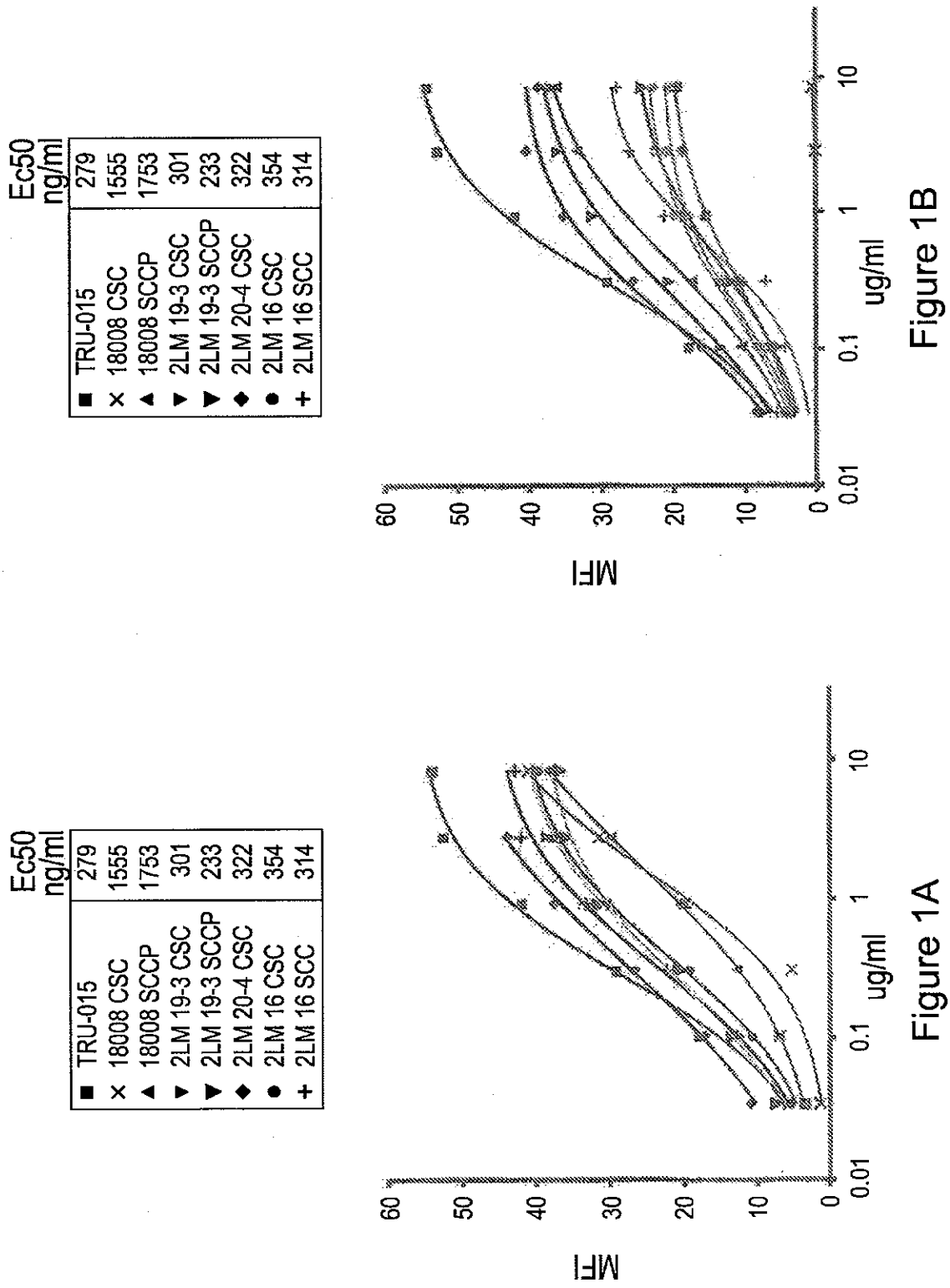


Figure 1A

Figure 1B

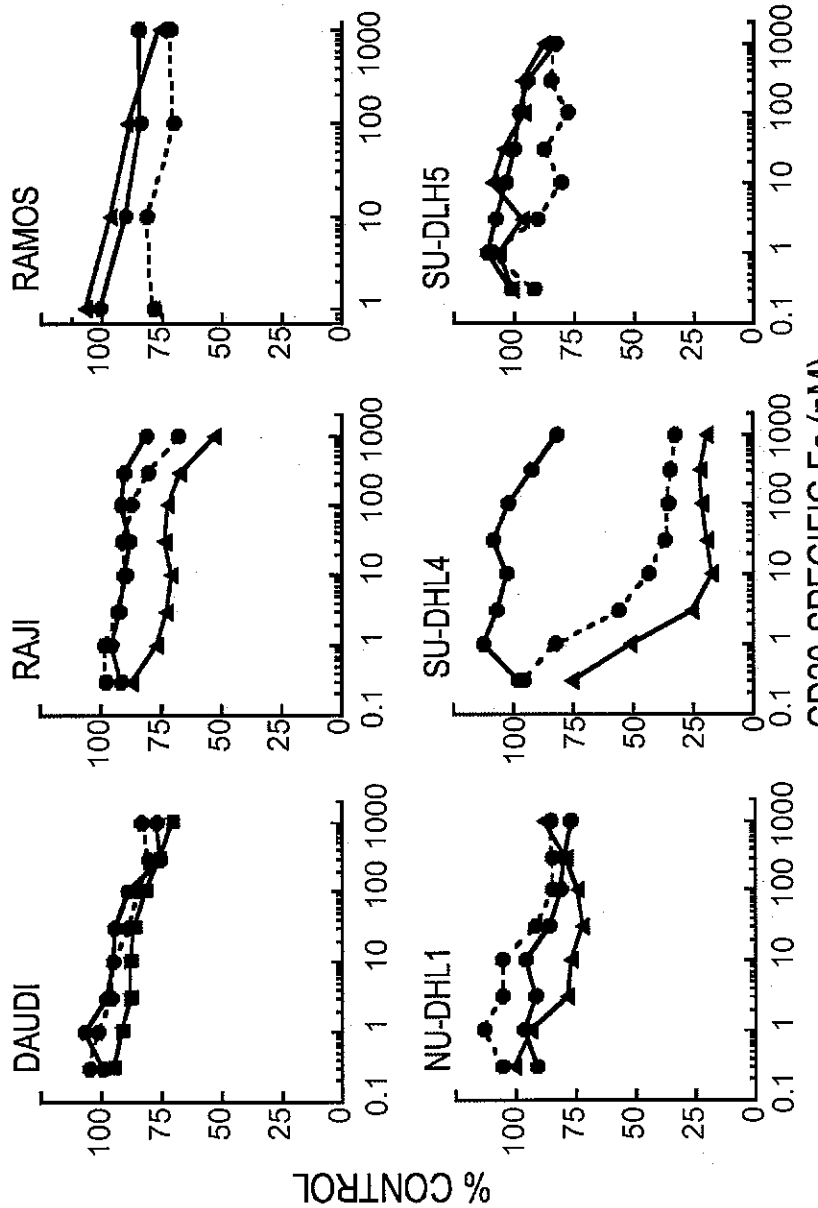
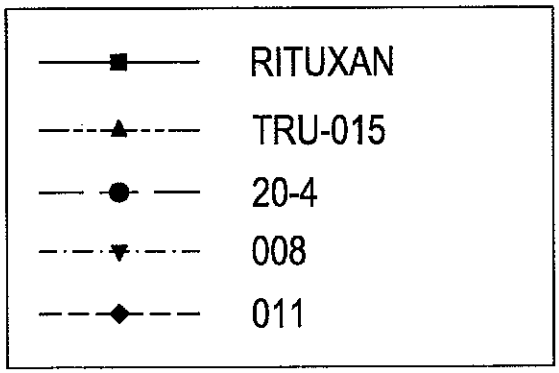

