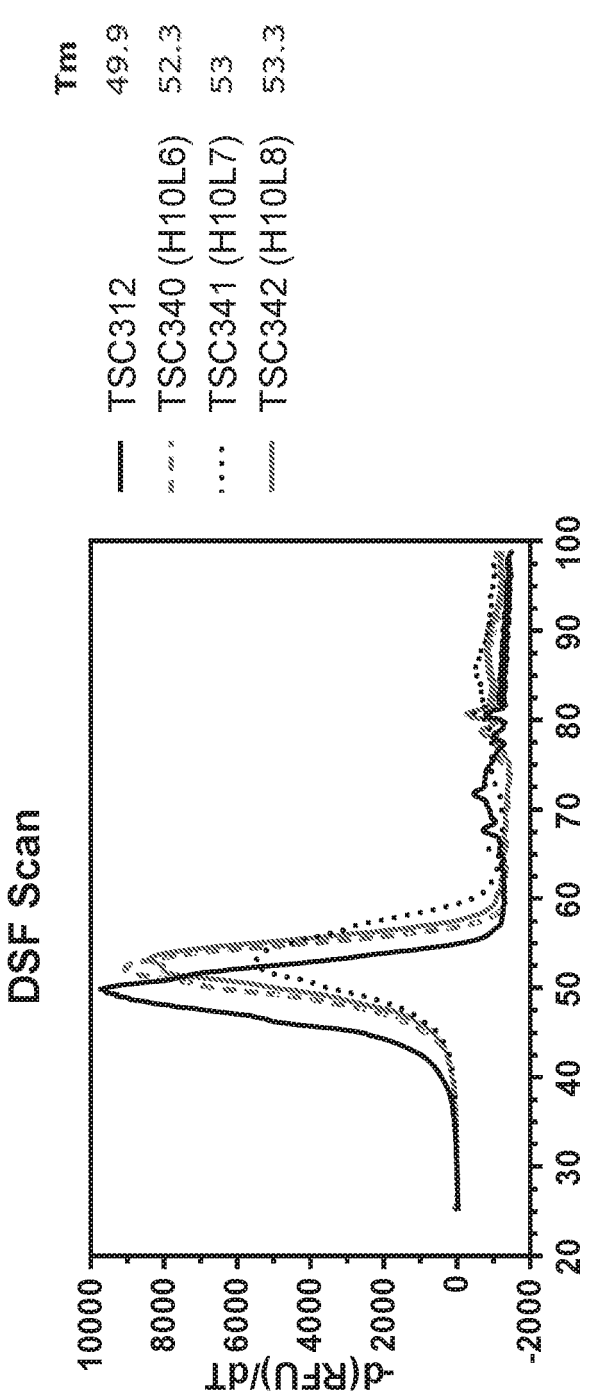
	EC $_{50}$ for CD3 binding
TSC312	1.7 +/- 0.4 nM
TSC313	0.87 +/- 0.3 nM
TSC315	na
TSC316	1.3 +/- 0.2 nM
TSC318	na
TSC319	1.8 +/- 0.4 nM
TSC321	na
TSC324	3.6 +/- 0.3 nM

Figure 2



	Top		EC50	
	Mean	SEM	Mean	SEM
TSC312	16106	86	1.04	0.03
TSC334 (H7L6)	10839	95	0.70	0.04
TSC335 (H7L7)	11431	168	0.74	0.07
TSC336 (H7L8)	11133	151	0.67	0.06
TSC337 (H8L6)	10073	143	0.73	0.07
TSC338 (H8L7)	10702	142	0.86	0.07
TSC339 (H8L8)	10334	206	0.78	0.10
TSC340 (H10L6)	17626	80	2.76	0.05
TSC341 (H10L7)	15963	229	2.67	0.15
TSC342 (H10L8)	16702	461	2.32	0.25

Figure 3


DSF Scan
Tm
TSC312 49.9
TSC340 (H10L6) 52.3
TSC341 (H10L7) 53
TSC342 (H10L8) 53.3
d(RFU)/dT
10000
8000
6000
4000
2000
0
-2000
20
30
40
50
60
70
80
90
100
Temperature (°C)

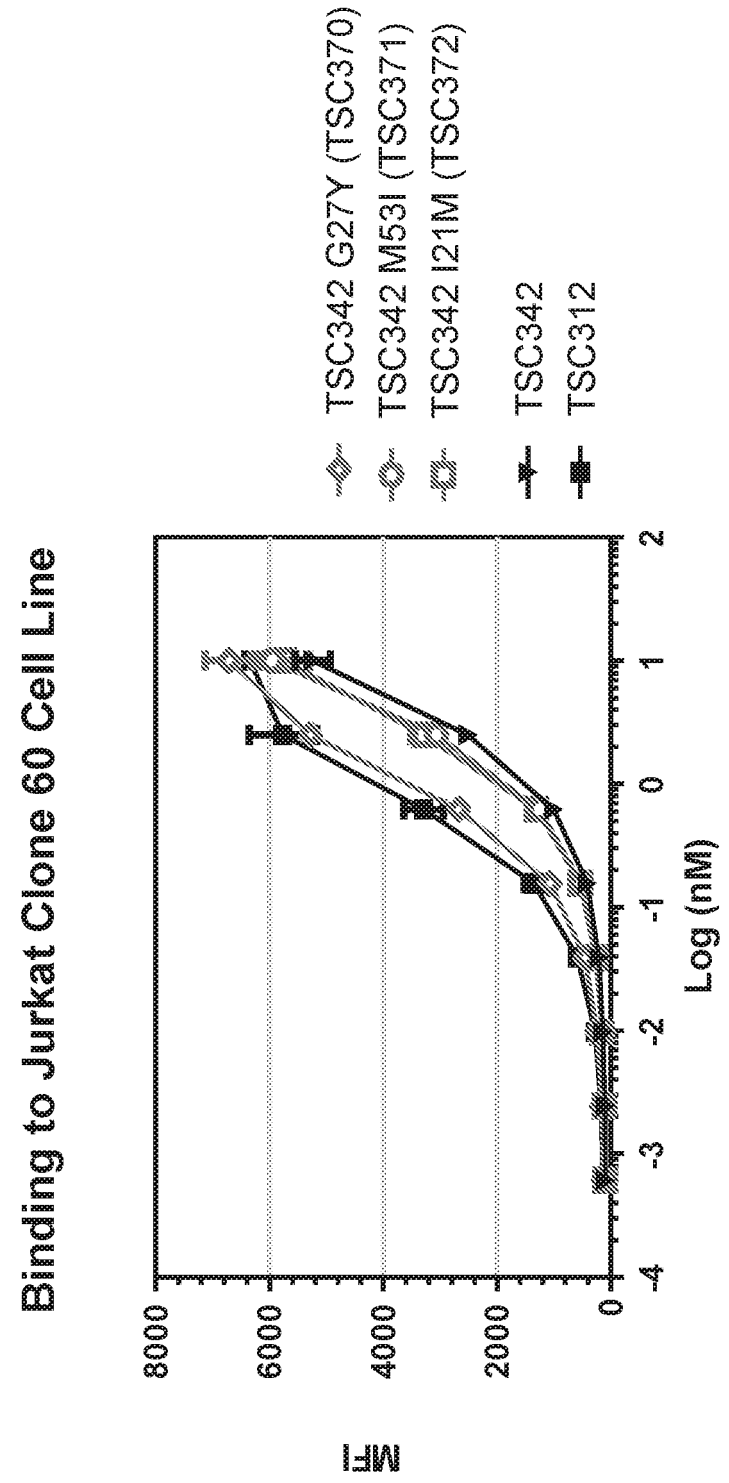

Binding to Jurkat Clone 60 Cell Line
MFI
8000
6000
4000
2000
0
-4
-3
-2
-1
0
1
2
Log (nM)
TSC342 G27Y (TSC370)
TSC342 M53I (TSC371)
TSC342 I21M (TSC372)
TSC342
TSC312

