Figure 1A

Light Chain				
Kabat #	muMov19	DPK19	huMov19v1.00	huMov19v1.60
1	D	D	D	D
3	E	***V***	***V***	***V***
5	T	T	T	T
9	A	***L***	***L***	***L***
15	L	L	L	L
17	Q	Q	Q	Q
18	R	***P***	***P***	***P***
40	P	P	P	P
41	G	G	G	G
42	Q	Q	Q	Q
45	K	***R***	***R***	***R***
57	G	G	G	G
60	T	***D***	***D***	***D***
67	S	S	S	S
70	D	D	D	D
74*	N	K	N	***T****
76	H	***S***	***S***	***S***
80	E	***A***	***A***	***A***
81	E	E	E	E
100	G	G	G	G
103	K	K	K	K
105	E	E	E	E
107	K	K	K	K
108	R	R	R	R

Figure 1B

Heavy Chain			
Kabat #	muMov19	8m27	huMov19
1	Q	Q	Q
3	Q	Q	Q
5	Q	*V*	*V*
9	A	A	A
11	L	*V*	*V*
13	K	K	K
14	P	P	P
19	K	K	K
23	K	K	K
28	S	*T*	*T*
41	H	*P*	*P*
42	G	G	G
43	K	*Q*	*Q*
61	Q	Q	Q
62	N	*K*	*K*
64	K	*Q*	*Q*
65	D	*G*	*G*
73	K	K	K
74	S	S	S
82B	S	S	S
84	S	S	S
85	E	E	E
105	Q	Q	Q
112	S	S	S
113	S	S	S

Figure 1C and 1D

C

FR1-21 V_L		
Kabat position	Murine residue	Human residue
1	D	D
3	V	V
9	S	S
10	**Y**	***S***
15	**L**	***V***
18	R	R
40	P	P
41	G	G
42	**N**	***K***
45	**R**	***K***
57	G	G
60	S	S
67	S	S
80	Q	Q
81	**T**	***P***
100	**S**	***Q***
103	K	K
105	E	E
107	K	K
108	R	R

D

FR1-21 V_H		
Kabat positio	Murine residue	Human residue
1	E	E
3	**K**	***Q***
11	**L**	***V***
13	K	K
14	P	P
17	S	S
19	K	K
41	P	P
42	**D**	***G***
43	K	K
44	**R**	***G***
60	**P**	***S***
61	**D**	***P***
63	**V**	***F***
64	**K**	***Q***
65	G	G
73	**N**	***K***
74	**A**	***S***
75	K	K
83	K	K
84	**S**	***A***
85	E	E
105	Q	Q
112	S	S

Figure 2

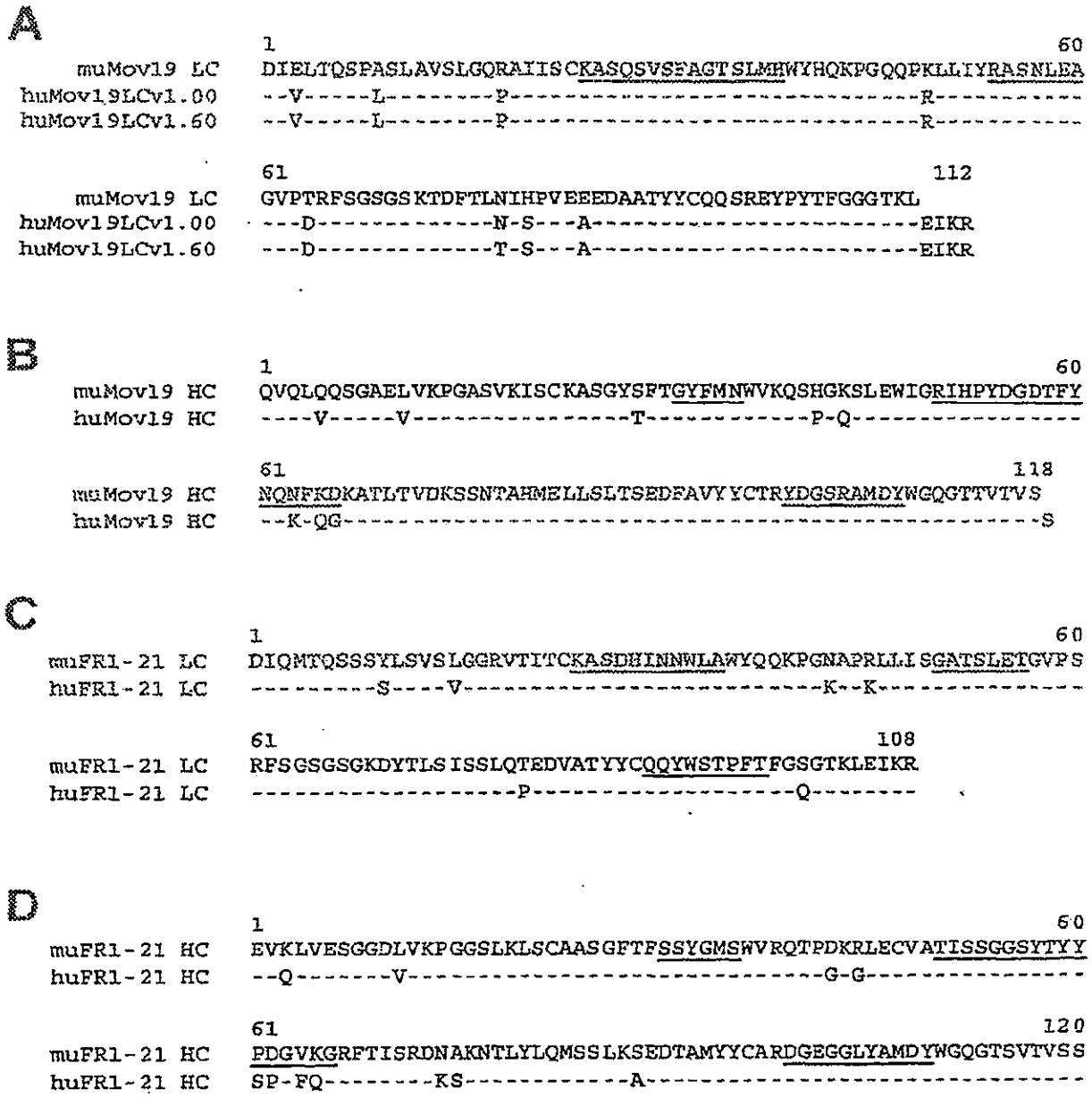
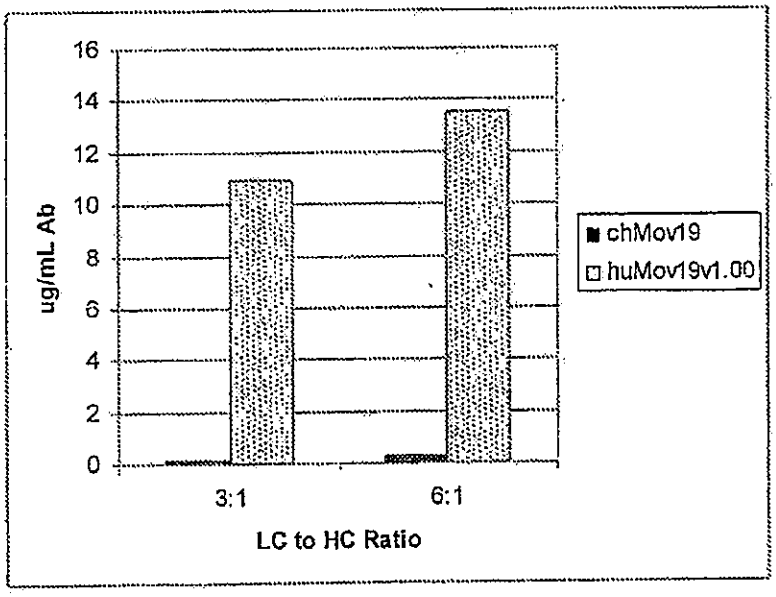