RAMOS
SU-DLH5
RAJI
SU-DHL4
DAUDI
NU-DHL1
% CONTROL
CD20-SPECIFIC Fc (nM)
018011
TRU-015
RITUXAN®

Figure 2


RITUXAN
TRU-015
20-4
008
011

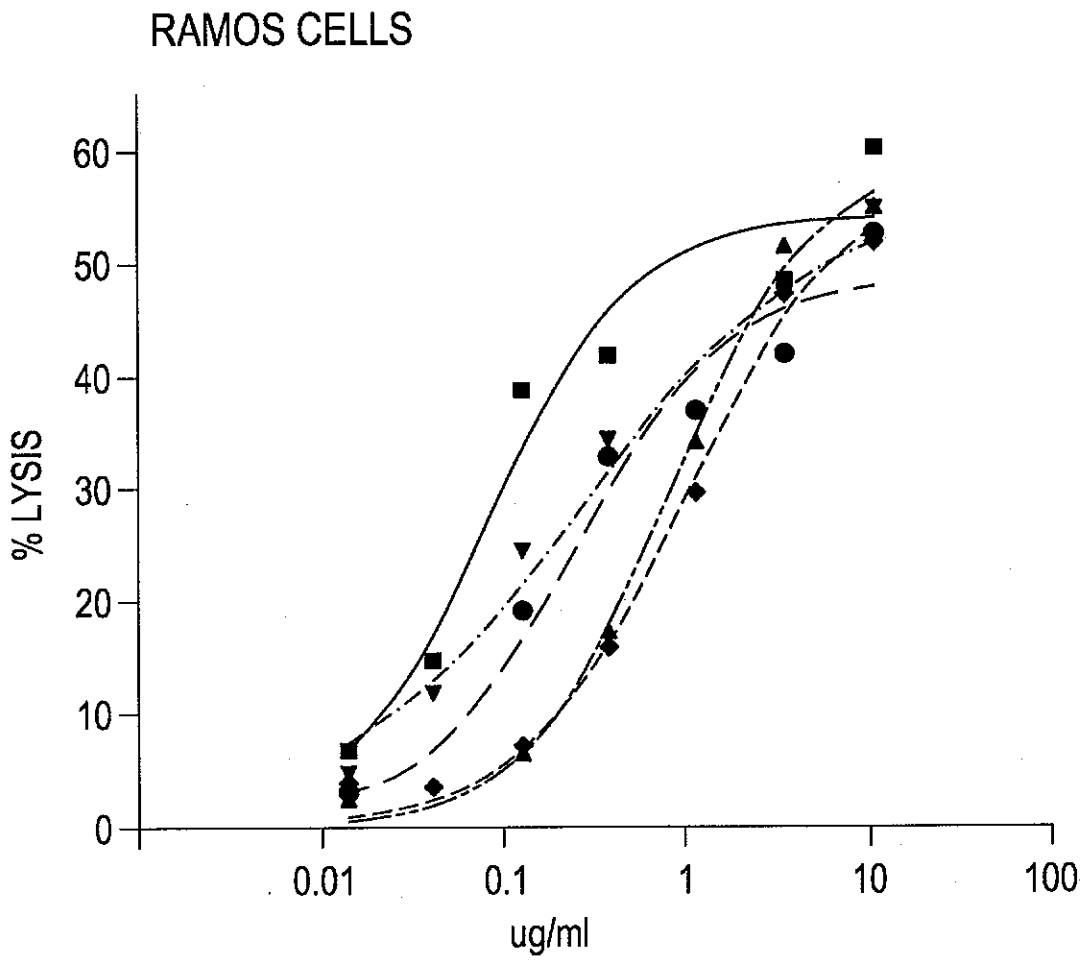

RAMOS CELLS
% LYSIS
60
50
40
30
20
10
0
0.01
0.1
1
10
100
ug/ml

Figure 3A

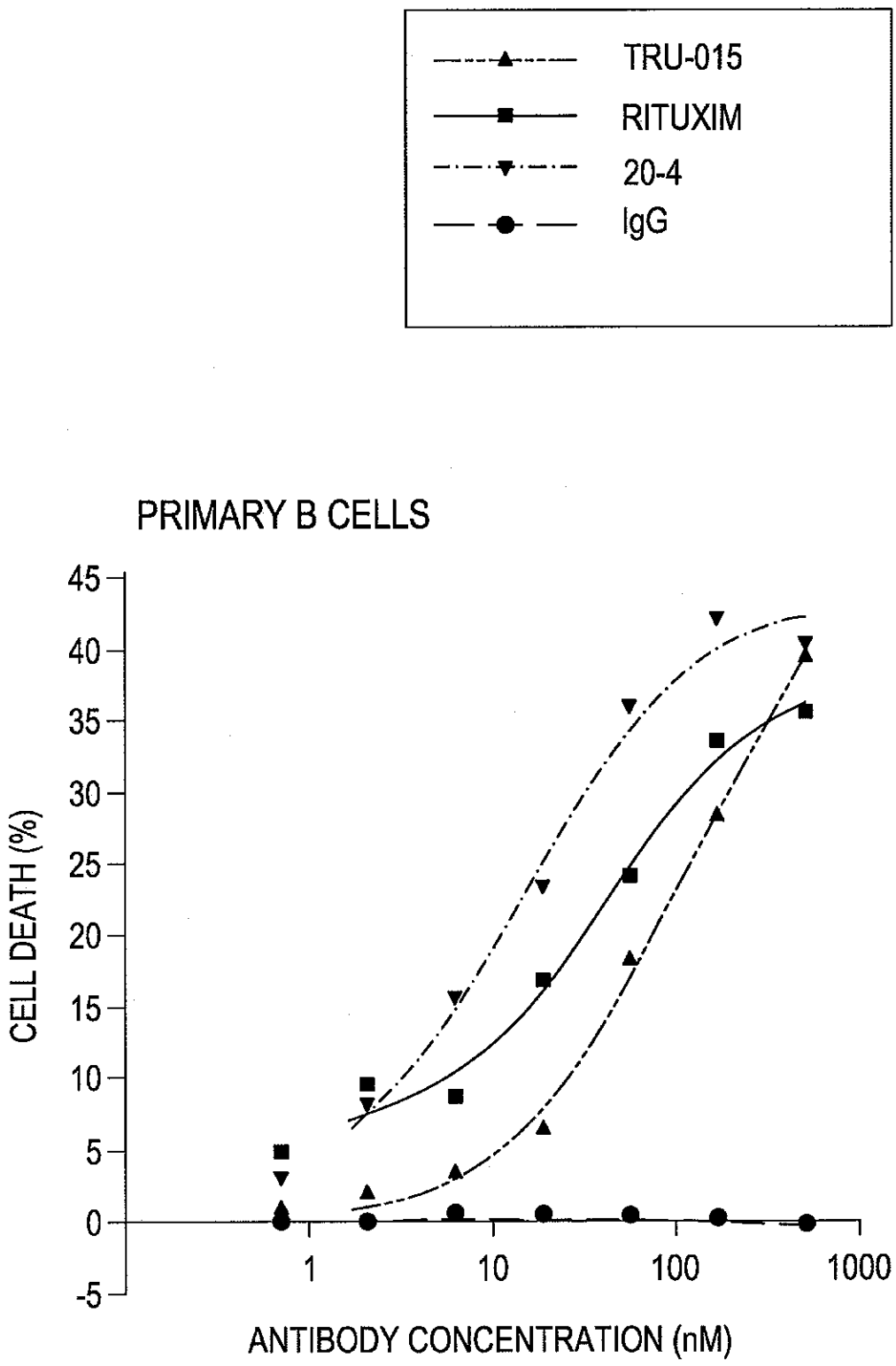

TRU-015
RITUXIM
20-4
IgG
PRIMARY B CELLS
CELL DEATH (%)
45
40
35
30
25
20
15
10
5
0
-5
1
10
100
1000
ANTIBODY CONCENTRATION (nM)