Figure 4

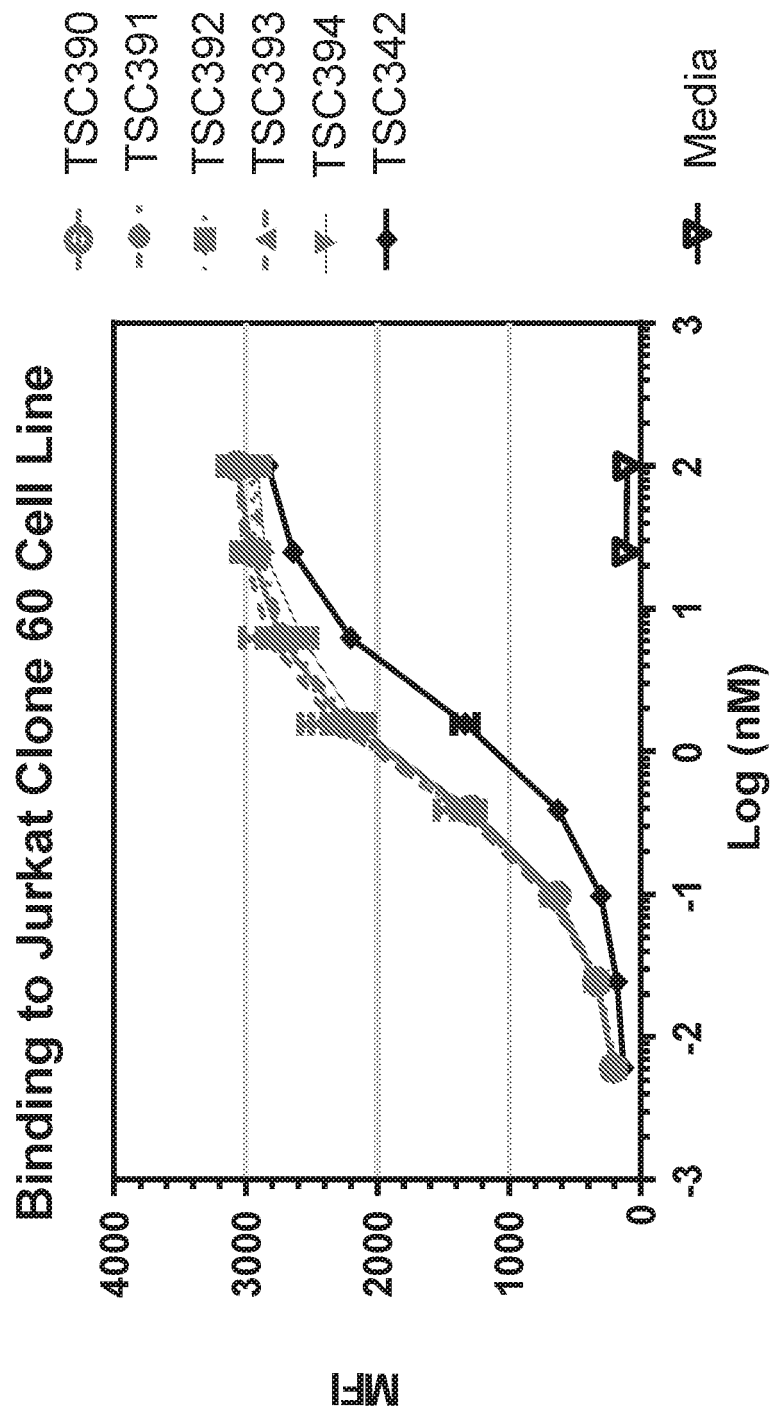
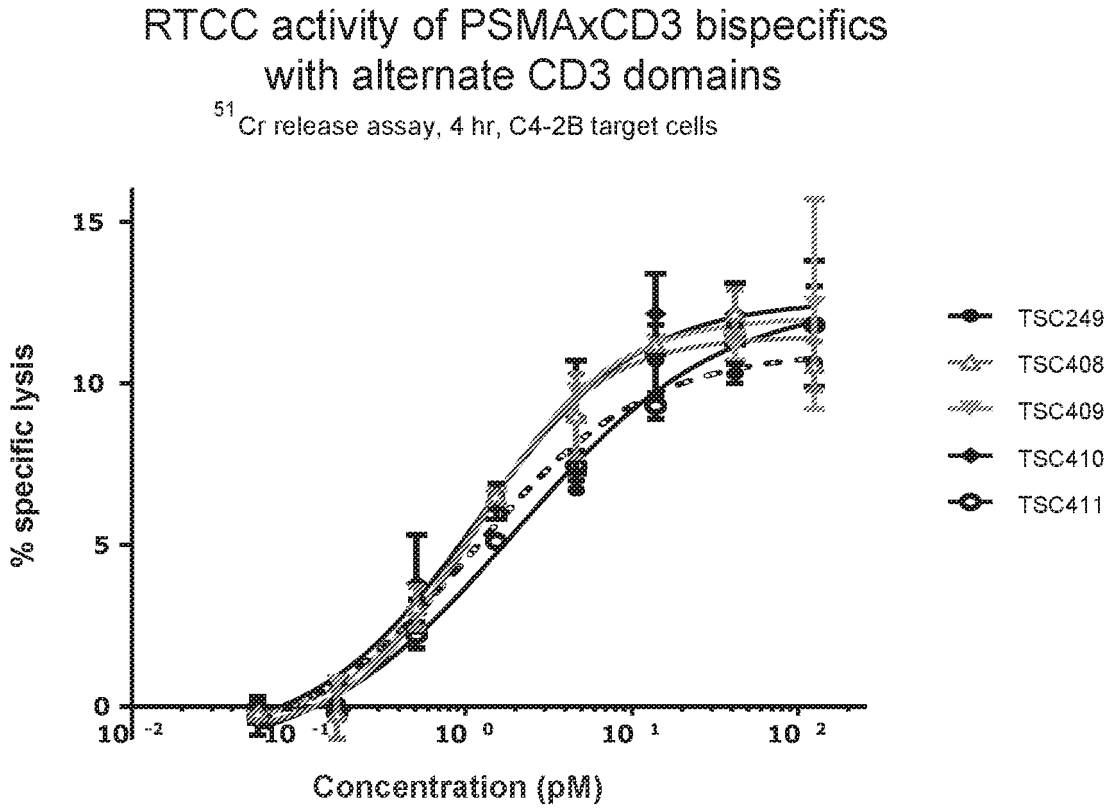

Binding to Jurkat Clone 60 Cell Line
MFI
4000
3000
2000
1000
0
-3
-2
-1
0
1
2
3
Log (nM)
TSC390
TSC391
TSC392
TSC393
TSC394
TSC342
Media