A
1 60
muMov19 LC DIELTQSPASLAVSLGQRAIISCKASQSVSFAGTSLMHWYHQKPGQQPKLLIYRASNLEA
huMov19LCv1.00 --V-----L--------P----------R----------
huMov19LCv1.60 --V-----L--------P----------R----------
61 112
muMov19 LC GVPTRFSGSGSKTDFTLNIHPVEEEDAATYYCQQSREYPYTFGGGTKL
huMov19LCv1.00 ---D----------N-S---A----------EIKR
huMov19LCv1.60 ---D----------T-S---A----------EIKR
B
1 60
muMov19 HC QVQLQQSGAELVKPGASVKISCKASGYSFTGYFMNWVKQSHGKSLEWIGRIHPYDGDTFY
huMov19 HC ----V-----V----------T----------P-Q----------
61 118
muMov19 HC NQNFKDKATLTVDKSSNTAHMELLSLTSEDFAVYYCTRYDGSRAMDYWGQGTTVTVS
huMov19 HC --K-QG----------S
C
1 60
muFR1-21 LC DIQMTQSSSYLSVSLGGRVTITCKASDHINNWLAWYQQKPGNAPRLLISGATSLETGVPS
huFR1-21 LC ---------S----V----------K--K----------
61 108
muFR1-21 LC RFSGSGSGKDYTLSISSLQTEDVATYYCQQYWSTPFTFGSGTKLEIKR
huFR1-21 LC ----------P----------Q--------
D
1 60
muFR1-21 HC EVKLVESGGDLVKPGGSLKLSCAASGFTFSSYGMSWVRQTPDKRLECVATISSGGSYTYY
huFR1-21 HC --Q-------V----------G-G----------
61 120
muFR1-21 HC PDGVKGRFTISRDNAKNTLYLQMSSLKSEDTAMYYCARDGEGGLYAMDYWGQGTSVTVSS
huFR1-21 HC SP-FQ--------KS----------A----------

