	Epitope Bin	Affinity Hu Biacore K_D nM	Native cell Avidity EC50 nM	Cyno Avidity EC50 nM	ADCC EC50 nM	ADCP EC50 pM	CDC # EC50 nM	Internalization T ½ (hr)
Chimeric mouse anti-human CD27L	3	1.25	0.60	2.22	0.195	2.17	2.64	0.41
Ab1	1	0.62	0.32	0.05	0.021	1.12	1.0	1.03
Ab2	1	0.59	0.24	0.24	0.034	1.19	1.17	0.69
Ab3	1	4.35	4.18	2.80	0.715	64.8	10.6	0.49
Ab4	3	3.05	0.25	0.48	0.332	1.55	1.54	0.30
Ab5	2	10.4	0.66	1.40	0.422	2.36	5.28	0.75
Ab6	4	6.06	0.87	0.87	0.167	1.88	4.20	1.08
Ab7	4	0.71	0.18	0.43	0.076	0.80	0.64	0.43
Ab8	2	10.8	0.09	0.34	> 67	1.60	> 67	1.81

FIG. 1

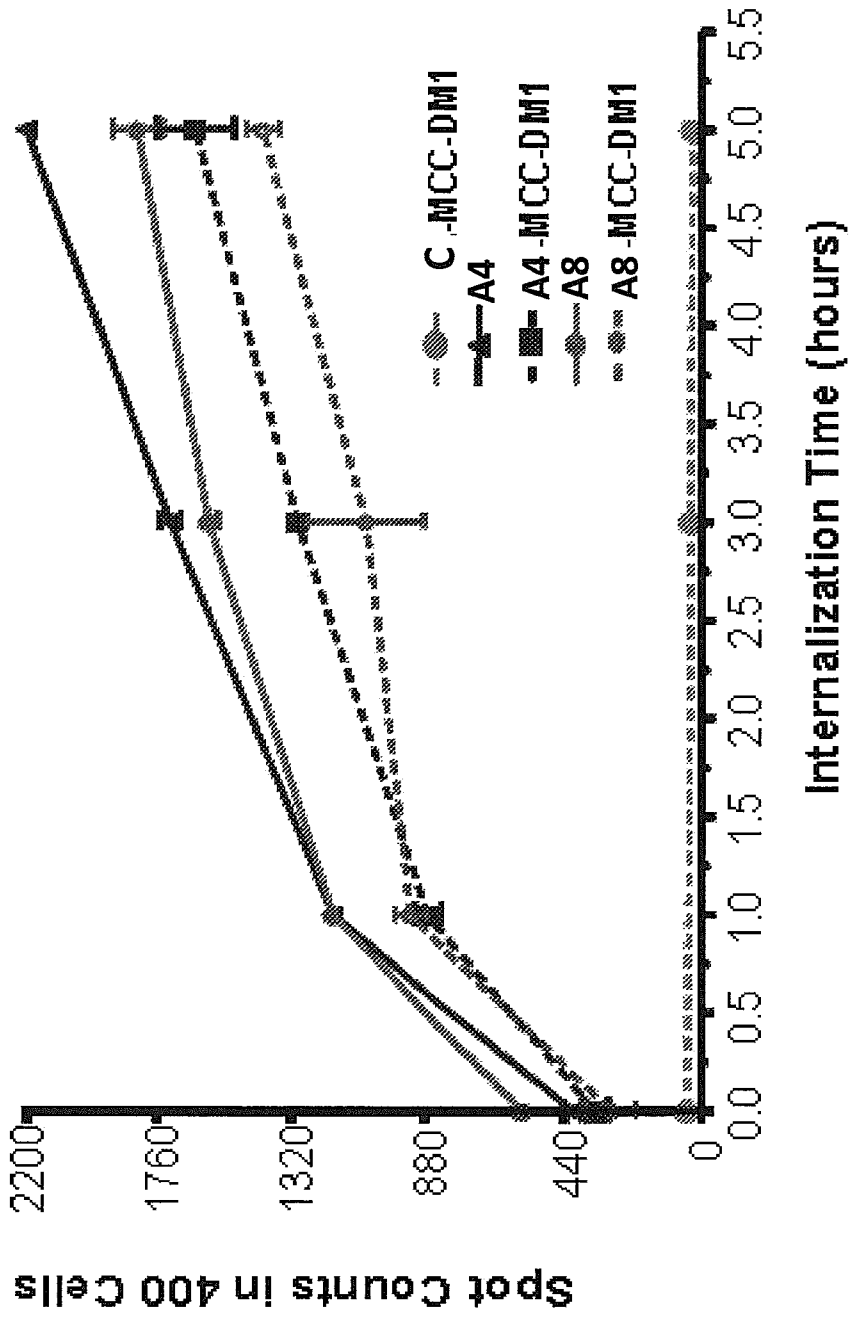

Spot Counts in 400 Cells
2200
1760
1320
880
440
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
Internalization Time (hours)
C-MCC-DM1
A4
A4-MCC-DM1
A8
A8-MCC-DM1