Figure 5

Figure 6



	EC $_{50}$ for RTCC
TSC249	1.12 +/- 0.42 pM
TSC408	1.10 +/- 0.26 pM
TSC409	1.20 +/- 0.39 pM
TSC410	1.18 +/- 0.52 pM
TSC411	2.03 +/- 0.53 pM

Figure 7A

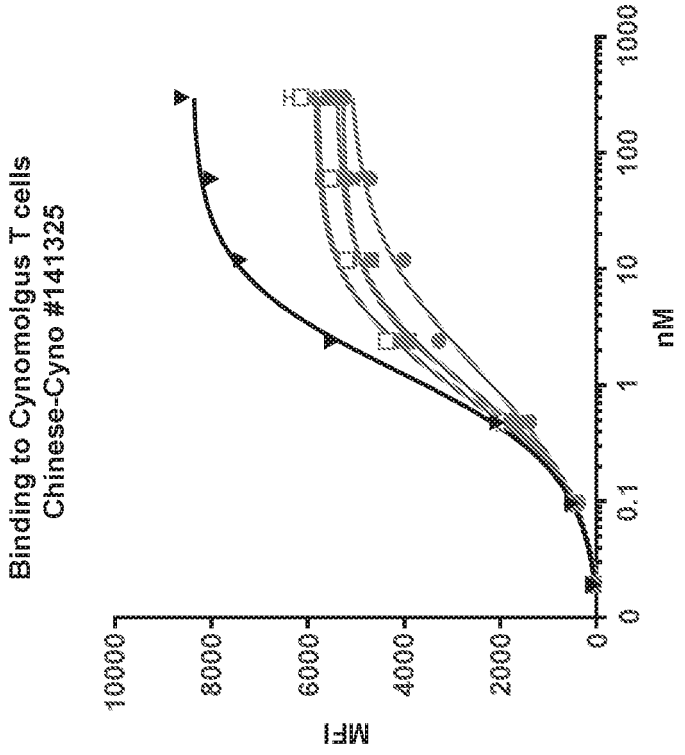


Figure 7B