Figure 3


16
14
12
10
8
6
4
2
0
ug/mL Ab
3:1
6:1
LC to HC Ratio
chMov19
huMov19v1.00

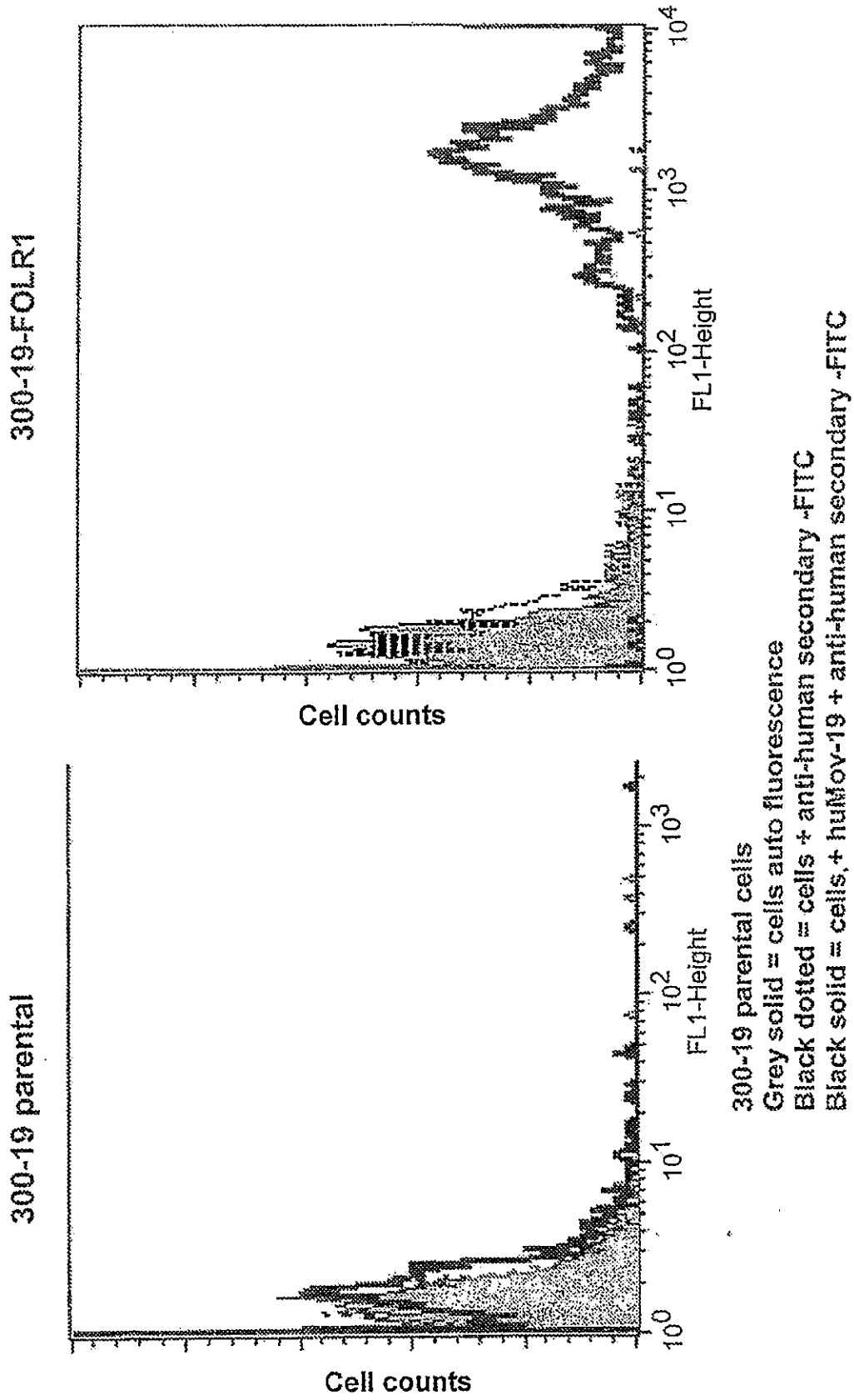

300-19-FOLR1
Cell counts
FL1-Height
300-19 parental
Cell counts
FL1-Height
300-19 parental cells
Grey solid = cells auto fluorescence
Black dotted = cells + anti-human secondary -FITC
Black solid = cells + huMov-19 + anti-human secondary -FITC

Figure 4

Figure 5

Clone	Isotype	Affinity on SKOV3 cells, Kd, nM	Cytotoxic activity of PEG4-mal-DM4 conjugates on KB cells, IC50, nM (continuous exposure)
HuMov19	IgG1	0.07	0.15
muFR1-9	IgG1	0.13	0.22
muFR1-13	IgG2b	0.66	0.15
muFR1-22	IgG2a	0.69	0.14
muFR1-23	IgG2a	0.55	0.13
huFR1-23	IgG1	0.60	
muFR1-21	IgG2b	0.07	0.10
huFR1-21	IgG1	0.07	0.10

Figure 6

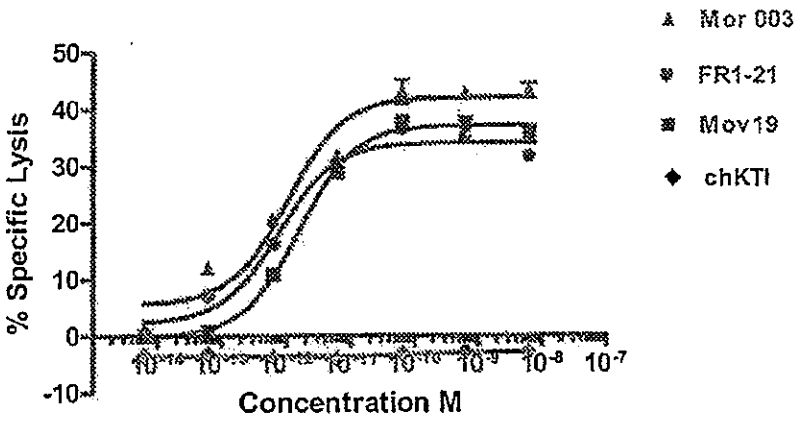

% Specific Lysis
50
40
30
20
10
0
-10
Concentration M
Mor 003
FR1-21
Mov19
chKTI

Figure 7

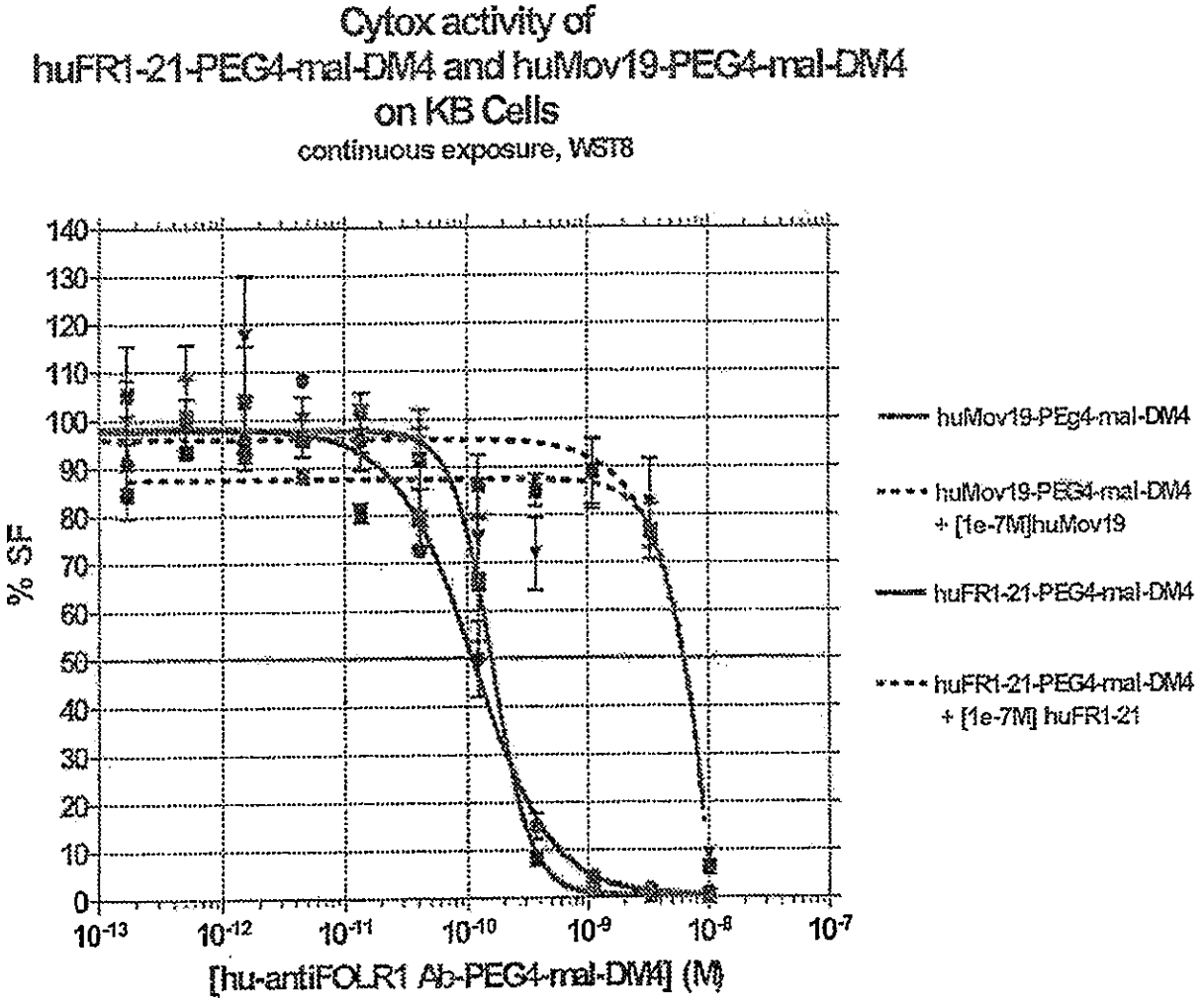

Cytox activity of
huFR1-21-PEG4-mal-DM4 and huMov19-PEG4-mal-DM4
on KB Cells
continuous exposure, WST8
% SF
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
10-13
10-12
10-11
10-10
10-9
10-8
10-7
[hu-antiFOLR1 Ab-PEG4-mal-DM4] (M)
huMov19-PEg4-mal-DM4
huMov19-PEG4-mal-DM4 + [1e-7M]huMov19
huFR1-21-PEG4-mal-DM4
huFR1-21-PEG4-mal-DM4 + [1e-7M] huFR1-21