FIG. 2

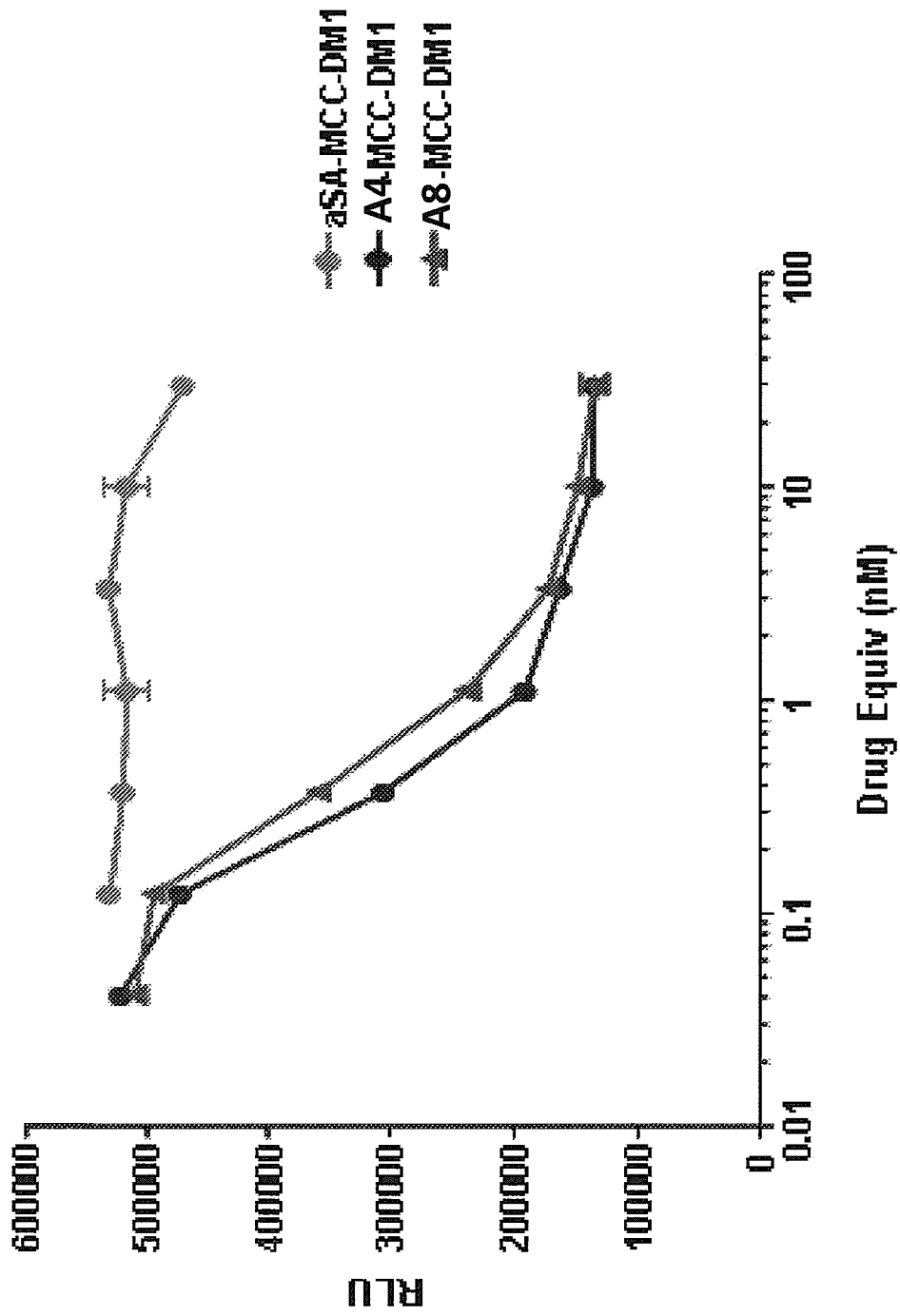

aSA-MCC-DM1
A4-MCC-DM1
A8-MCC-DM1
RLU
600000
500000
400000
300000
200000
100000
0
0.01
0.1
1
10
100
Drug Equiv (nM)