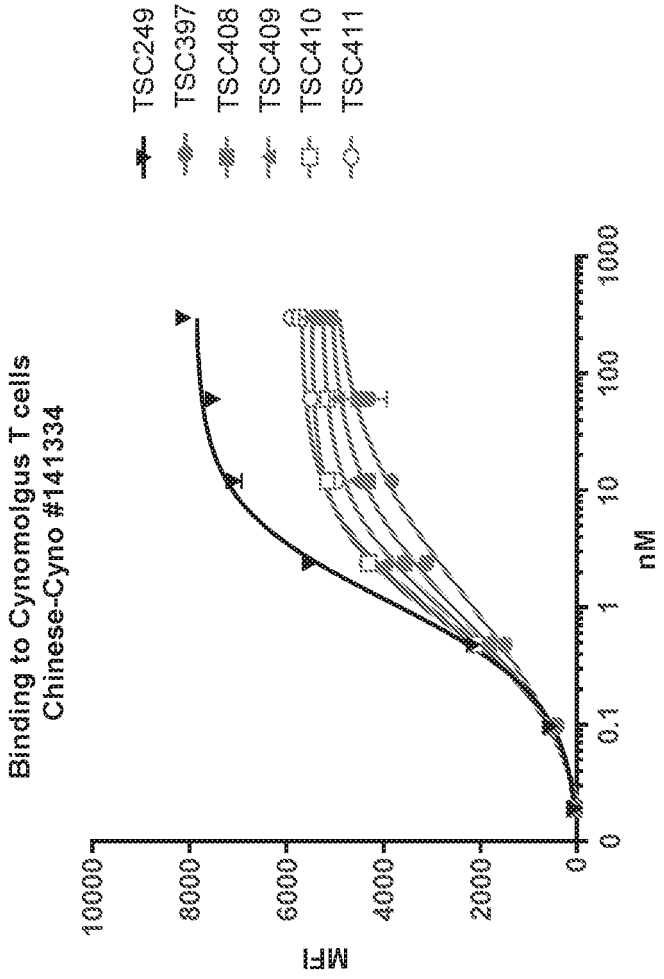


Figure 8A

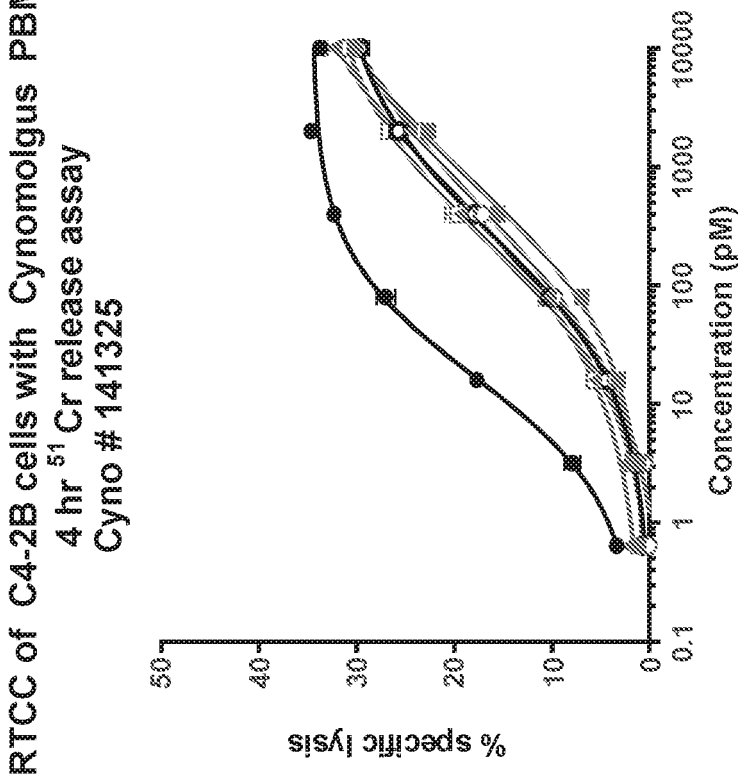


Figure 8B

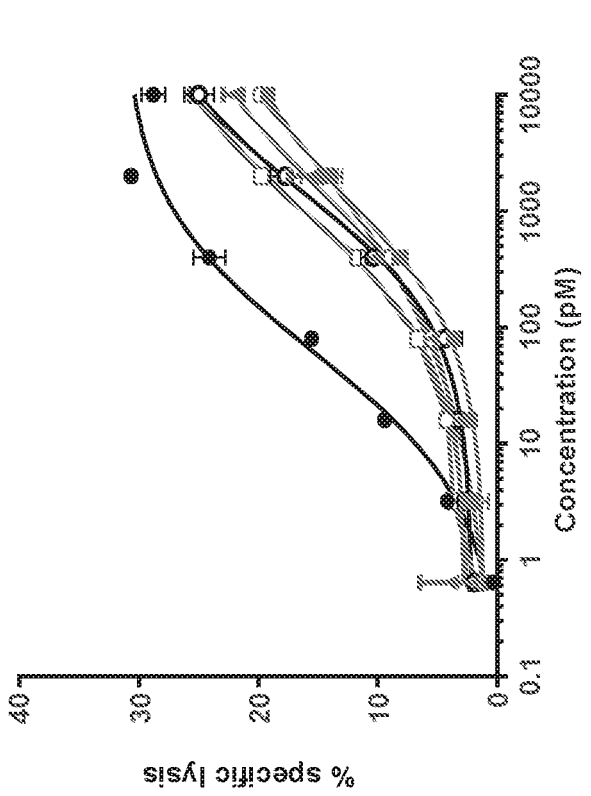


Figure 9

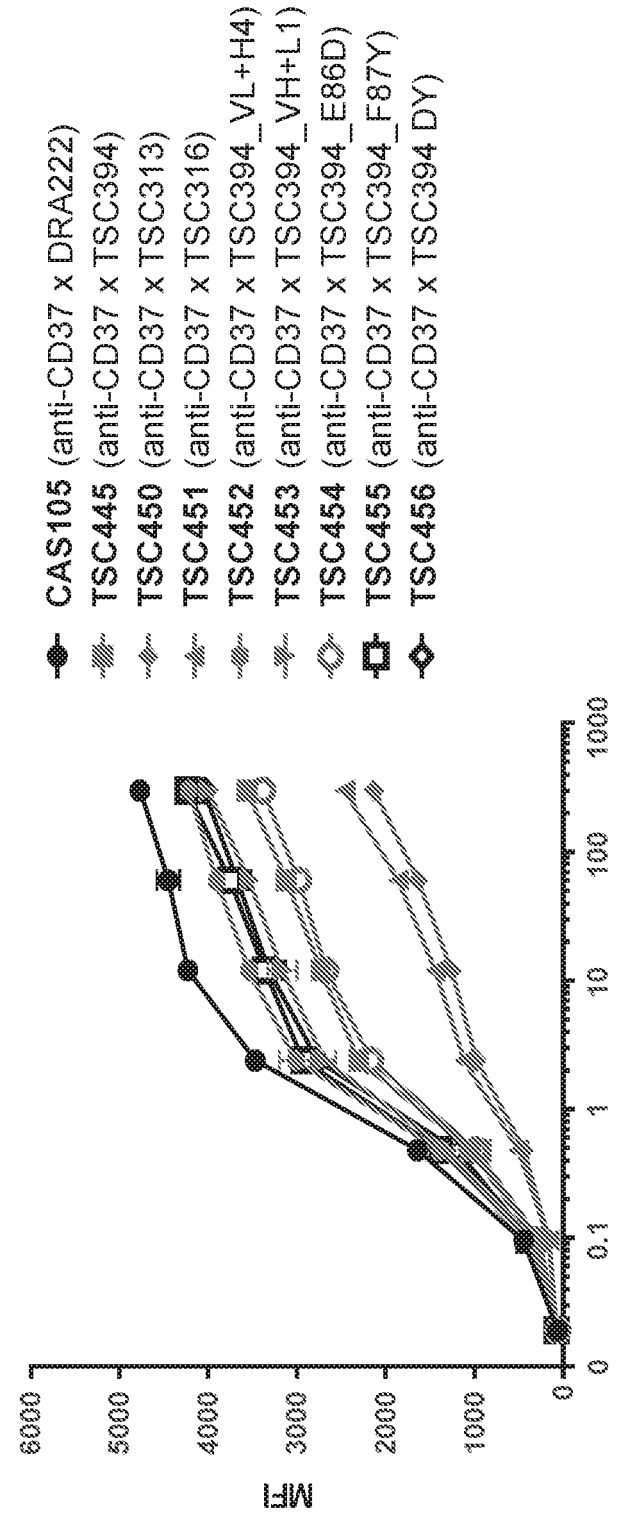
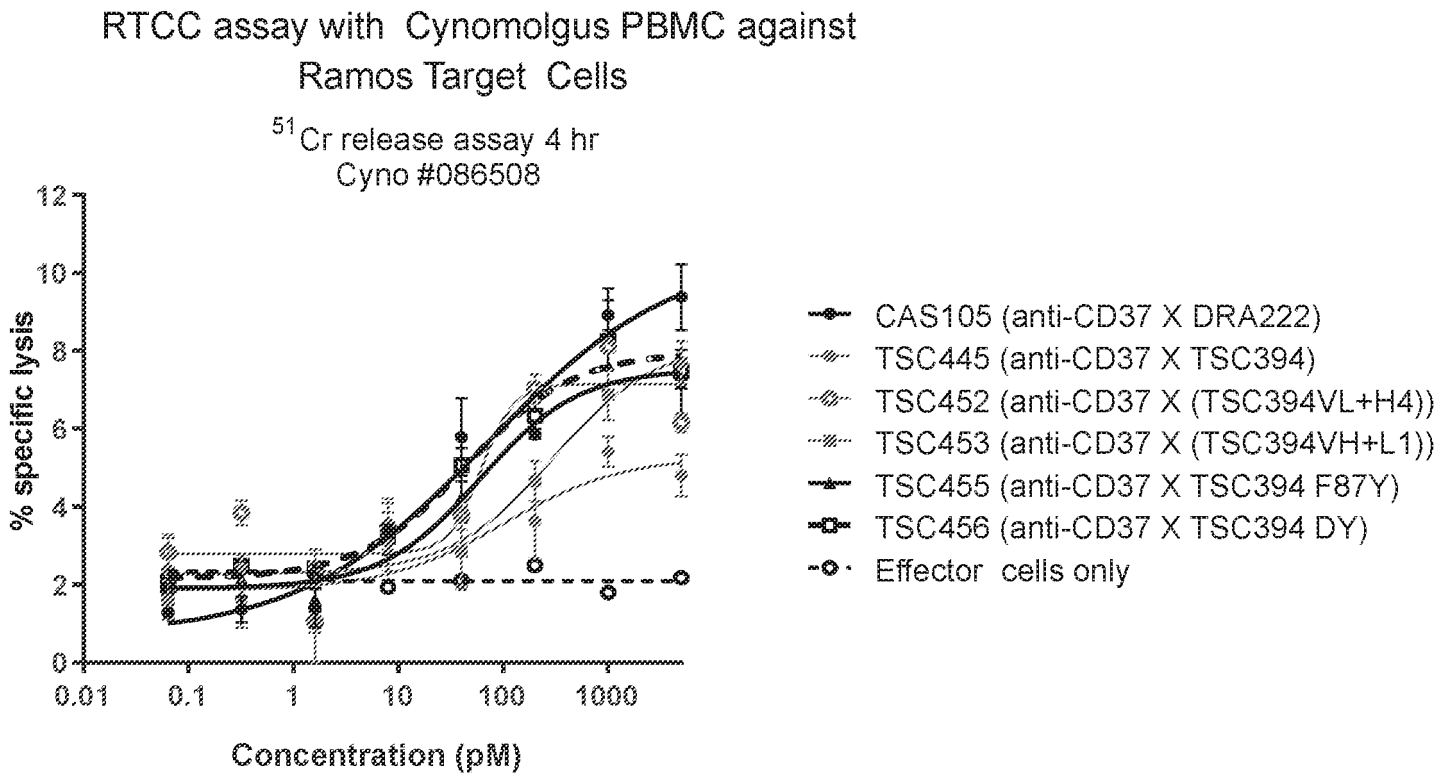