Figure 3B

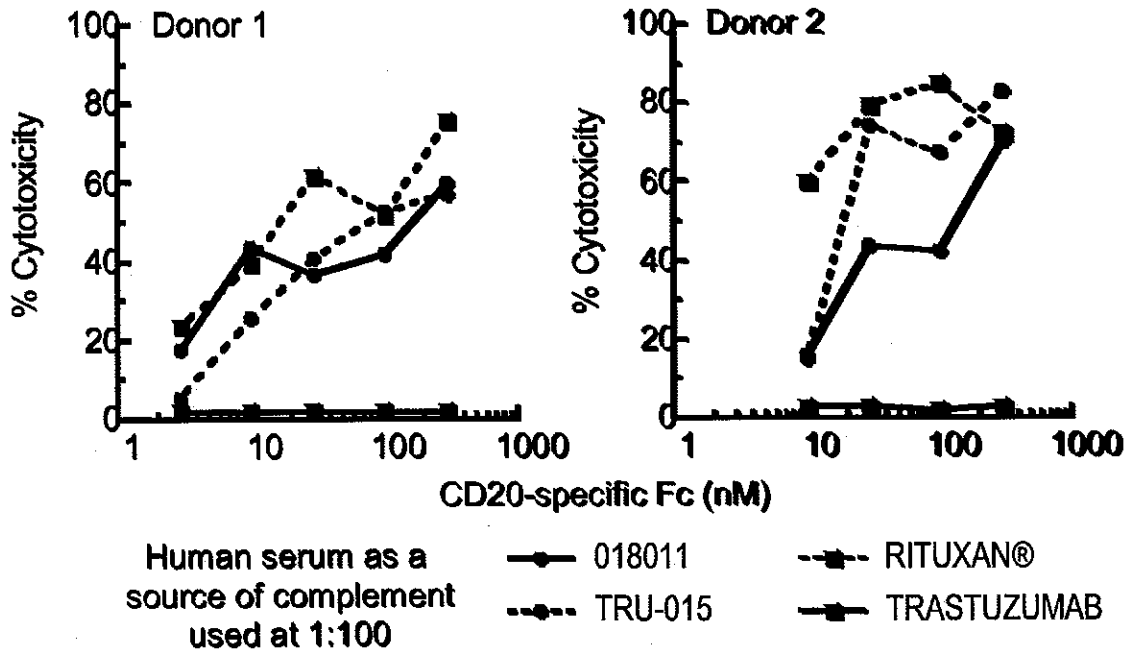


Figure 4A

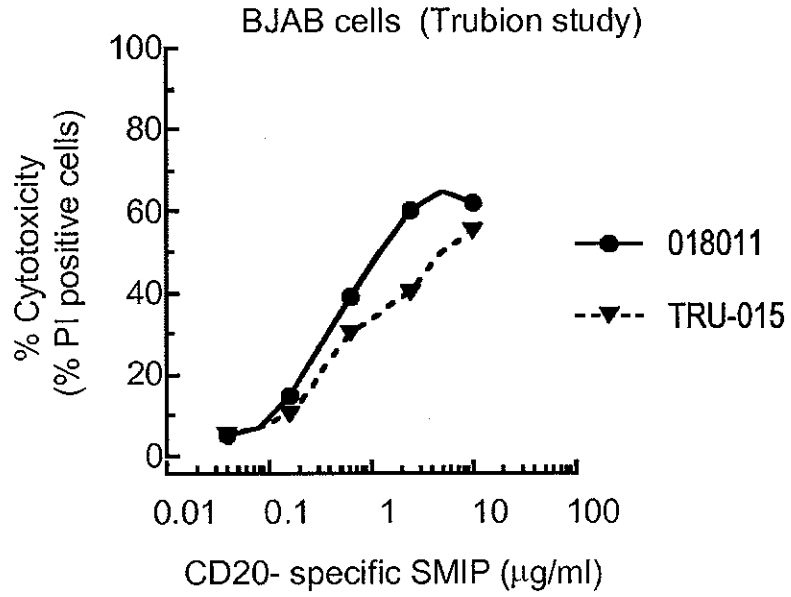


Figure 4B

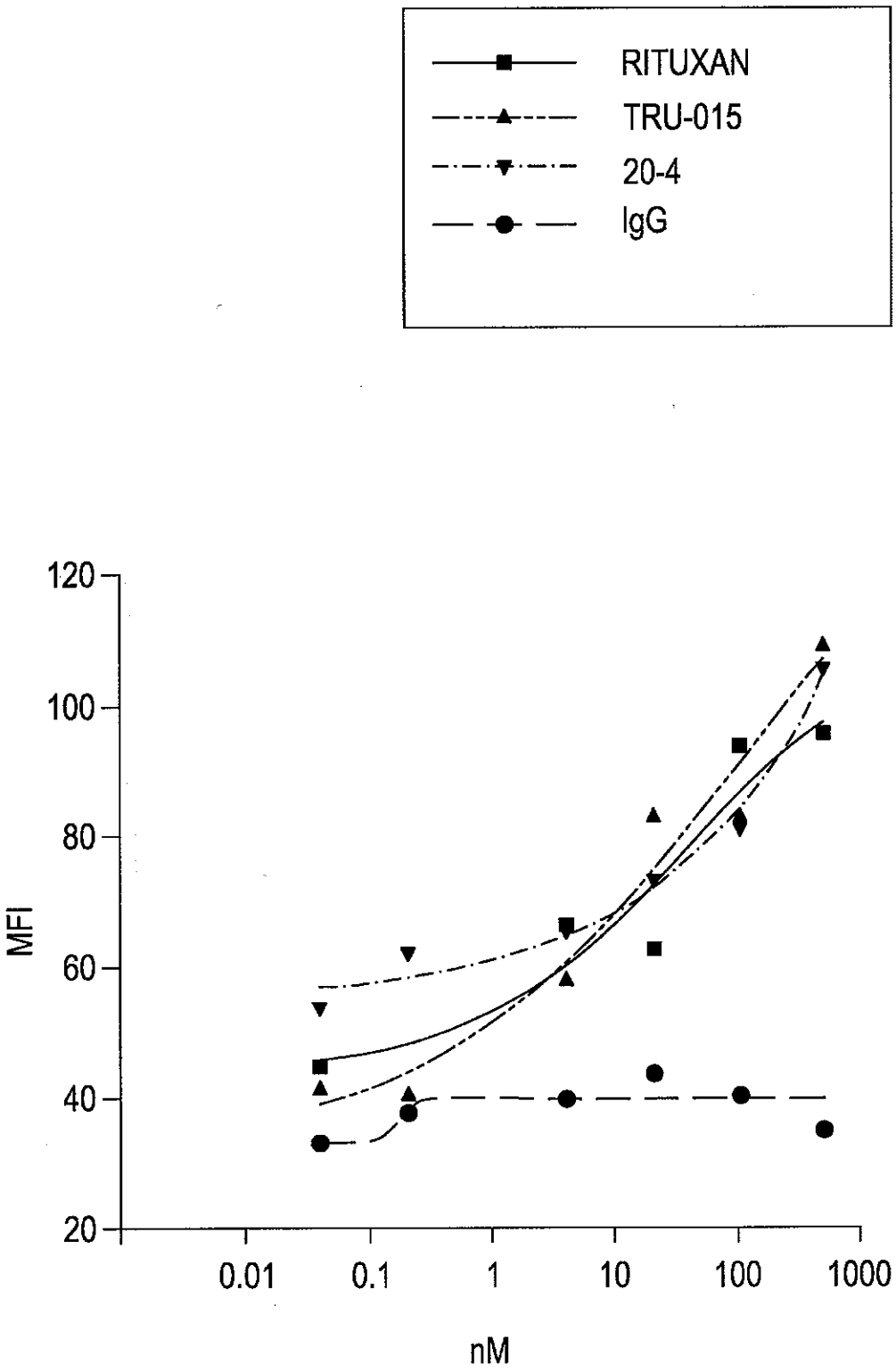

RITUXAN
TRU-015
20-4
IgG
120
100
80
60
40
20
MFI
0.01
0.1
1
10
100
1000
nM

Figure 5

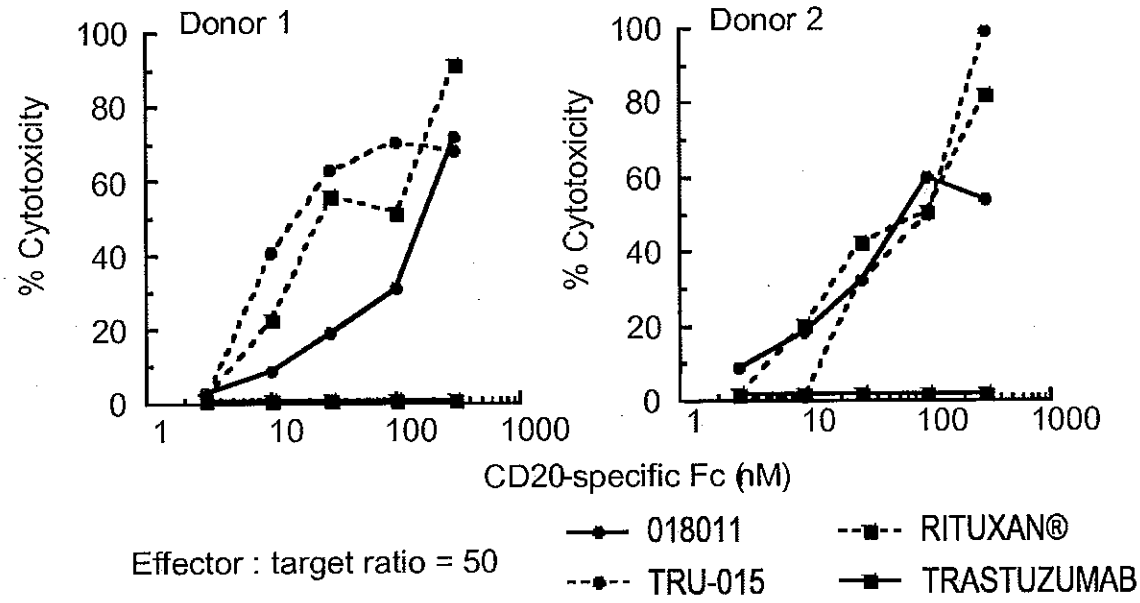


Figure 6A

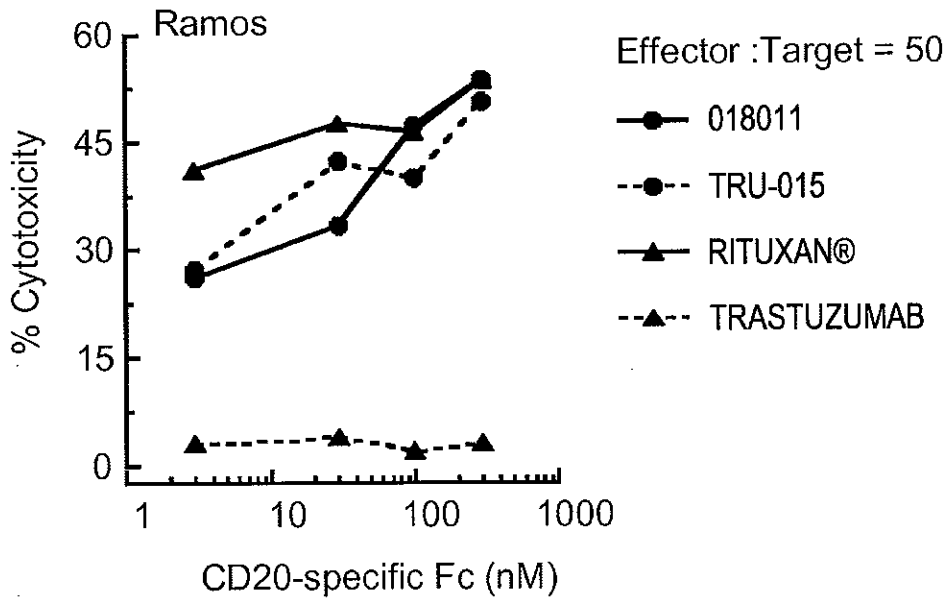


Figure 6B

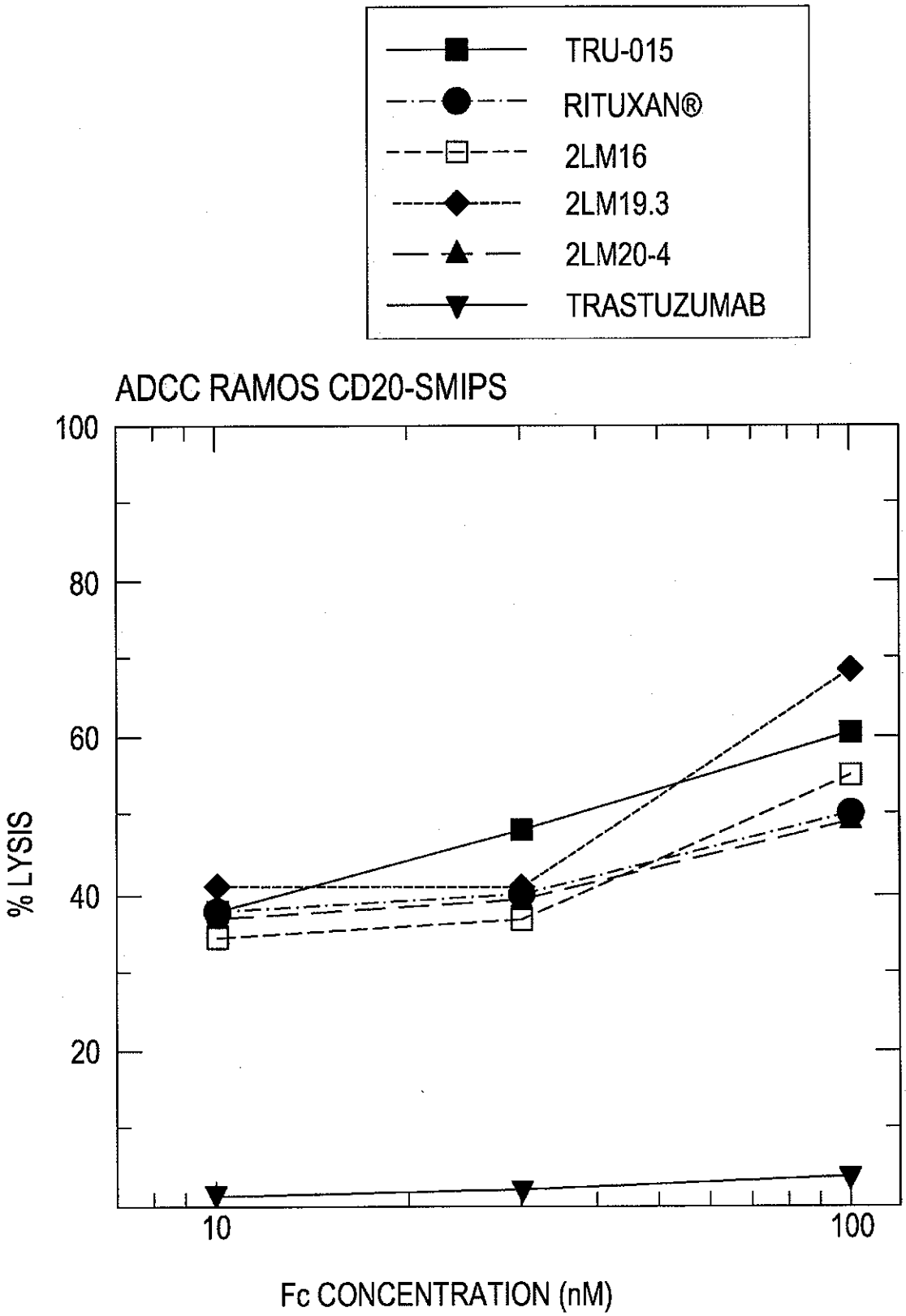

TRU-015
RITUXAN®
2LM16
2LM19.3
2LM20-4
TRASTUZUMAB
ADCC RAMOS CD20-SMIPS
100
80
60
40
20
% LYSIS
10
100
Fc CONCENTRATION (nM)