Figure 8

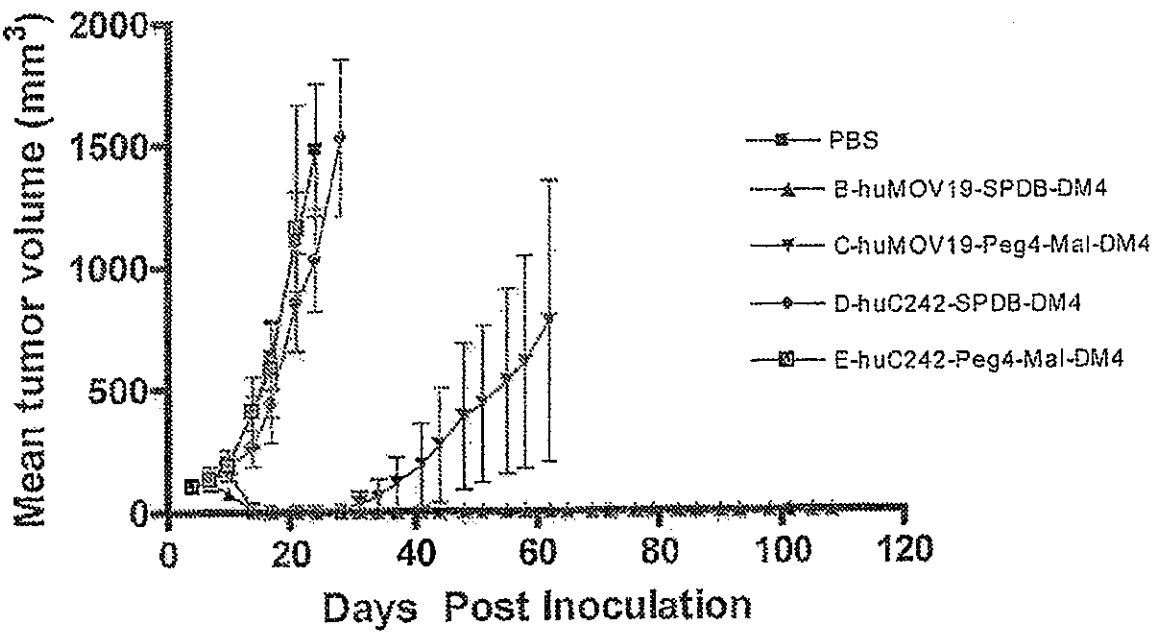

Mean tumor volume (mm3)
2000
1500
1000
500
0
0
20
40
60
80
100
120
Days Post Inoculation
PBS
B-huMOV19-SPDB-DM4
C-huMOV19-Peg4-Mal-DM4
D-huC242-SPDB-DM4
E-huC242-Peg4-Mal-DM4

Figure 9

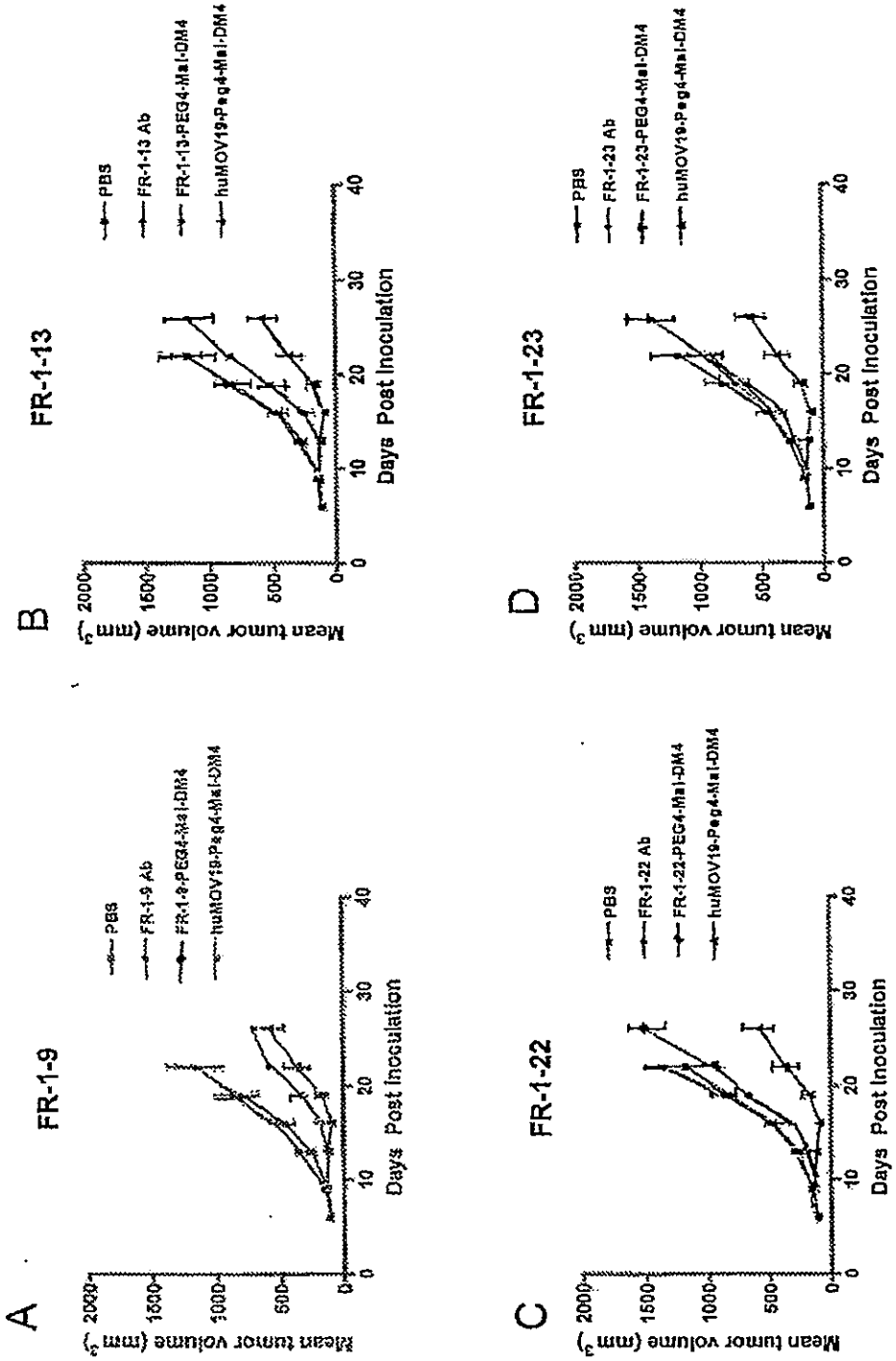
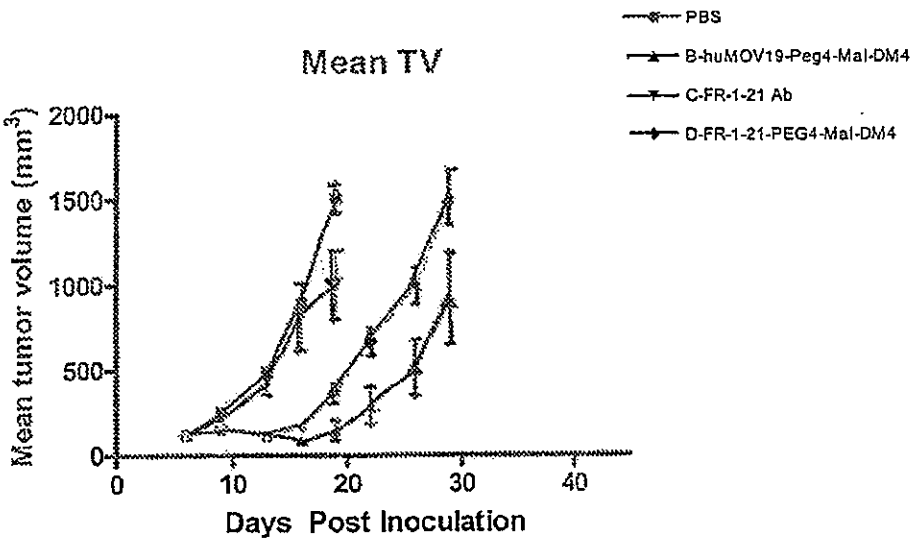