Binding to Cynomolgus T cells
Cyno #086508
CAS105 (anti-CD37 x DRA222)
TSC445 (anti-CD37 x TSC394)
TSC450 (anti-CD37 x TSC313)
TSC451 (anti-CD37 x TSC316)
TSC452 (anti-CD37 x TSC394_VL+H4)
TSC453 (anti-CD37 x TSC394_VH+L1)
TSC454 (anti-CD37 x TSC394_E86D)
TSC455 (anti-CD37 x TSC394_F87Y)
TSC456 (anti-CD37 x TSC394 DY)
MFI
6000
5000
4000
3000
2000
1000
0
0
0.1
1
10
100
1000
Concentration (nM)

Figure 10



10:1 E:T		EC50 for RTCC
Ramos	CAS105	69.47+/- 57.6 pM
Cyno #086508	TSC445	101.3+/- 142.1 pM
	TSC452	61.65 +/- 45.57 pM
	TSC453	298.6 +/- 218.9 pM
	TSC455	60.18 +/- 21.51 pM
	TSC456	44.78 +/- 19.9 pM

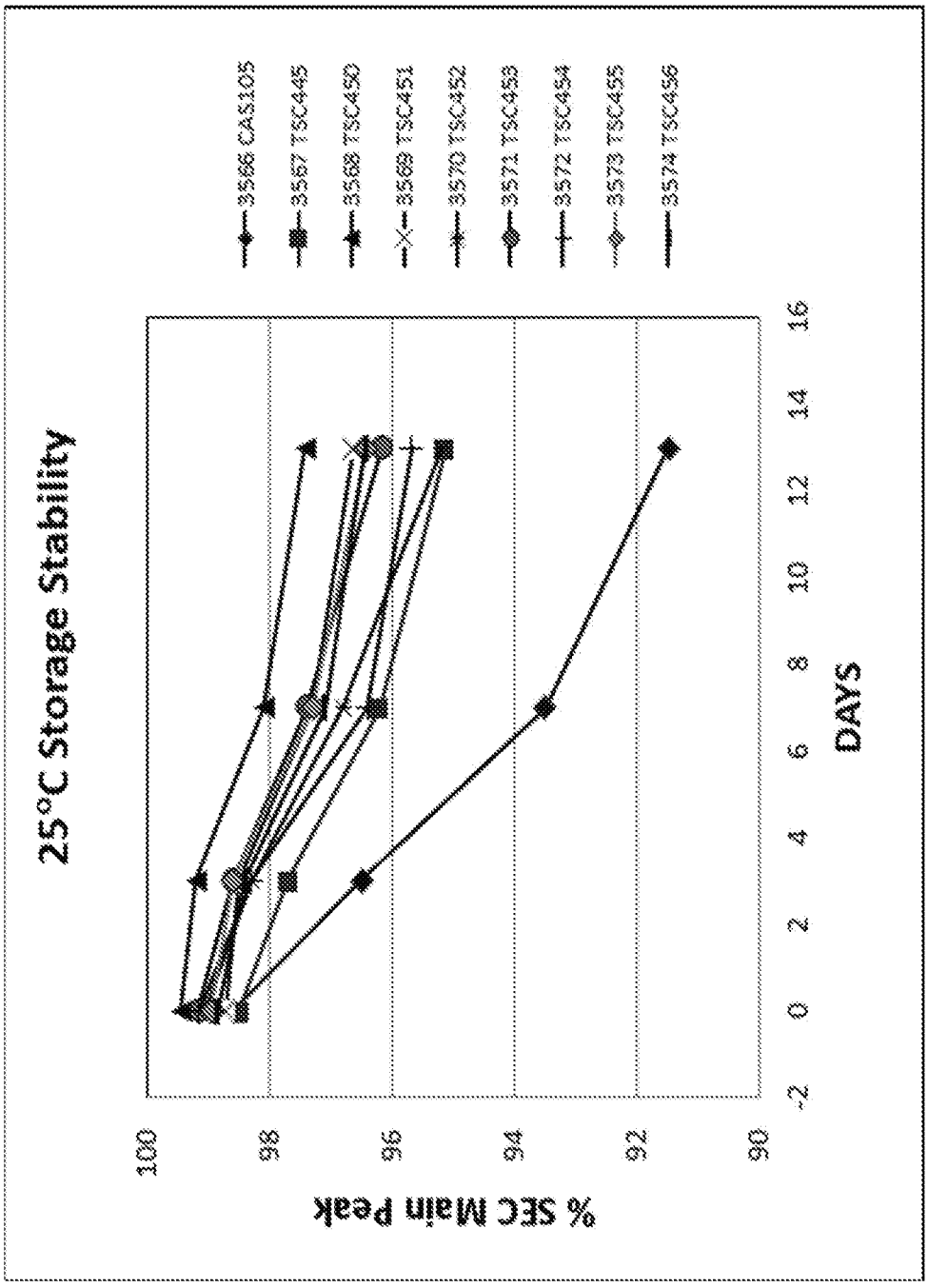
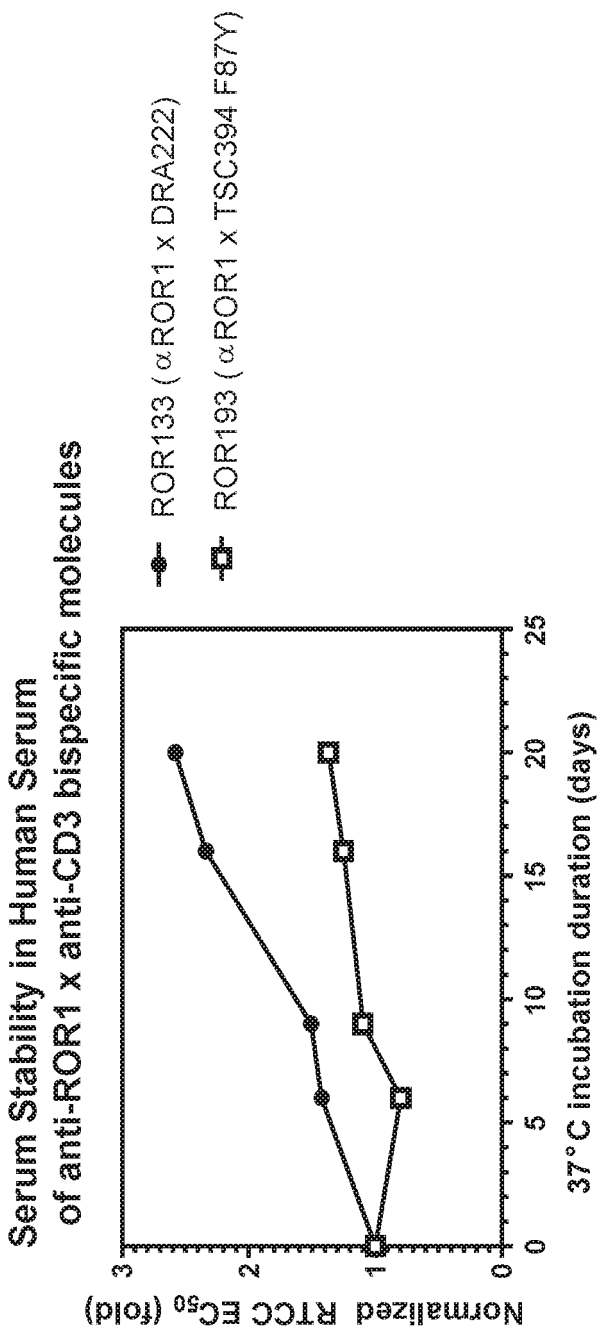