Figure 7

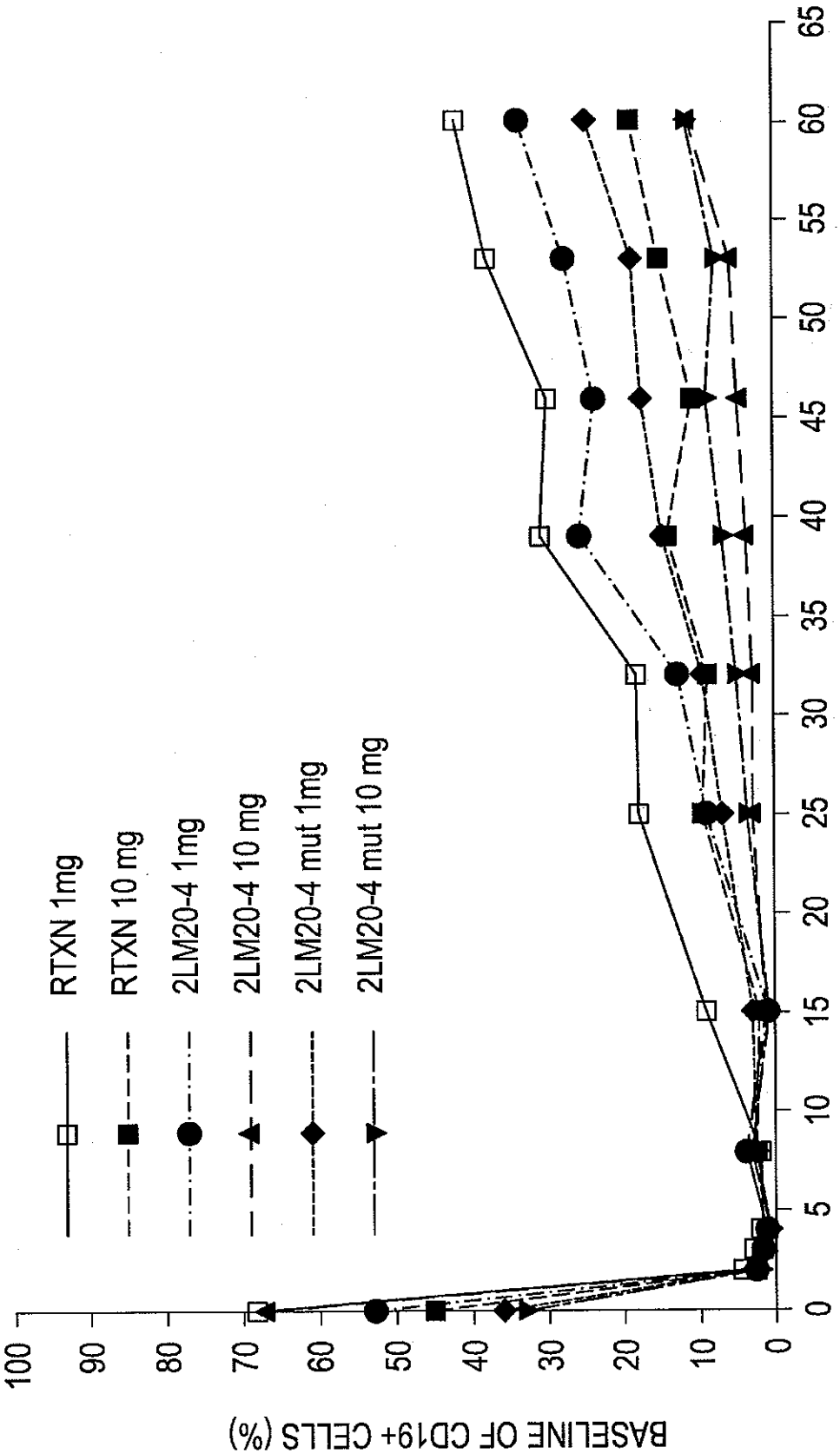

BASELINE OF CD19+ CELLS (%)
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
30
35
40
45
50
55
60
65
DAY
RTXN 1mg
RTXN 10 mg
2LM20-4 1mg
2LM20-4 10 mg
2LM20-4 mut 1mg
2LM20-4 mut 10 mg

Figure 8

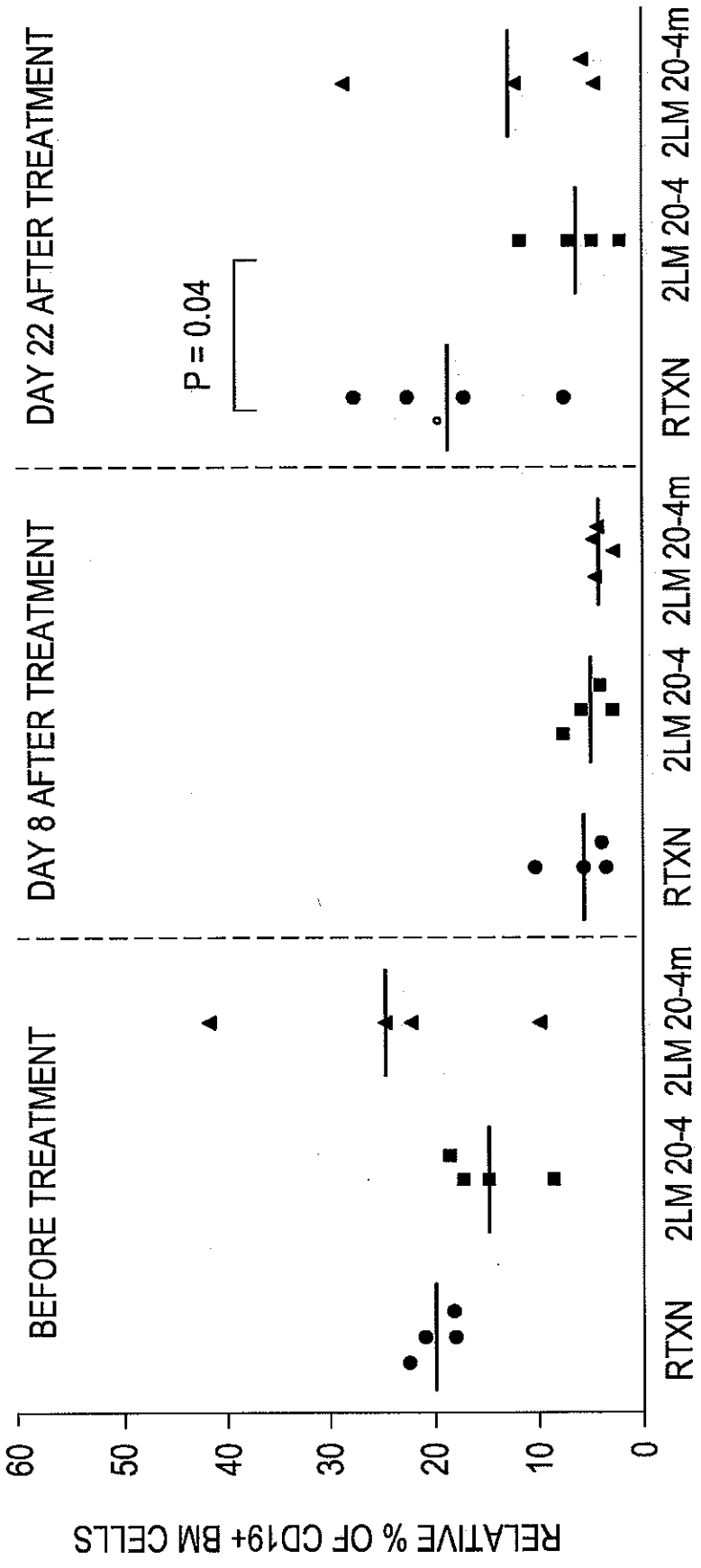

RELATIVE % OF CD19+ BM CELLS
60
50
40
30
20
10
0
BEFORE TREATMENT
DAY 8 AFTER TREATMENT
DAY 22 AFTER TREATMENT
P = 0.04
RTXN
2LM 20-4
2LM 20-4m
RTXN
2LM 20-4
2LM 20-4m
RTXN
2LM 20-4
2LM 20-4m

Figure 9

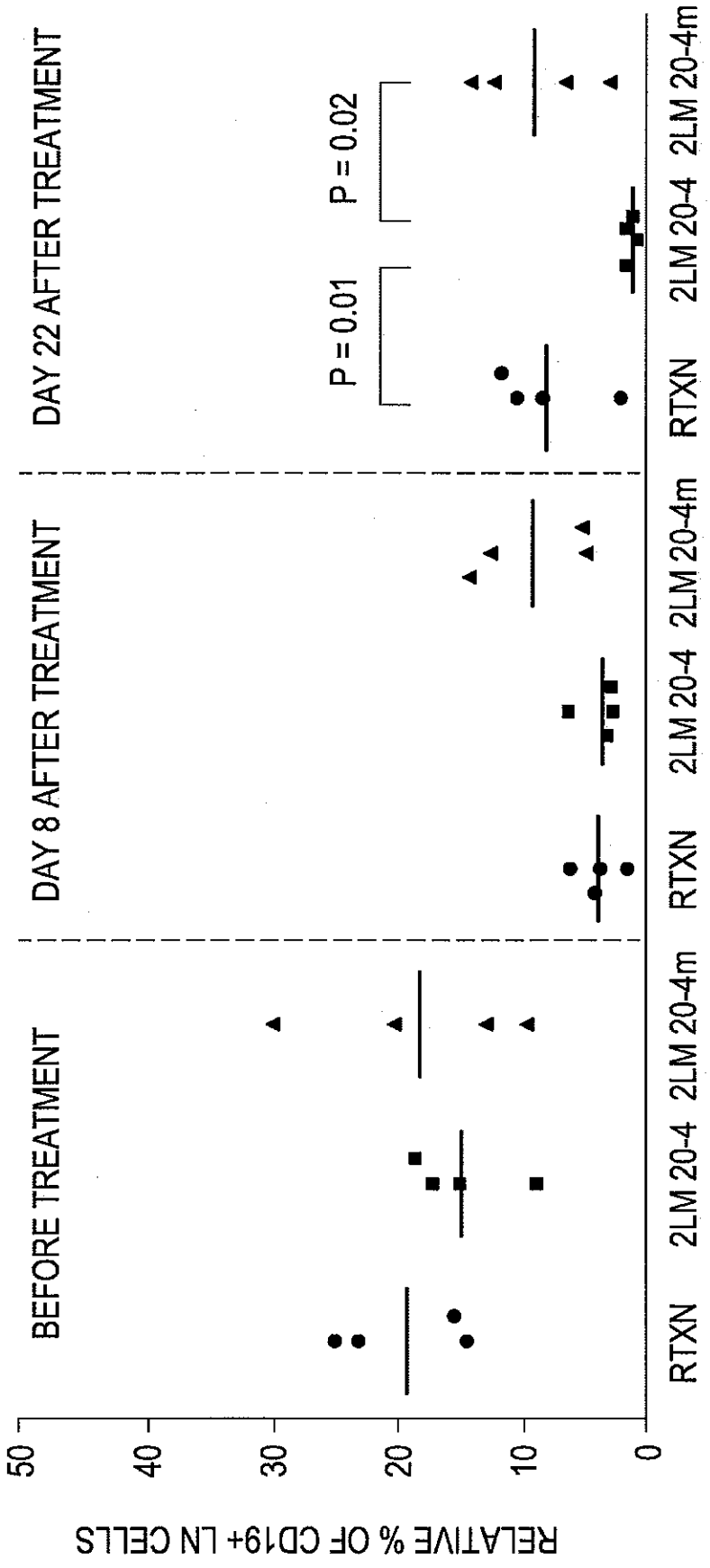

RELATIVE % OF CD19+ LN CELLS
50
40
30
20
10
0
BEFORE TREATMENT
DAY 8 AFTER TREATMENT
DAY 22 AFTER TREATMENT
P = 0.01
P = 0.02
RTXN
2LM 20-4
2LM 20-4m
RTXN
2LM 20-4
2LM 20-4m
RTXN
2LM 20-4
2LM 20-4m