FIG. 3

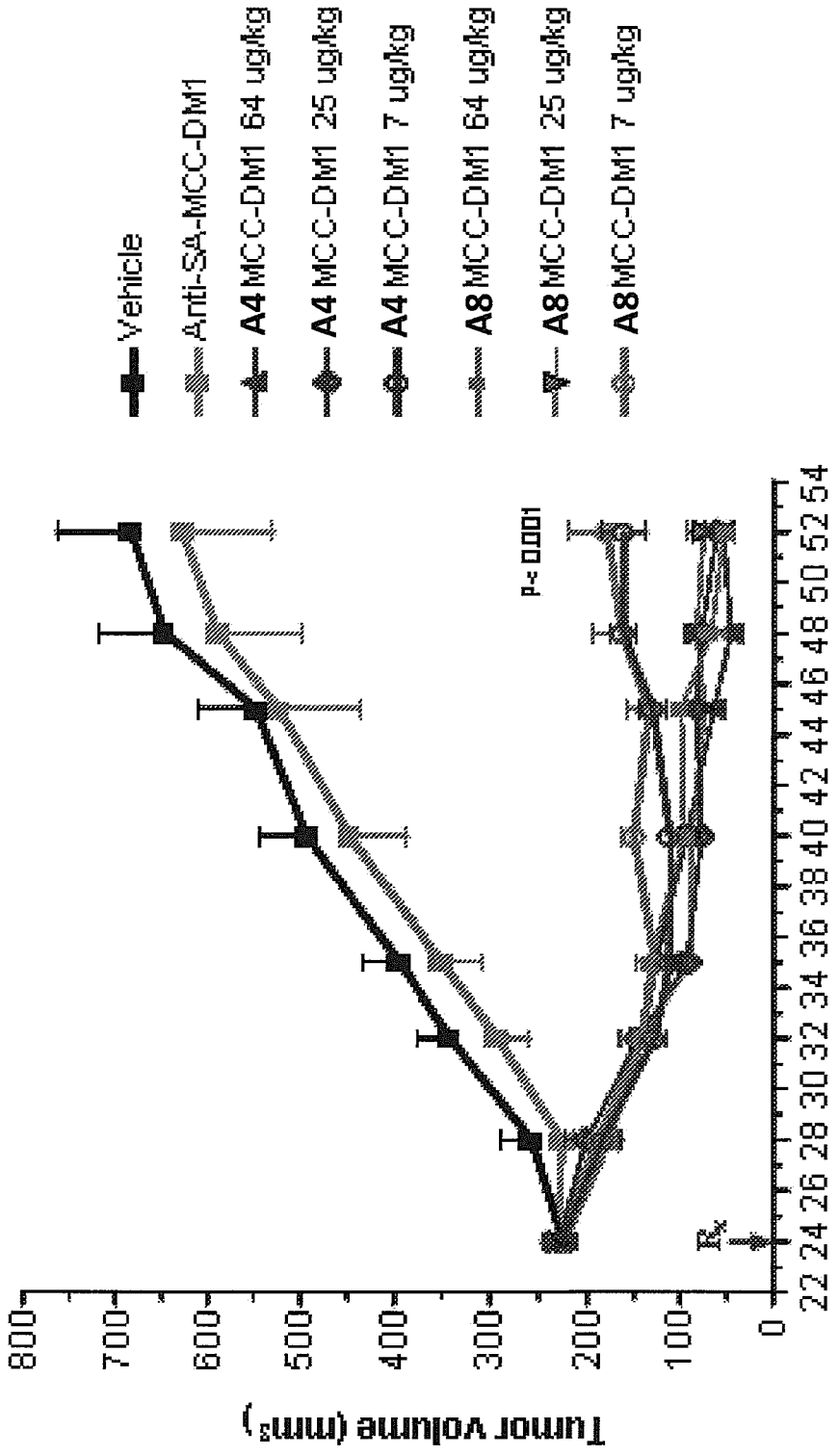

Vehicle
Anti-SA-MCC-DM1
A4 MCC-DM1 64 ug/kg
A4 MCC-DM1 25 ug/kg
A4 MCC-DM1 7 ug/kg
A8 MCC-DM1 64 ug/kg
A8 MCC-DM1 25 ug/kg
A8 MCC-DM1 7 ug/kg
p< 0.0001
Rx
Tumor volume (mm³)
Day post tumor implant
0
100
200
300
400
500
600
700
800
22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54