25°C Storage Stability
% SEC Main Peak
DAYS
100
98
96
94
92
90
-2
0
2
4
6
8
10
12
14
16
3566 CAS105
3567 TSC445
3568 TSC450
3569 TSC451
3570 TSC452
3571 TSC453
3572 TSC454
3573 TSC455
3574 TSC456

Figure 11

Figure 12


Serum Stability in Human Serum
of anti-ROR1 x anti-CD3 bispecific molecules
ROR133 (αROR1 x DRA222)
ROR193 (αROR1 x TSC394 F87Y)
Normalized RTCC EC50 (fold)
37°C incubation duration (days)
0
1
2
3
0
5
10
15
20
25

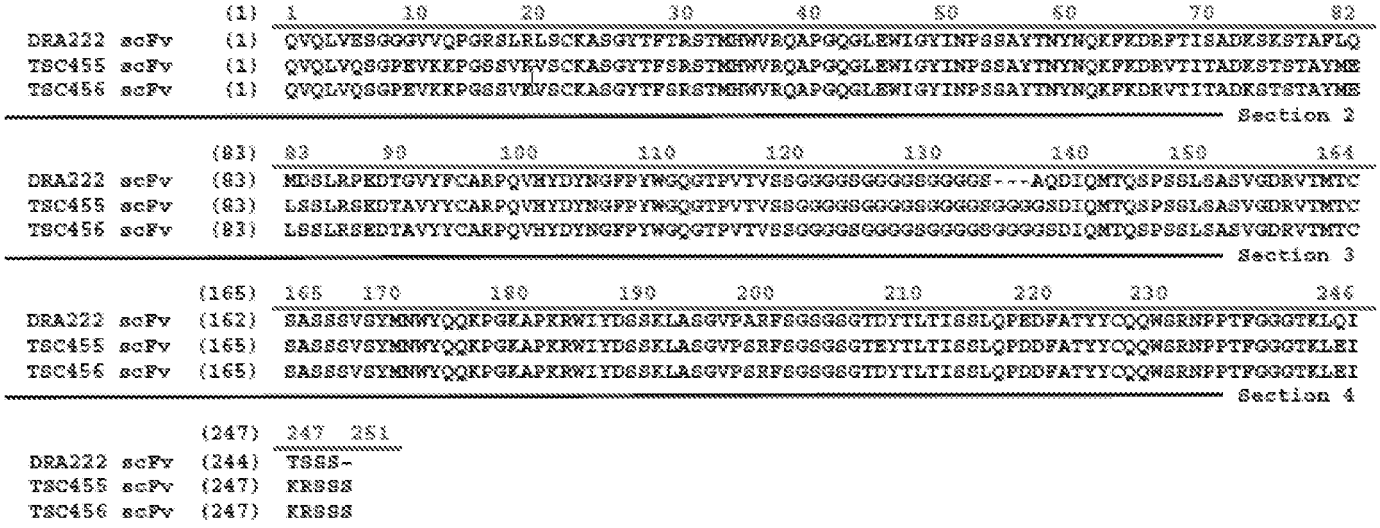

(1) 1 10 20 30 40 50 60 70 82
DRA222 scFv (1) QVQLVESGGGVVQPGRSLRLSCKASGYTFTRSTMHWVRQAPGQGLEWIGYINPSSAYTNYNQKFKDRFTISADKSKSTAFLQ
TSC455 scFv (1) QVQLVQSGPEVKKPGSSVKVSCKASGYTFSRSTMHWVRQAPGQGLEWIGYINPSSAYTNYNQKFKDRVTITADKSTSTAYME
TSC456 scFv (1) QVQLVQSGPEVKKPGSSVKVSCKASGYTFSRSTMHWVRQAPGQGLEWIGYINPSSAYTNYNQKFKDKVTITADKSTSTAYME
Section 2
(83) 83 90 100 110 120 130 140 150 164
DRA222 scFv (83) MESLRPEDTGVYFCARPQVHYDYNGFPYWGQGTPVTVSSGGGGSGGGGSGGGGS---AQDIQMTQSPSSLSASVGDRVTMTC
TSC455 scFv (83) LSSLRSEDTAVYYCARPQVHYDYNGFPYWGQGTPVTVSSGGGGSGGGGSGGGGSGGGGSDIQMTQSPSSLSASVGDRVTMTC
TSC456 scFv (83) LSSLRSEDTAVYYCARPQVHYDYNGFPYWGQGTPVTVSSGGGGSGGGGSGGGGSGGGGSDIQMTQSPSSLSASVGDRVTMTC
Section 3
(165) 165 170 180 190 200 210 220 230 246
DRA222 scFv (162) SASSSVSYMNWYQQKPGKAPKRWIYDSSKLASGVPARFSGSGSGTDYTLTISSLQPEDFATYYCQQWSRNPPTFGGGTKLQI
TSC455 scFv (165) SASSSVSYMNWYQQKPGKAPKRWIYDSSKLASGVPSRFSGSGSGTEYTLTISSLQPDDFATYYCQQWSRNPPTFGGGTKLEI
TSC456 scFv (165) SASSSVSYMNWYQQKPGKAPKRWIYDSSKLASGVPSRFSGSGSGTDYTLTISSLQPDDFATYYCQQWSRNPPTFGGGTKLEI
Section 4
(247) 247 251
DRA222 scFv (244) TSSS-
TSC455 scFv (247) KRSSS
TSC456 scFv (247) KRSSS