Figure 10

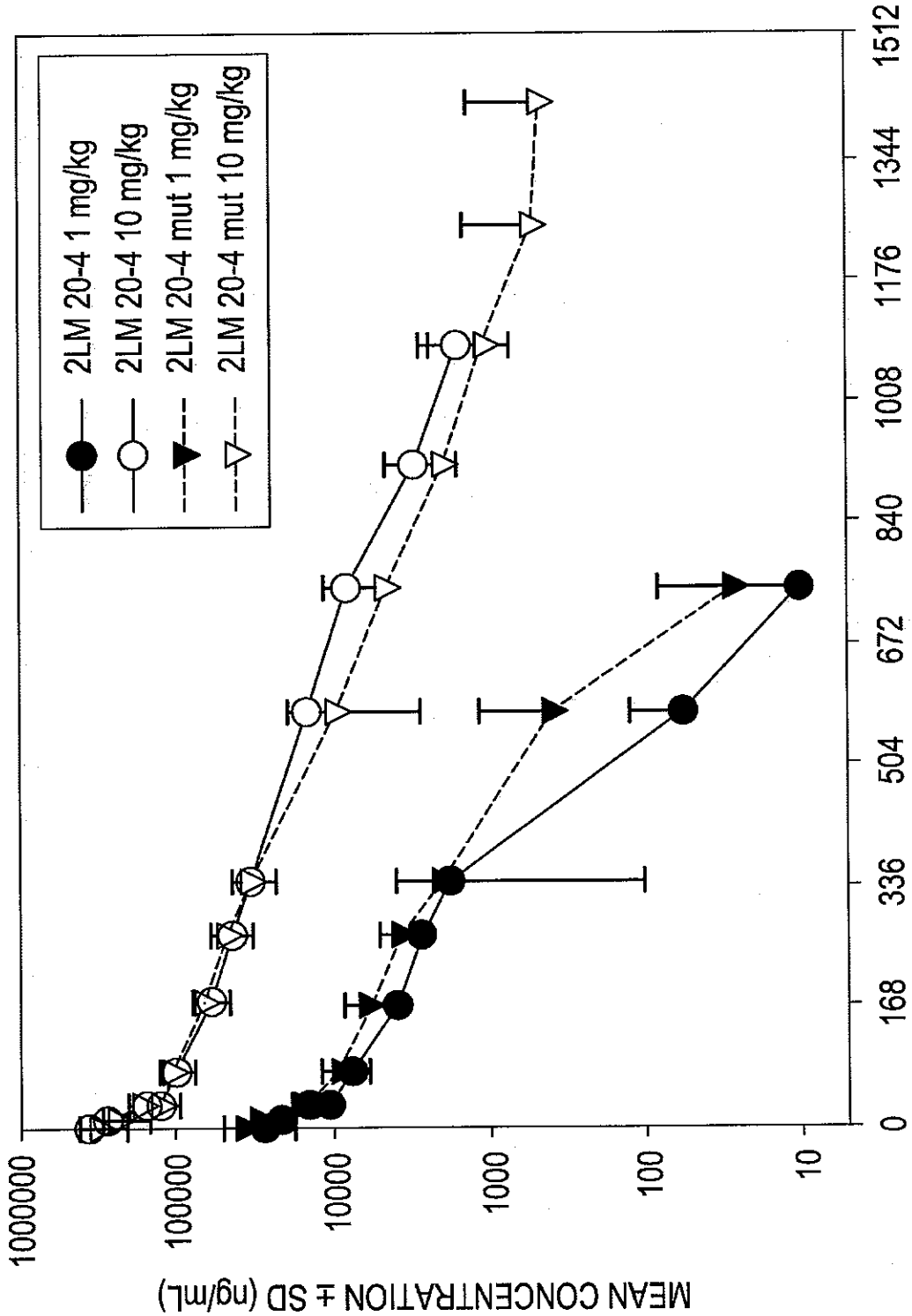

2LM 20-4 1 mg/kg
2LM 20-4 10 mg/kg
2LM 20-4 mut 1 mg/kg
2LM 20-4 mut 10 mg/kg
MEAN CONCENTRATION ± SD (ng/mL)
1000000
100000
10000
1000
100
10
0
168
336
504
672
840
1008
1176
1344
1512
HOURS

Figure 11

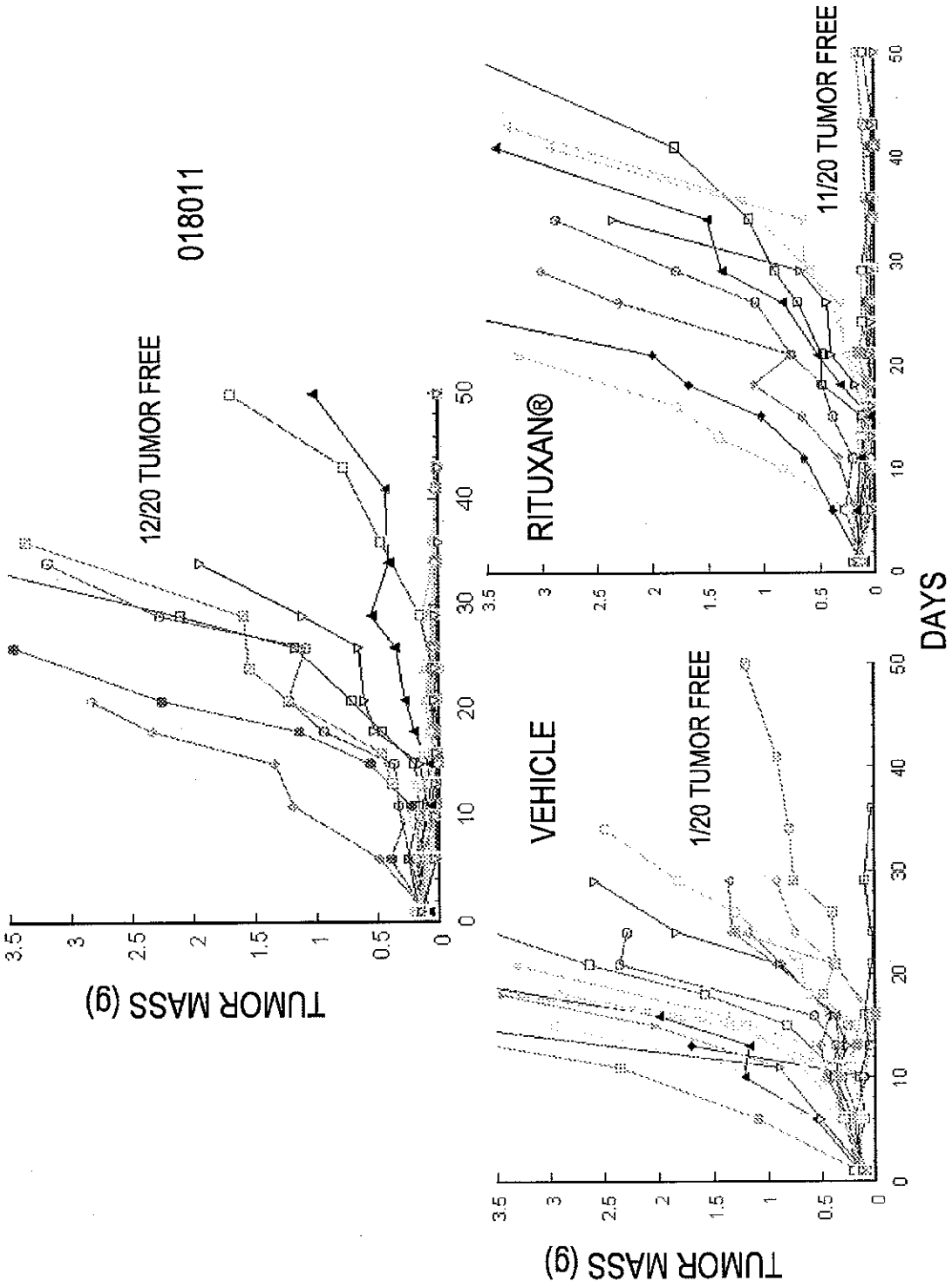

018011
12/20 TUMOR FREE
RITUXAN®
11/20 TUMOR FREE
VEHICLE
1/20 TUMOR FREE
TUMOR MASS (g)
DAYS

Figure 12

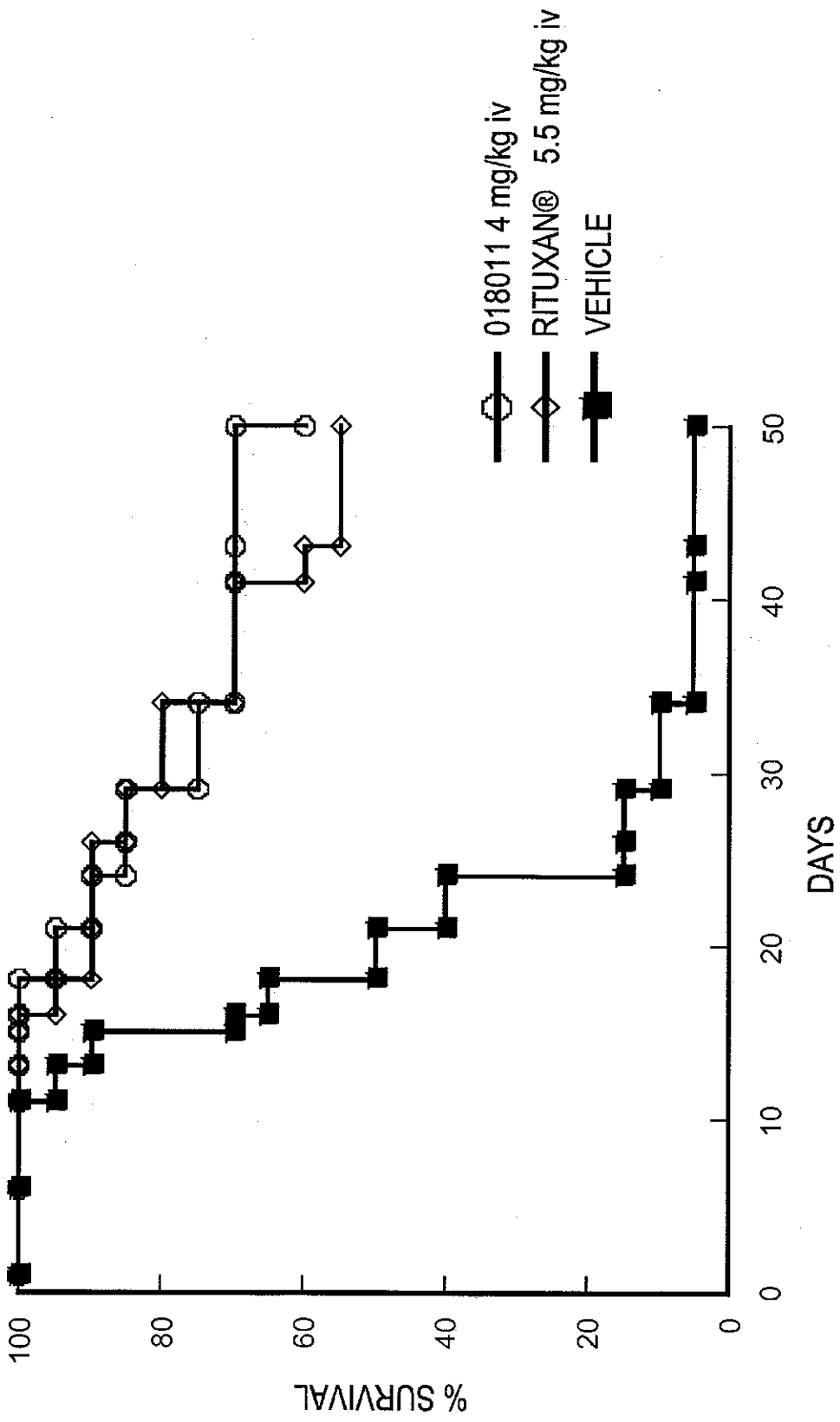

018011 4 mg/kg iv
RITUXAN® 5.5 mg/kg iv
VEHICLE
% SURVIVAL
100
80
60
40
20
0
0
10
20
30
40
50
DAYS