FIG. 4

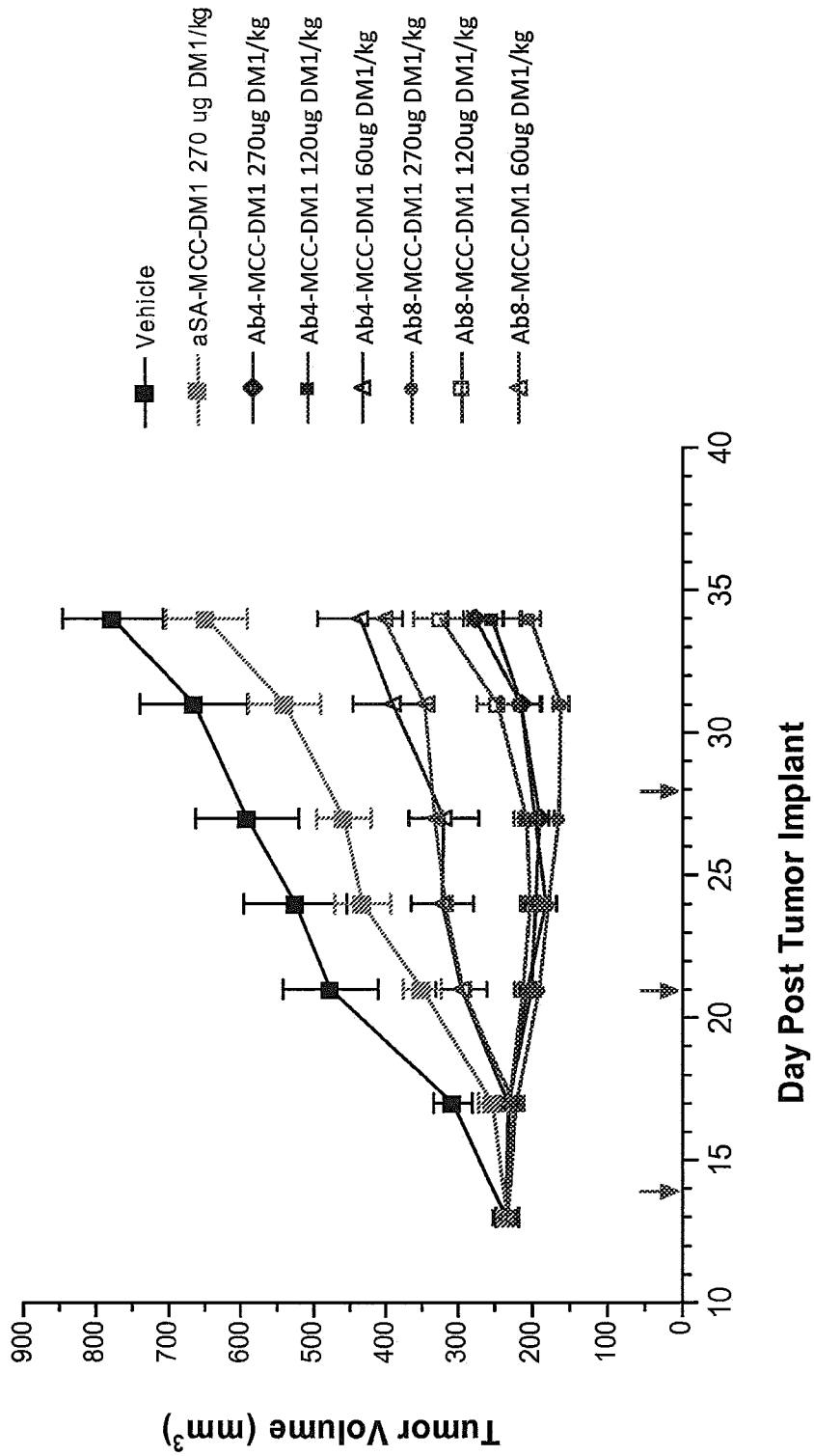

Vehicle
aSA-MCC-DM1 270 ug DM1/kg
Ab4-MCC-DM1 270ug DM1/kg
Ab4-MCC-DM1 120ug DM1/kg
Ab4-MCC-DM1 60ug DM1/kg
Ab8-MCC-DM1 270ug DM1/kg
Ab8-MCC-DM1 120ug DM1/kg
Ab8-MCC-DM1 60ug DM1/kg
Tumor Volume (mm³)
900
800
700
600
500
400
300
200
100
0
10
15
20
25
30
35
40
Day Post Tumor Implant