A
FR-1-9
PBS
FR-1-9 Ab
FR-1-9-PEG4-Mal-DM4
huMOV19-Peg4-Mal-DM4
Mean tumor volume (mm3)
Days Post Inoculation
B
FR-1-13
PBS
FR-1-13 Ab
FR-1-13-PEG4-Mal-DM4
huMOV19-Peg4-Mal-DM4
Mean tumor volume (mm3)
Days Post Inoculation
C
FR-1-22
PBS
FR-1-22 Ab
FR-1-22-PEG4-Mal-DM4
huMOV19-Peg4-Mal-DM4
Mean tumor volume (mm3)
Days Post Inoculation
D
FR-1-23
PBS
FR-1-23 Ab
FR-1-23-PEG4-Mal-DM4
huMOV19-Peg4-Mal-DM4
Mean tumor volume (mm3)
Days Post Inoculation

Figure 10



10 mg/kg single injection day 6 post inoculation, KB model

Figure 11

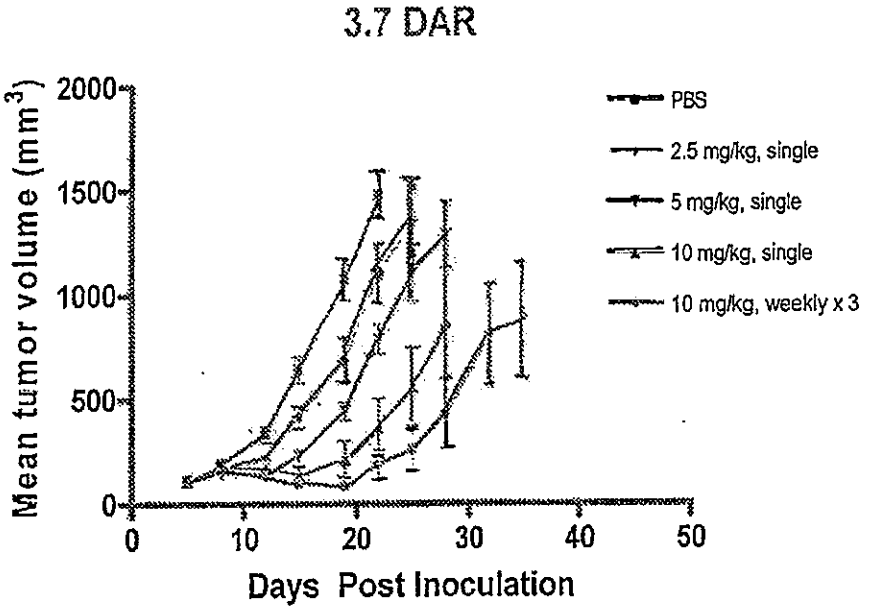
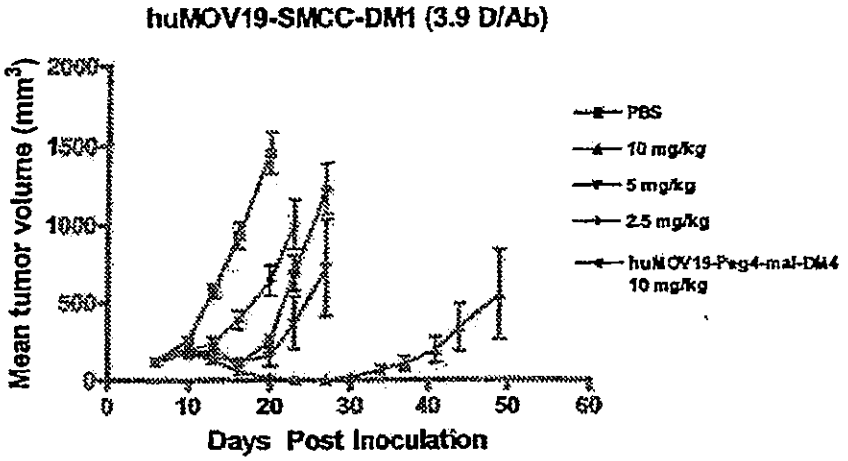
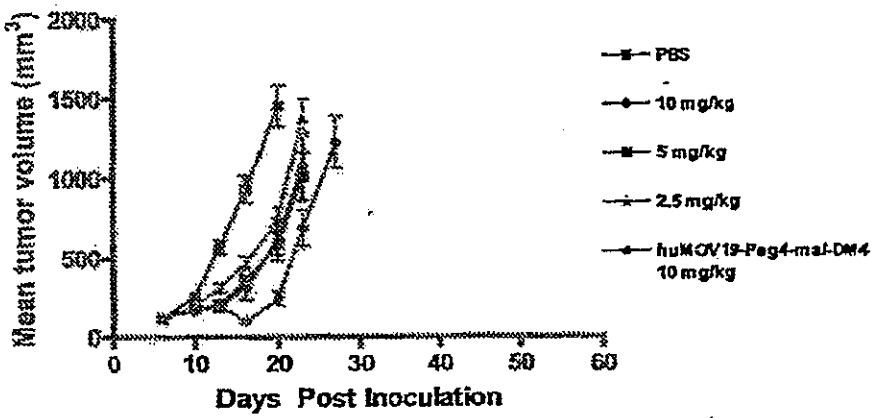