Figure 13

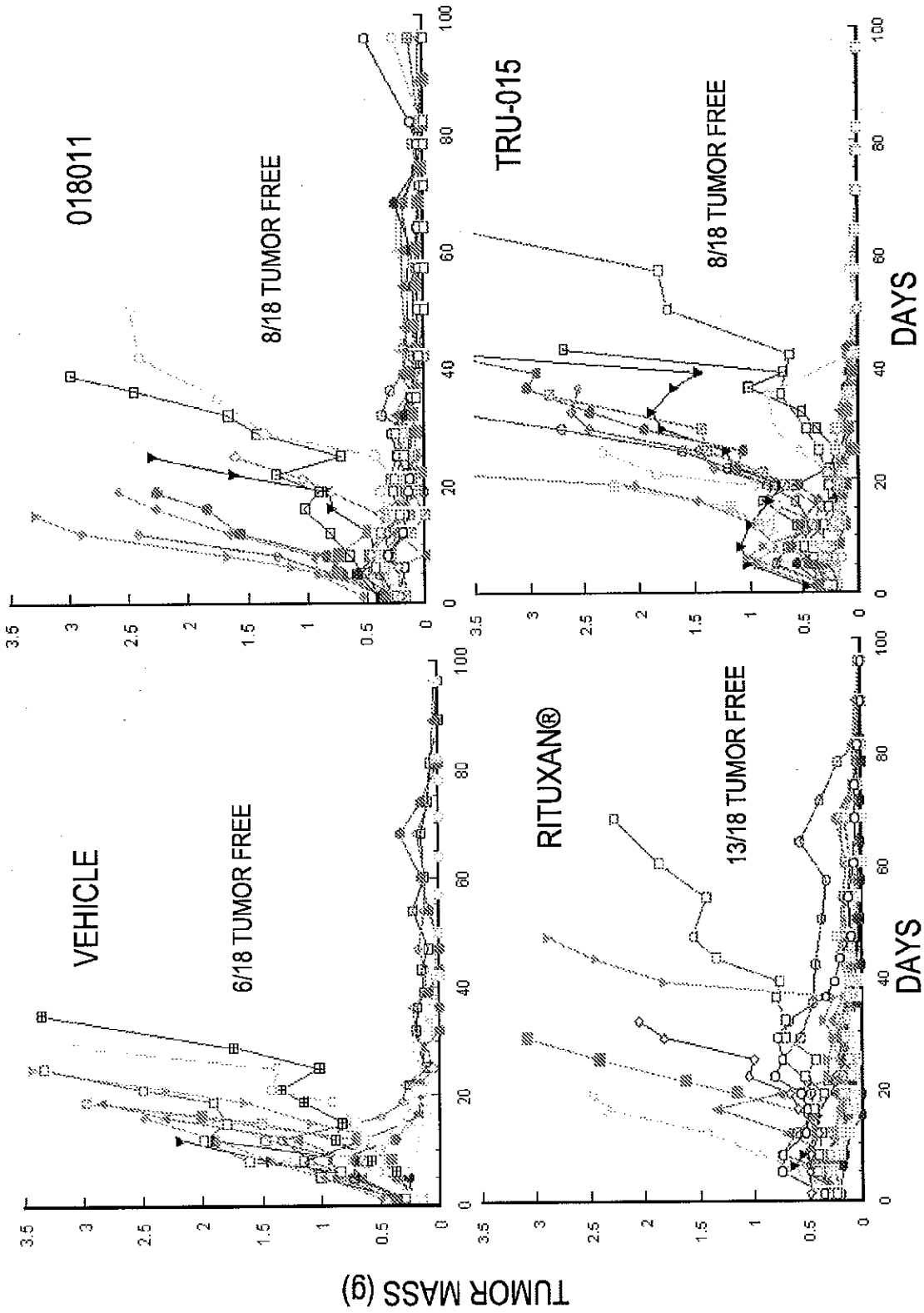

VEHICLE
6/18 TUMOR FREE
018011
8/18 TUMOR FREE
RITUXAN®
13/18 TUMOR FREE
TRU-015
8/18 TUMOR FREE
TUMOR MASS (g)
DAYS
DAYS

Figure 14

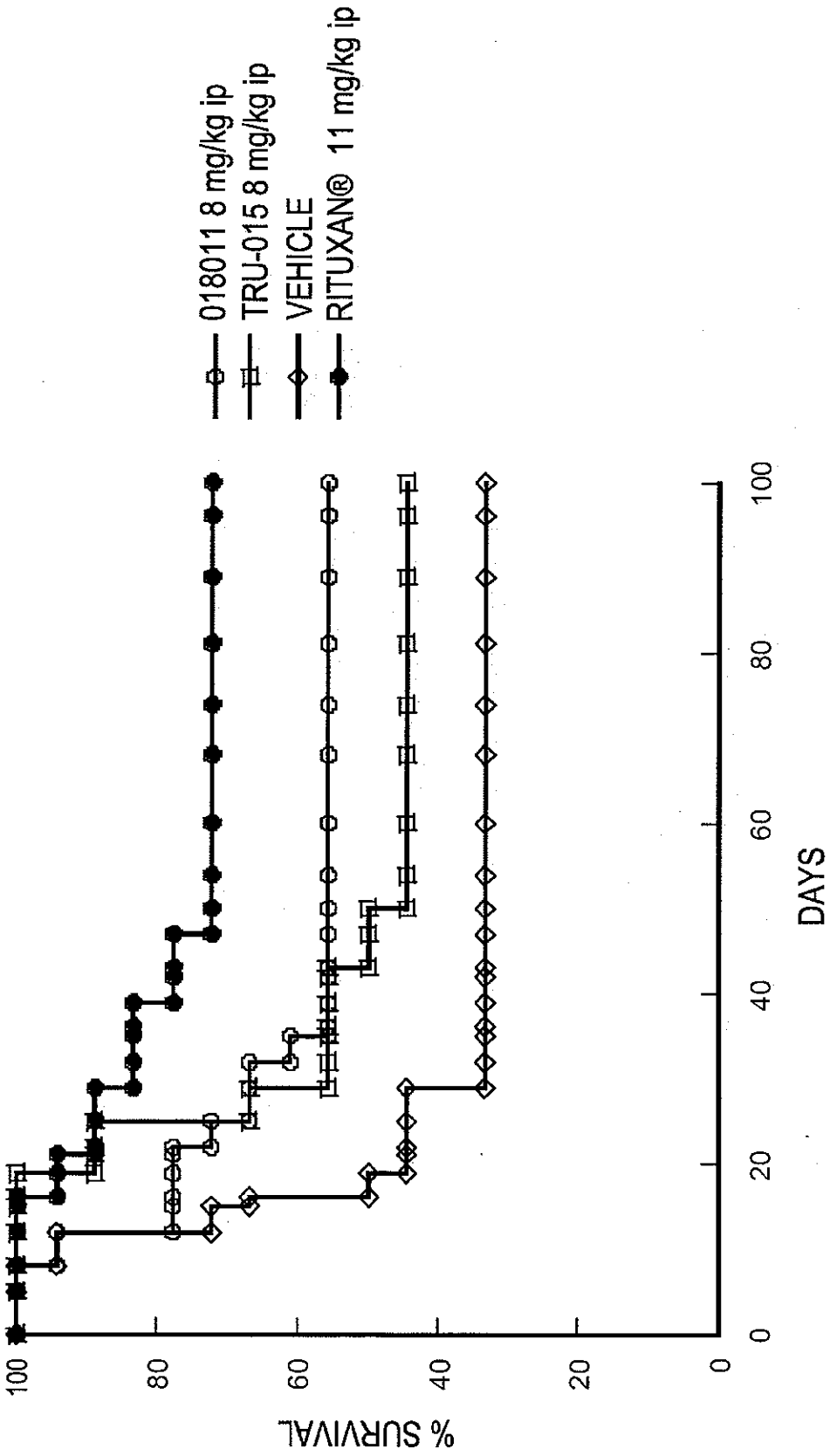

018011 8 mg/kg ip
TRU-015 8 mg/kg ip
VEHICLE
RITUXAN® 11 mg/kg ip
% SURVIVAL
100
80
60
40
20
0
0
20
40
60
80
100
DAYS