FIG. 5

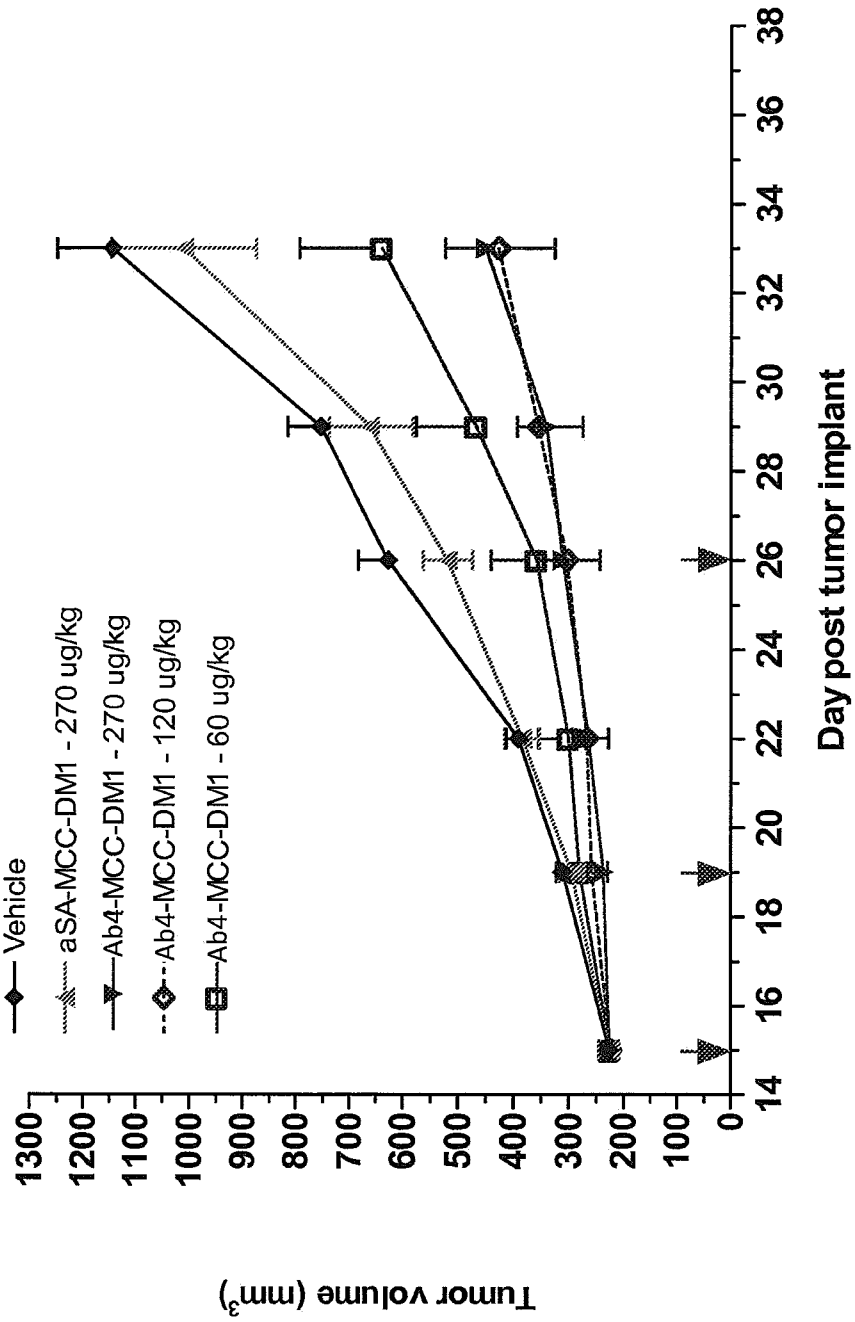

Vehicle
aSA-MCC-DM1 - 270 ug/kg
Ab4-MCC-DM1 - 270 ug/kg
Ab4-MCC-DM1 - 120 ug/kg
Ab4-MCC-DM1 - 60 ug/kg
Tumor volume (mm3)
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
14
16
18
20
22
24
26
28
30
32
34
36
38
Day post tumor implant