Figure 13

Figure 14

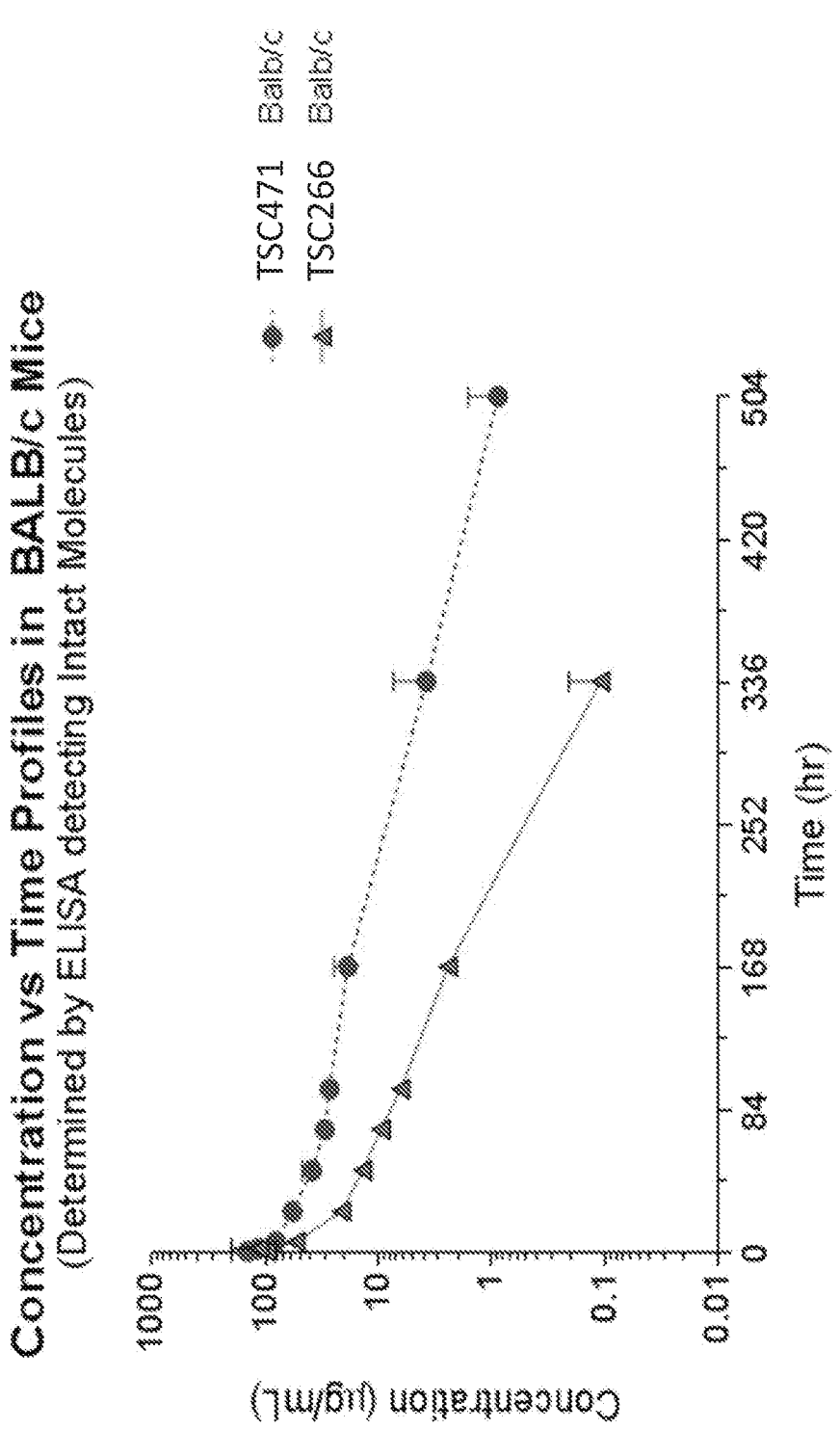

Concentration vs Time Profiles in BALB/c Mice
(Determined by ELISA detecting Intact Molecules)
TSC471 Balb/c
TSC266 Balb/c
Concentration (µg/mL)
1000
100
10
1
0.1
0.01
0
84
168
252
336
420
504
Time (hr)
5H5-bio detection
Diluted Serum
1H5 coated plates

Figure 15

NCA Parameter	Units	TSC471	TSC266
HL_Lambda_z	**hr**	**83.631**	**41.5**
Cmax (Tmax)	ug/mL	144.0 (at 0.25 hr)	114.33 (at 2 hrs)
AUCall	hr*ug/mL	8561	2673.7
AUCINF_obs	hr*ug/mL	8668	2671
Vz_obs	**mL/kg**	**150.5**	238.7
Cl_obs	**mL/hr/kg**	**1.247**	3.9872
Vss_obs	mL/kg	137.70	197.8

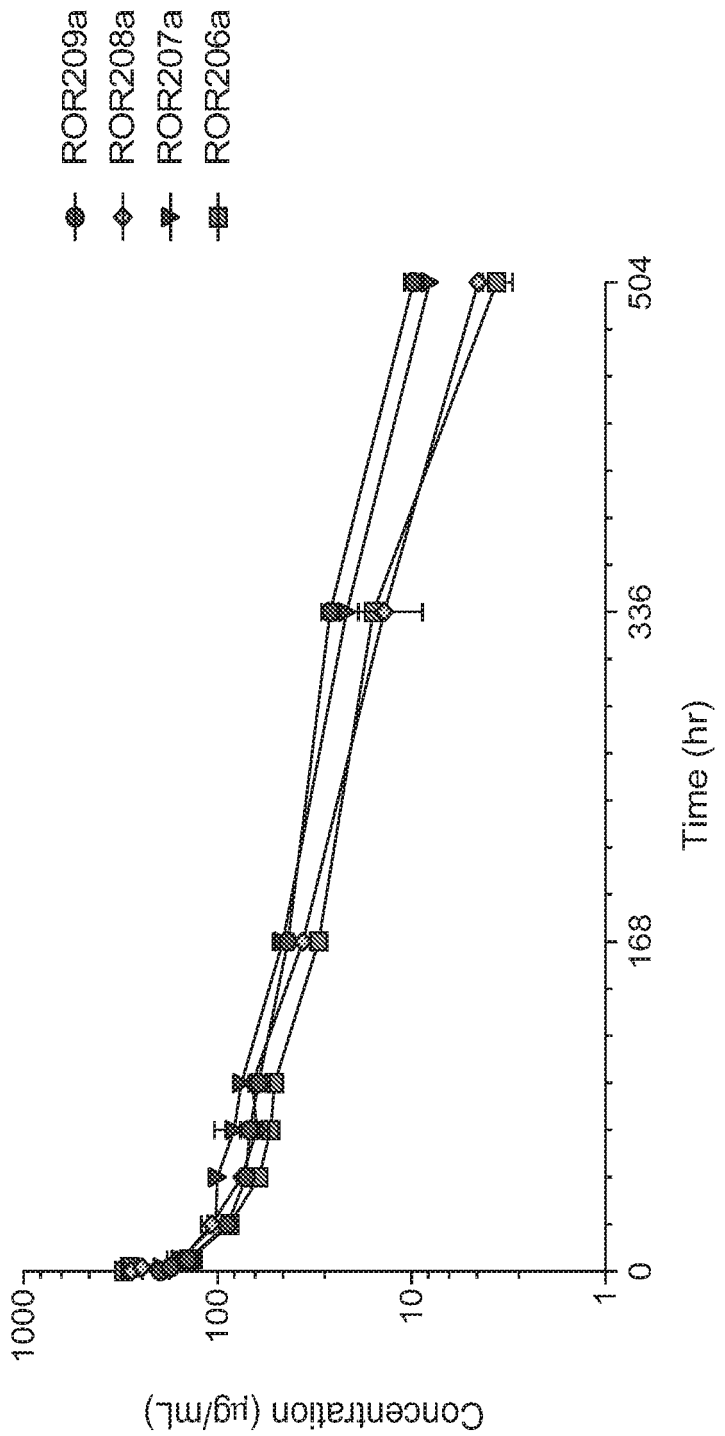

ROR209a
ROR208a
ROR207a
ROR206a
Concentration (µg/mL)
1000
100
10
1
0
168
336
504
Time (hr)

Figure 16

Figure 17A

Parameter Estimate	HL	Cmax	AUC all	AUC inf	Volume	Clearance
Units	hr	ug/mL	hr*ug/mL	hr*ug/mL	mL/kg	mL/hr/kg
ROR206a	116.8	306.3	16306	16920	100.1	0.594
ROR207a	128.5	280.6	22617	24113	78.1	0.421
ROR208a	112.1	278.7	18545	19279	87.4	0.540
ROR209a	163.3	198.2	20941	23252	107.8	0.458

Figure 17B

Parameter Estimate	CL	CLD2	V1	V2	Alpha HL	Beta HL	AUC
Units	mL/hr/kg	mL/hr/kg	mL/kg	mL/kg	hr	hr	hr*ug/mL
ROR206a	0.635	4.197	29.9	70.3	3.22	117.8	15818
ROR207a	0.440	6.165	35.6	44.6	2.18	129.2	23042
ROR208a	0.581	3.940	35.6	49.9	3.48	107.3	17926
ROR209a	0.469	3.069	53.5	56.0	5.93	168.3	22666