Figure 15

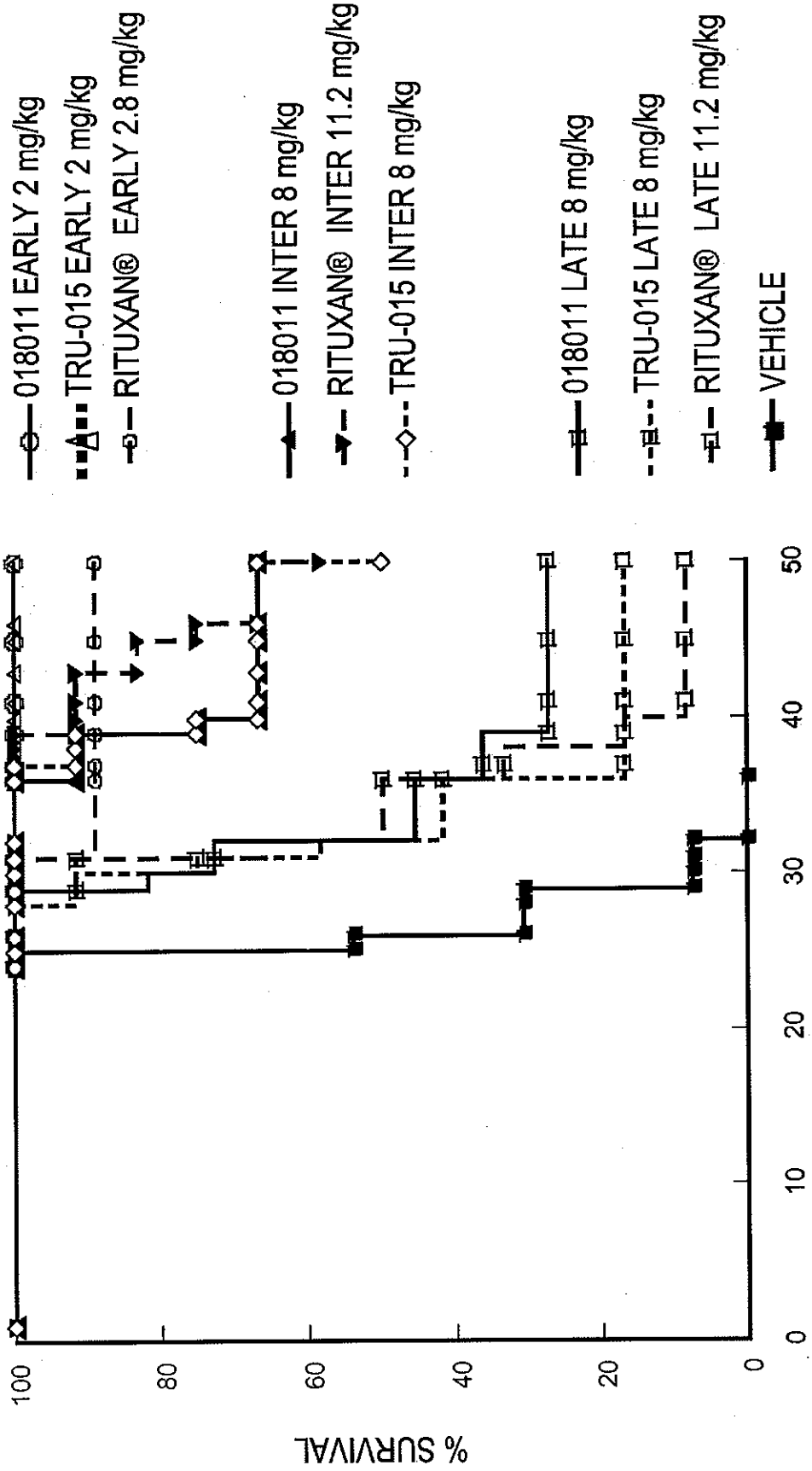

018011 EARLY 2 mg/kg
TRU-015 EARLY 2 mg/kg
RITUXAN® EARLY 2.8 mg/kg
018011 INTER 8 mg/kg
RITUXAN® INTER 11.2 mg/kg
TRU-015 INTER 8 mg/kg
018011 LATE 8 mg/kg
TRU-015 LATE 8 mg/kg
RITUXAN® LATE 11.2 mg/kg
VEHICLE
% SURVIVAL
100
80
60
40
20
0
0
10
20
30
40
50
DAYS

Figure 16

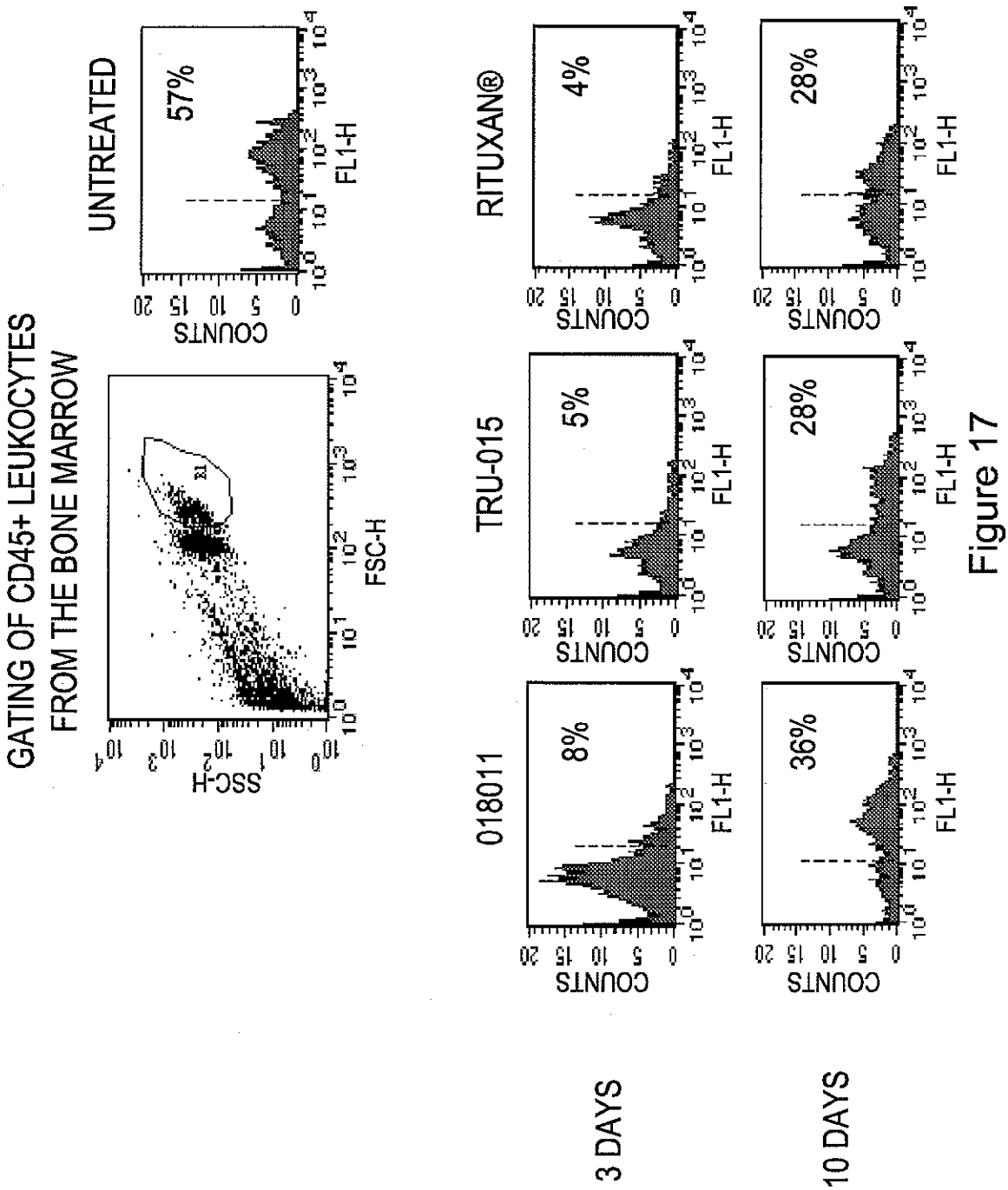

GATING OF CD45+ LEUKOCYTES
FROM THE BONE MARROW
SSC-H
FSC-H
R1
UNTREATED
57%
COUNTS
FL1-H
RITUXAN®
4%
28%
TRU-015
5%
28%
018011
8%
36%
3 DAYS
10 DAYS

Figure 17

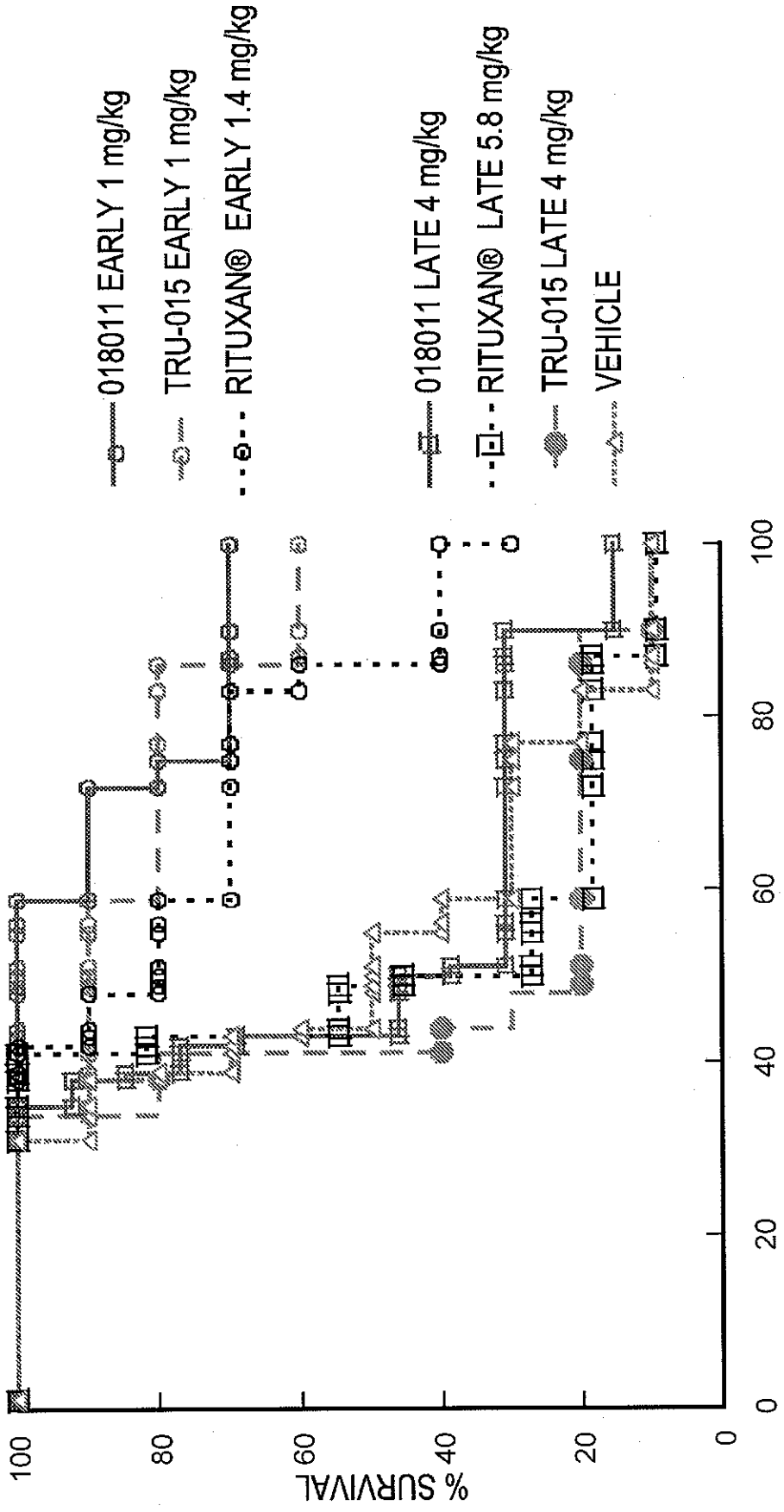

018011 EARLY 1 mg/kg
TRU-015 EARLY 1 mg/kg
RITUXAN® EARLY 1.4 mg/kg
018011 LATE 4 mg/kg
RITUXAN® LATE 5.8 mg/kg
TRU-015 LATE 4 mg/kg
VEHICLE
% SURVIVAL
100
80
60
40
20
0
DAYS
0
20
40
60
80
100