FIG. 6

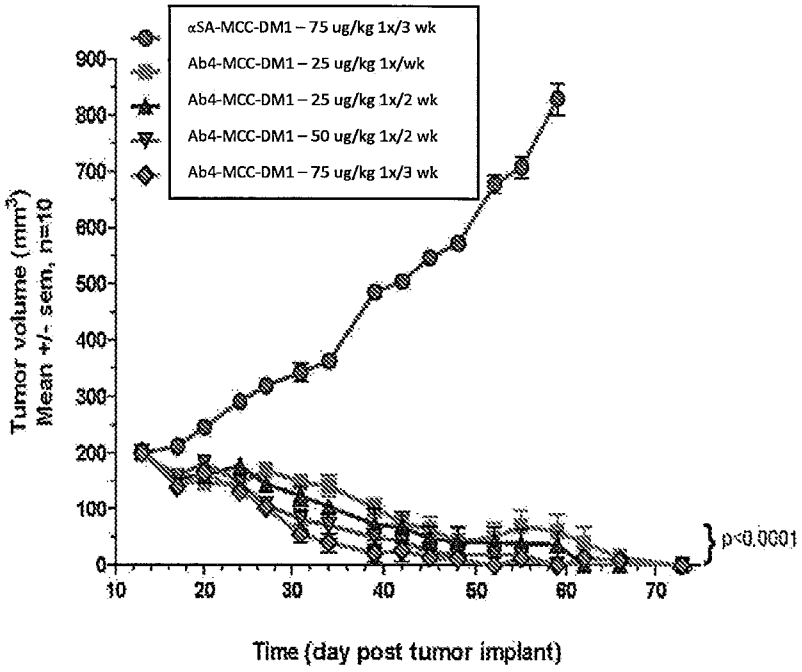

αSA-MCC-DM1 – 75 ug/kg 1x/3 wk
Ab4-MCC-DM1 – 25 ug/kg 1x/wk
Ab4-MCC-DM1 – 25 ug/kg 1x/2 wk
Ab4-MCC-DM1 – 50 ug/kg 1x/2 wk
Ab4-MCC-DM1 – 75 ug/kg 1x/3 wk
Tumor volume (mm3)
Mean +/- sem, n=10
900
800
700
600
500
400
300
200
100
0
10
20
30
40
50
60
70
p<0.0001
Time (day post tumor implant)

Figure 7

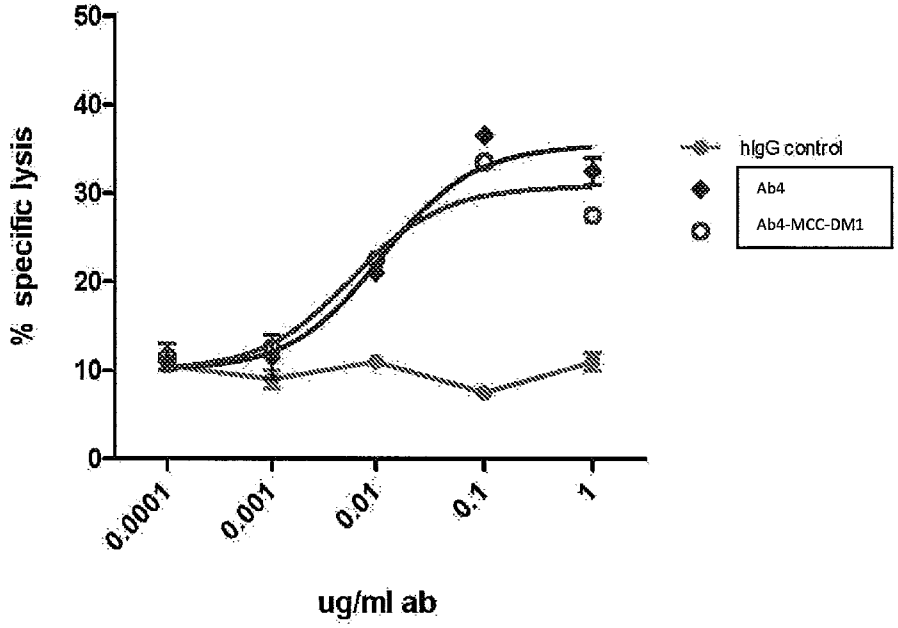

50
40
30
20
10
0
% specific lysis
0.0001
0.001
0.01
0.1
1
ug/ml ab
hIgG control
Ab4
Ab4-MCC-DM1