3.7 DAR
Mean tumor volume (mm3)
2000
1500
1000
500
0
0
10
20
30
40
50
Days Post Inoculation
PBS
2.5 mg/kg, single
5 mg/kg, single
10 mg/kg, single
10 mg/kg, weekly x 3

Figure 12

A



B



C

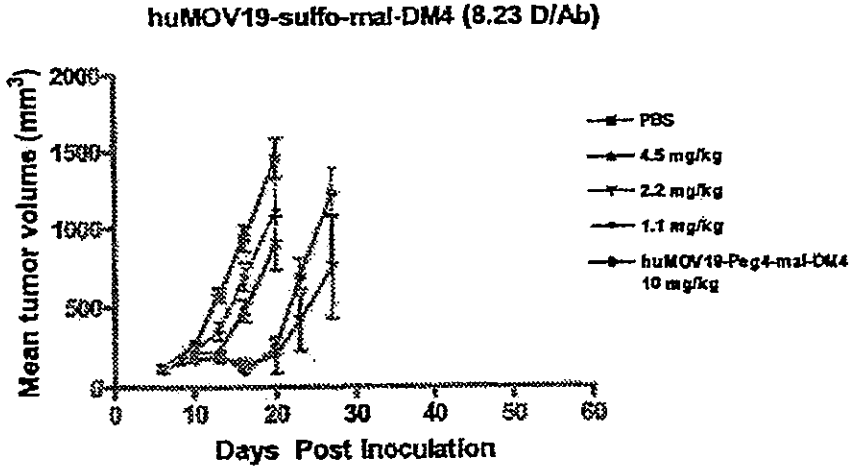
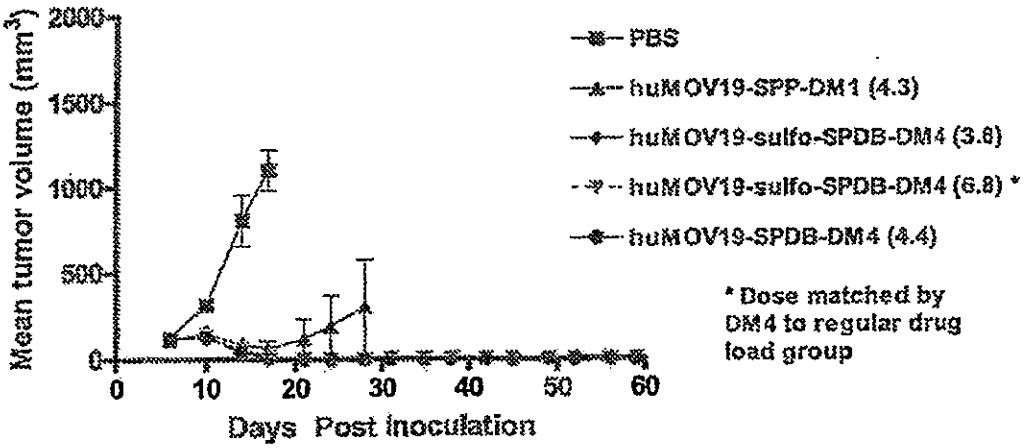


Figure 13

A. 5 mg/kg
single injection



B. 2.5 mg/kg
single injection

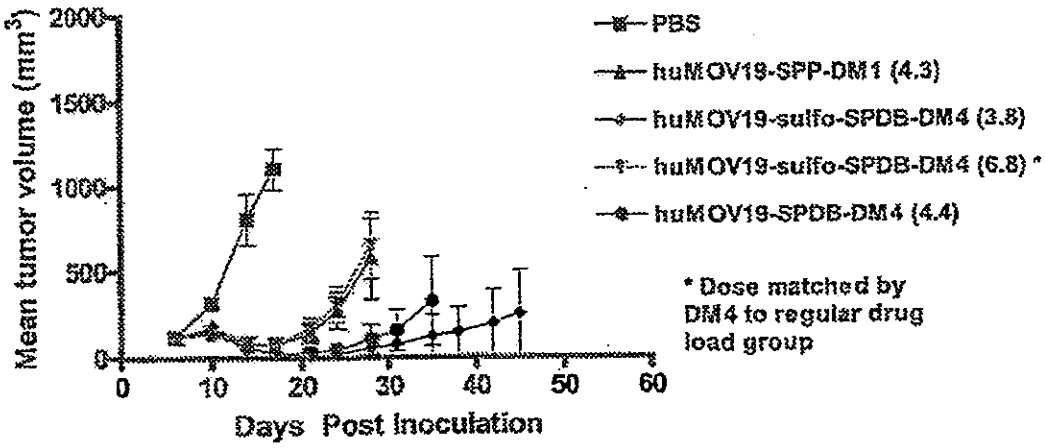
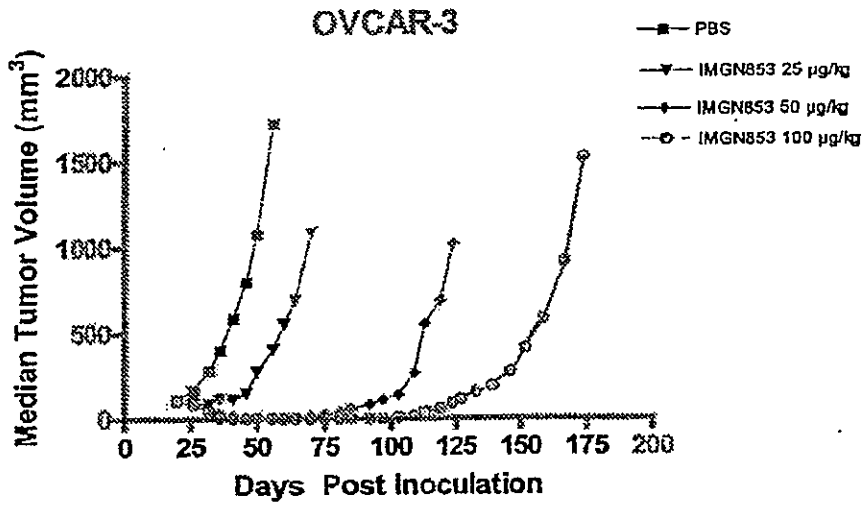
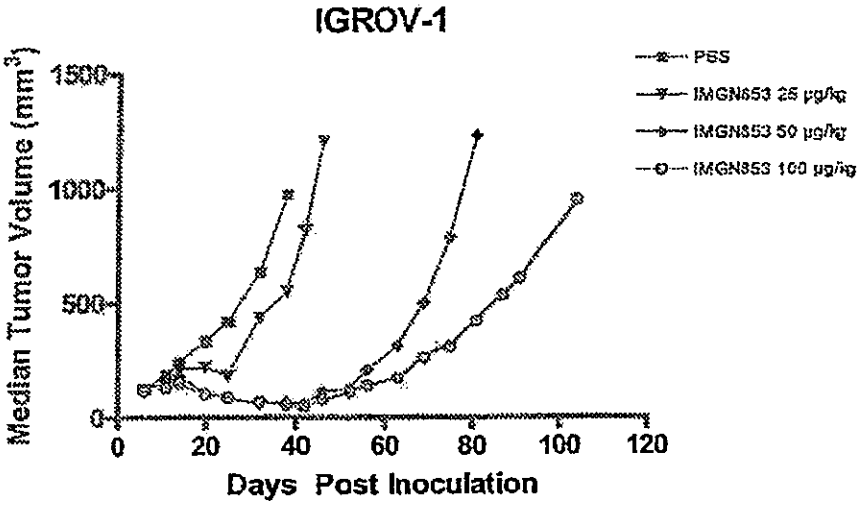