Figure 18

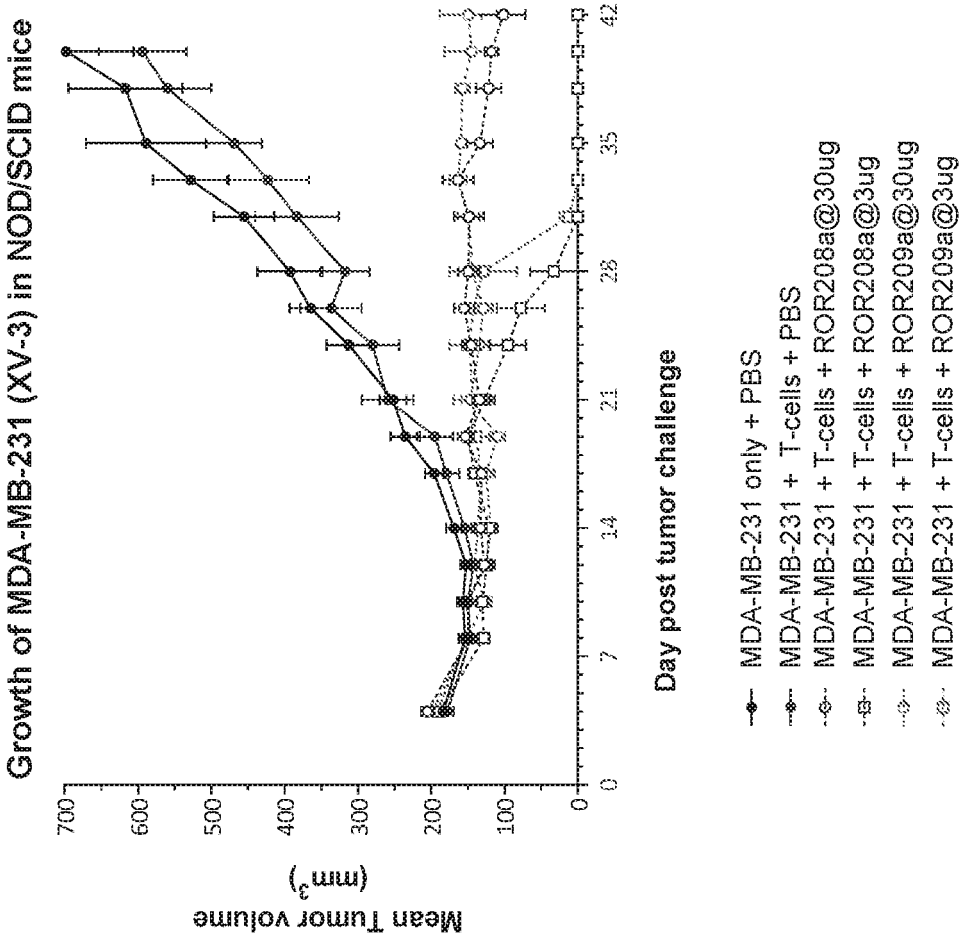
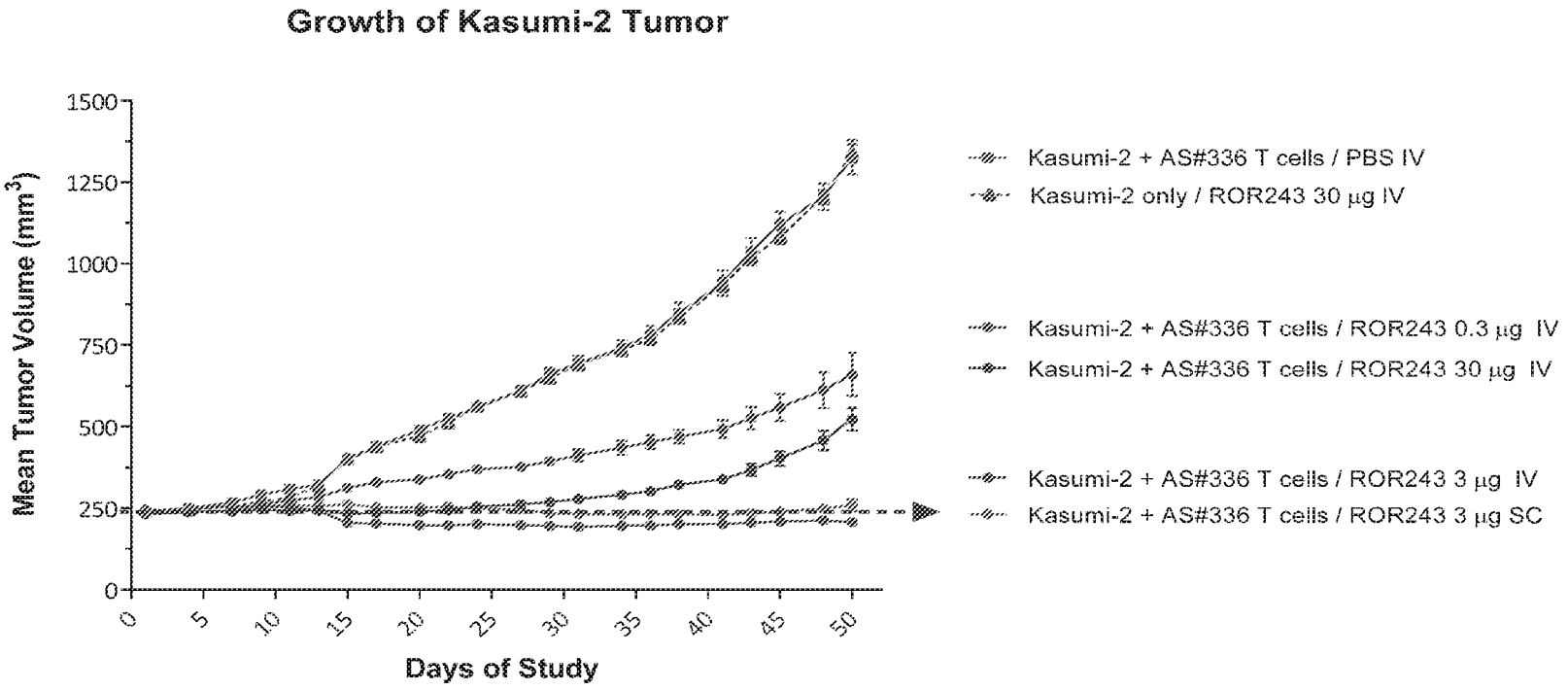

Growth of MDA-MB-231 (XV-3) in NOD/SCID mice
Mean Tumor volume (mm3)
700
600
500
400
300
200
100
0
0
7
14
21
28
35
42
Day post tumor challenge
MDA-MB-231 only + PBS
MDA-MB-231 + T-cells + PBS
MDA-MB-231 + T-cells + ROR208a@30ug
MDA-MB-231 + T-cells + ROR208a@3ug
MDA-MB-231 + T-cells + ROR209a@30ug
MDA-MB-231 + T-cells + ROR209a@3ug

Figure 19



*Tumor volumes are plotted as the mean + SEM of tumor volume measurement

*Tumor volumes are plotted until first mouse in study reached the endpoint