FIG. 8

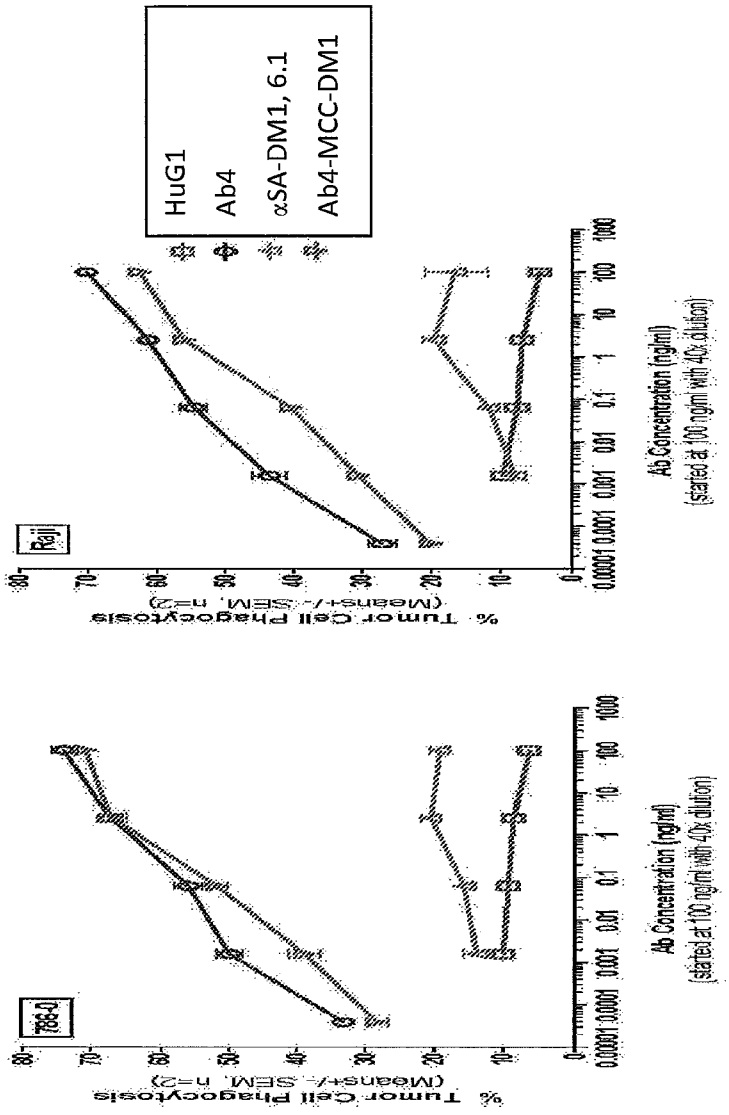
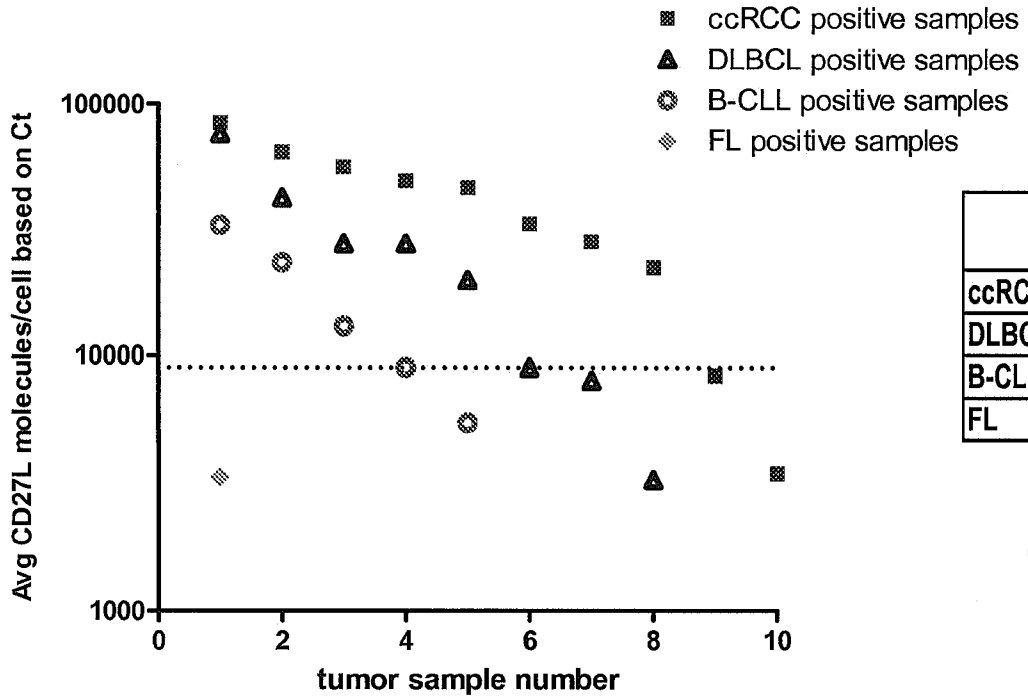

HuG1
Ab4
αSA-DM1, 6.1
Ab4-MCC-DM1
Raji
7884-0
% Tumor Cell Phagocytosis
(Means+/- SEM, n=2)
Ab Concentration (ng/ml)
(started at 100 ng/ml with 40x dilution)

FIG. 9

Comparison of CD27L Expression (estimated sites/cell) for primary frozen tumor samples that scored "positive" by masked IHC



In vitro 9000 sites per cell required for sensitivity .....