Figure 14



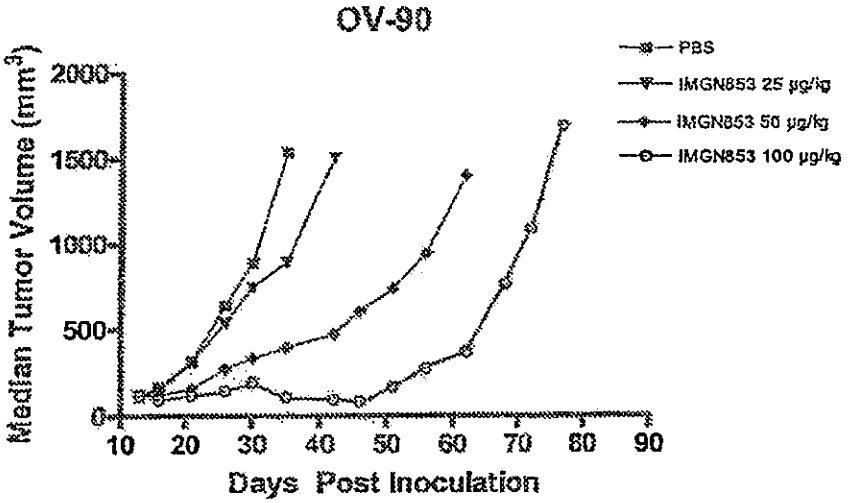
MODEL	Dosage per injection	T/C (%)	(T-C) in days	log cell kill	Regressions		Tumor free survivors day 208	Comments
					Partial	Complete		
OVCAR-3	25 µg/kg	18	21.0	0.7	2/6	1/6	0/6	active
	50 µg/kg	0	74.5	2.4	6/6	4/6	0/6	highly active
	100 µg/kg	0	120.0	3.9	6/6	6/6	0/6	highly active

Figure 15



MODEL	Dosage per injection	T/C (%)	(T-C) in days	log cell kill	Regressions Partial	Regressions Complete	Tumor free survivors day 120	Comments
IGROV-1	25 µg/kg	55	6.0	0.2	0/6	0/6	0/6	inactive
	50 µg/kg	7	41.0	1.1	5/6	0/6	0/6	highly active
	100 µg/kg	5	67.0	1.8	6/6	0/6	0/6	highly active

Figure 16



MODEL	Dosage per injection	T/C (%)	(T-C) in days	log cell kill	Regressions Partial	Regressions Complete	Tumor free survivors day 92	Comments
OV-90	25 µg/kg	77	5.0	0.2	0/6	0/6	0/6	inactive
	50 µg/kg	36	26.0	1.2	0/6	0/6	0/6	active
	100 µg/kg	18	40.0	1.9	2/6	0/6	0/6	active