	IHC Postive	> Receptor Density Threshold
ccRCC	10/13 (77%)	9/13 (69%)
DLBCL	8/15 (53%)	7/15 (47%)
B-CLL	5/10 (50%)	4/10 (40%)
FL	1/10 (10%)	0/10 (0%)

- % of positive samples:
ccRCC > DLBCL > B-CLL >> FL

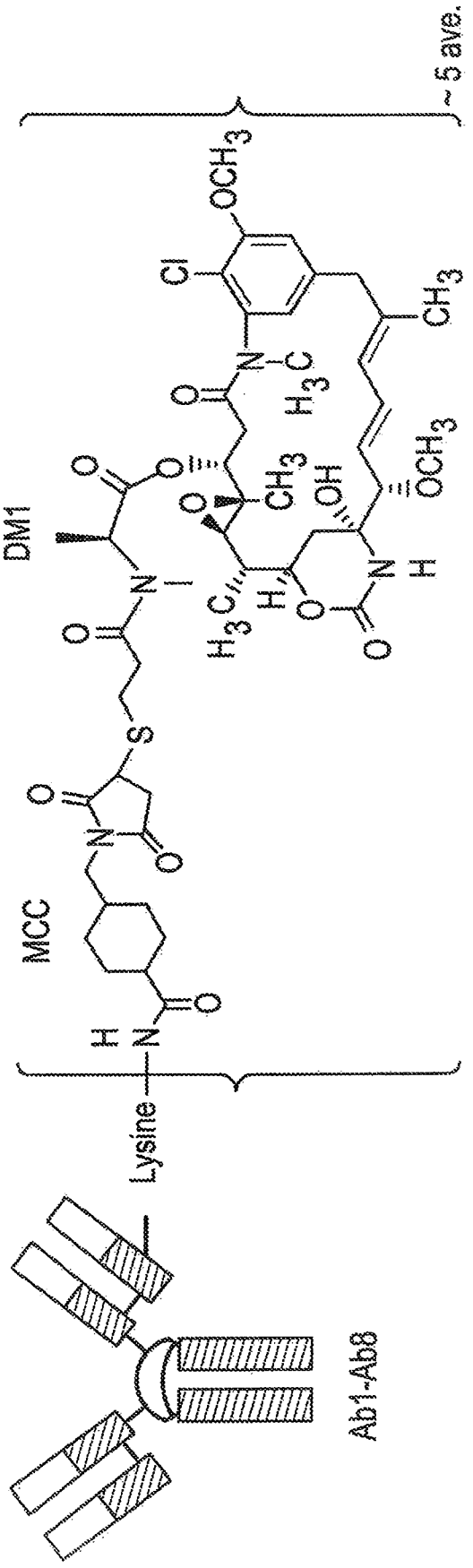
FIG. 10

Tumor Type	mRNA Expression		Protein Expression			
			IHC		Flow Cytometry	
	Literature	Amgen	Literature	Amgen	Literature	Amgen
Clear cell renal cell carcinoma						
OCT embedded			100% (n=41/41)	100% (n=13/13)		
Fresh frozen	86% (n=6/7) 100% (n=10/10)	90% (n=44/49) 94% (n=44/47)			n.d.	n.d.
FFPE			82% (n=189/230)			
B-NHL subsets (Frozen)						
Diffuse large B-cell lymphoma	85% (n=335/414)	100% (n=30/30) 100%(n=15/15)	71% (n=15/21)	67% (n=10/15)	n.d.	n.d.
Follicular lymphoma	n.d.	64% (n=21/33) 100% (n=10/10)	33% (n=6/18)	50% (n=5/10)	n.d.	n.d.
Mantle cell lymphoma	n.d.	100% (n=10/10)	25% (n=1/4)	n.d.	n.d.	n.d.
Chronic lymphocytic leukemia (Frozen)	n.d.	75% (n=21/28) 90% (n=9/10)	50% (n=3/6)	50% (n = 5/10)	90% (17/19)	100% (11/11)

IHC = immunohistochemistry
qPCR = quantitative PCR
n.d. = not determined

Amgen mRNA results show; between 35 to 50% of SCCH&N (primarily ESO) and about 14% of ovarian patient samples express CD27L; 40% of papillary RCC express CD27L

FIG. 11



Linker: MCC; 4-[N-maleimidomethyl] cyclohexane-1-carboxylate (SMCC starting material)

Fig. 12