Figure 17

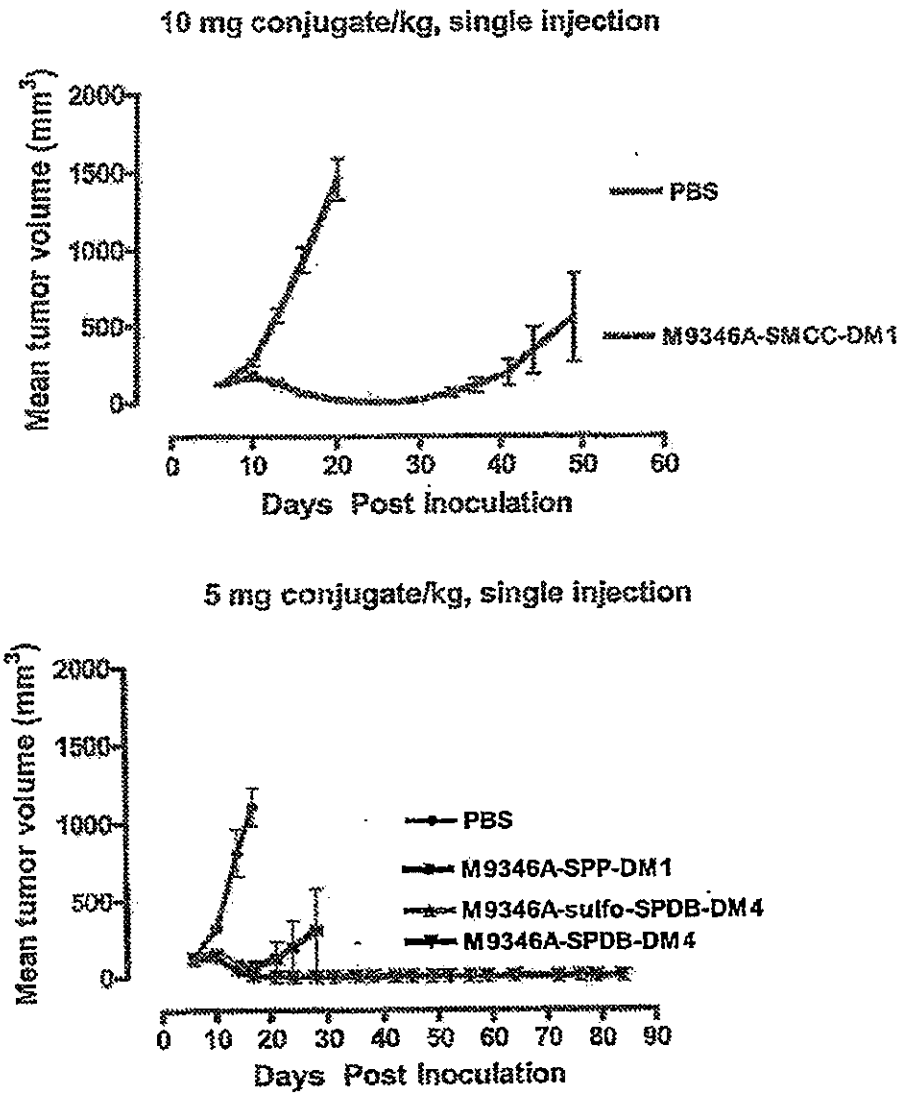
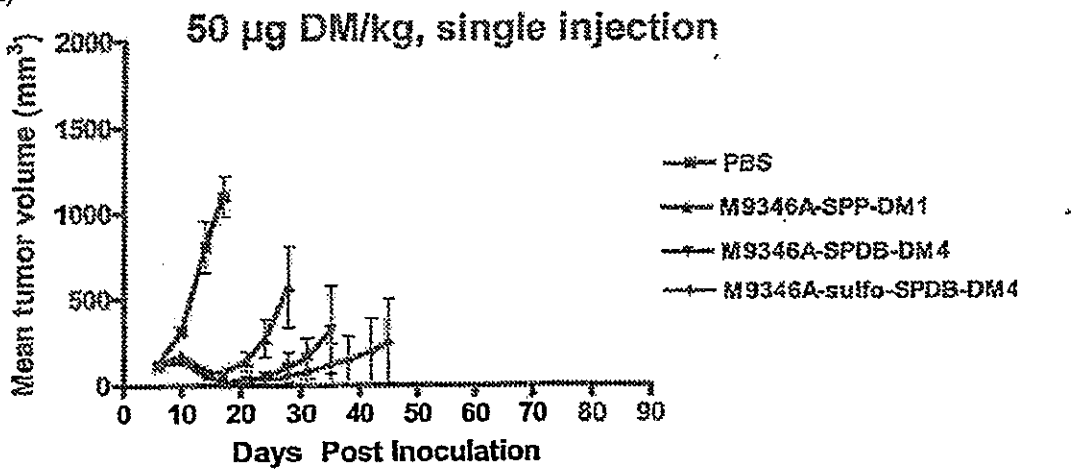

10 mg conjugate/kg, single injection
Mean tumor volume (mm3)
2000
1500
1000
500
0
PBS
M9346A-SMCC-DM1
0 10 20 30 40 50 60
Days Post Inoculation
5 mg conjugate/kg, single injection
Mean tumor volume (mm3)
2000
1500
1000
500
0
PBS
M9346A-SPP-DM1
M9346A-sulfo-SPDB-DM4
M9346A-SPDB-DM4
0 10 20 30 40 50 60 70 80 90
Days Post Inoculation

Figure 18

(A)


50 µg DM/kg, single injection
Mean tumor volume (mm3)
2000
1500
1000
500
0
0 10 20 30 40 50 60 70 80 90
Days Post Inoculation
PBS
M9346A-SPP-DM1
M9346A-SPDB-DM4
M9346A-sulfo-SPDB-DM4

(B)

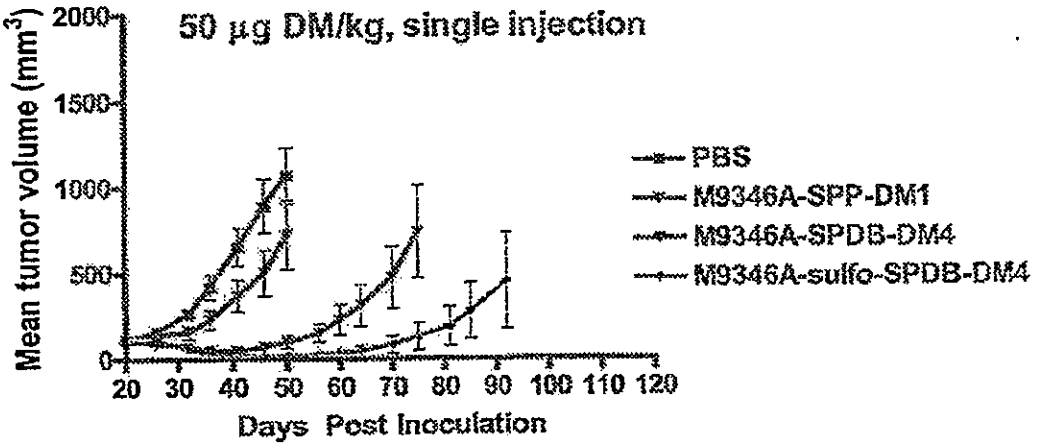
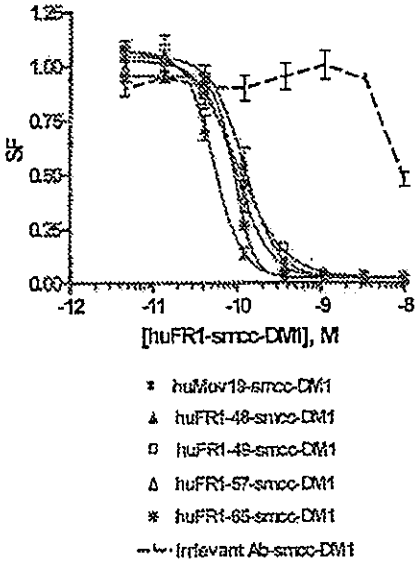

50 µg DM/kg, single injection
Mean tumor volume (mm3)
2000
1500
1000
500
0
20 30 40 50 60 70 80 90 100 110 120
Days Post Inoculation
PBS
M9346A-SPP-DM1
M9346A-SPDB-DM4
M9346A-sulfo-SPDB-DM4

Figure 19

In vitro
KB cell line



In vivo
KB xenograft model