Figure 18

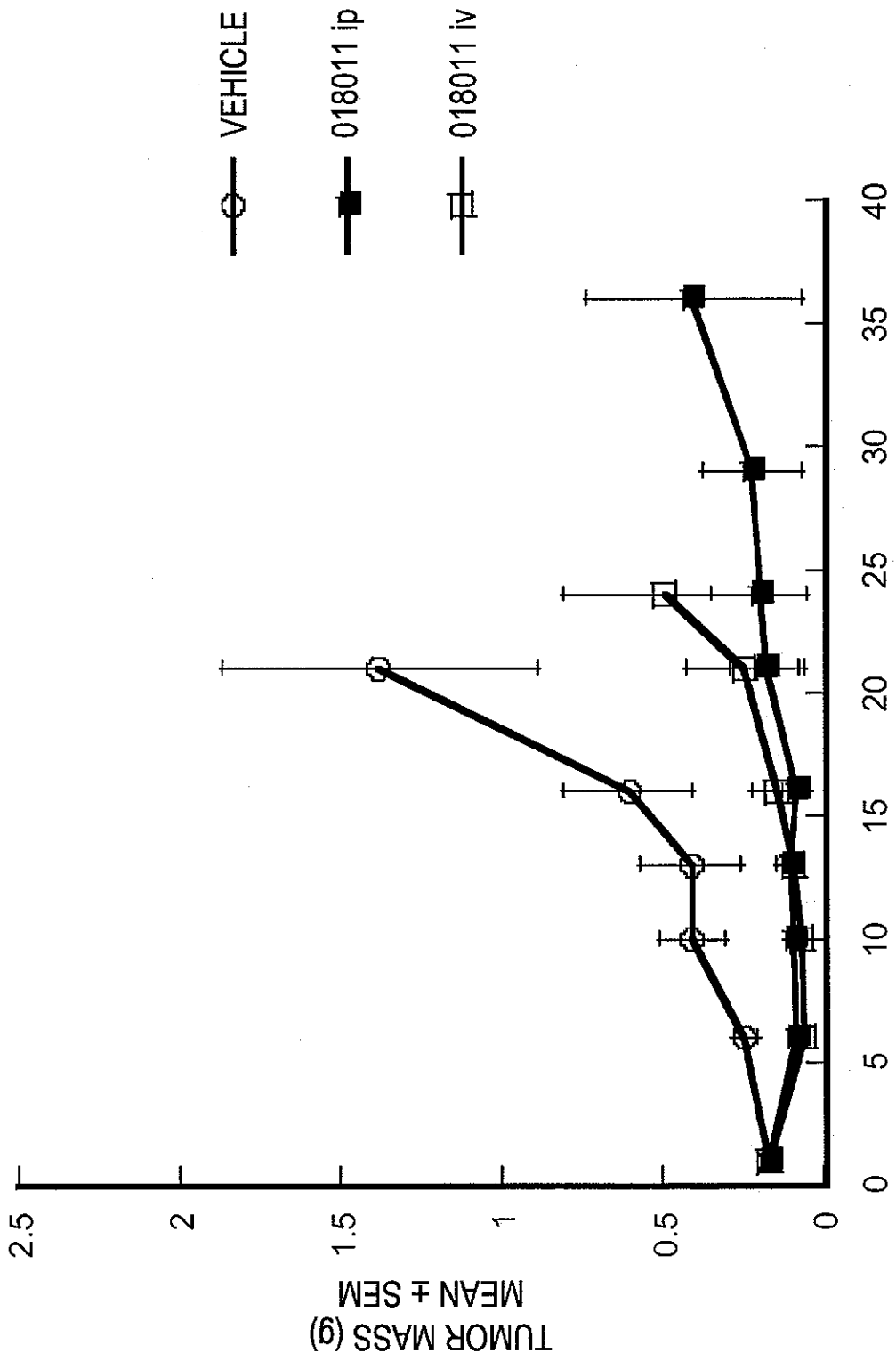

VEHICLE
018011 ip
018011 iv
TUMOR MASS (g)
MEAN ± SEM
2.5
2
1.5
1
0.5
0
0
5
10
15
20
25
30
35
40
DAYS

Figure 19

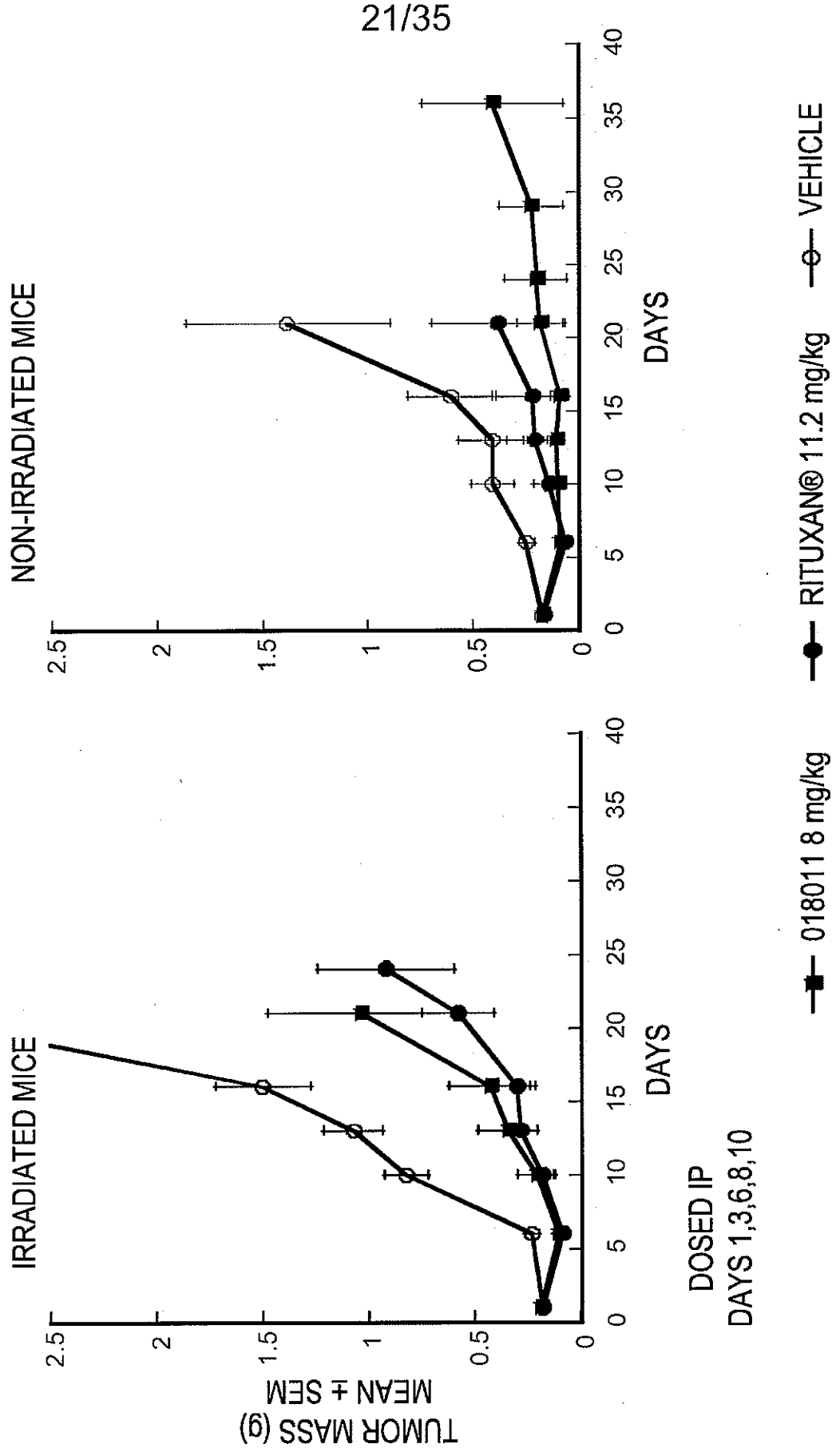

IRRADIATED MICE
NON-IRRADIATED MICE
TUMOR MASS (g)
MEAN ± SEM
DAYS
DOSED IP
DAYS 1,3,6,8,10
018011 8 mg/kg
RITUXAN® 11.2 mg/kg
VEHICLE

Figure 20

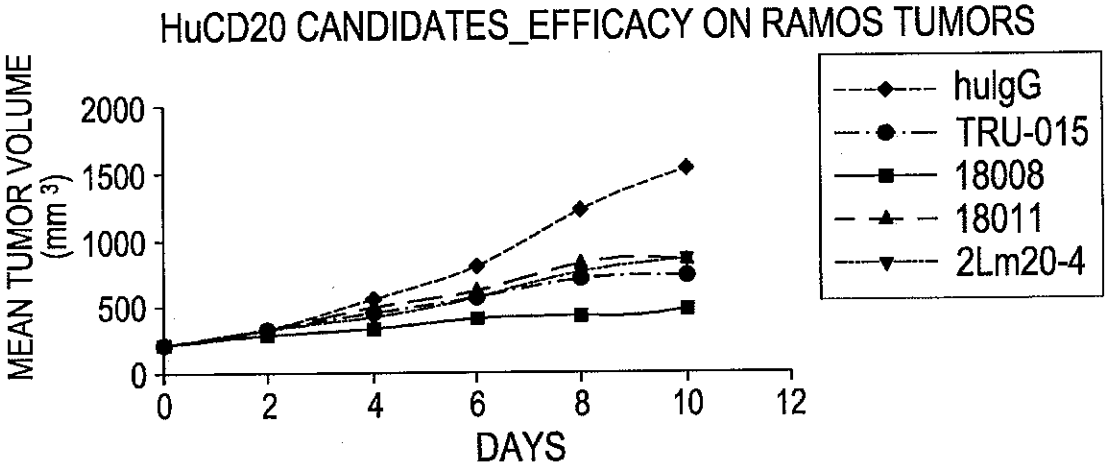


Figure 21A

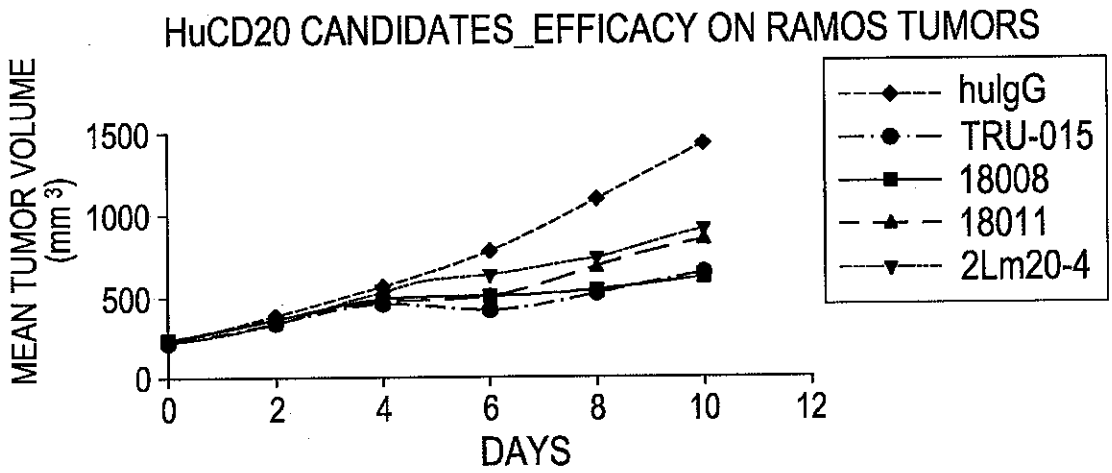


Figure 21B

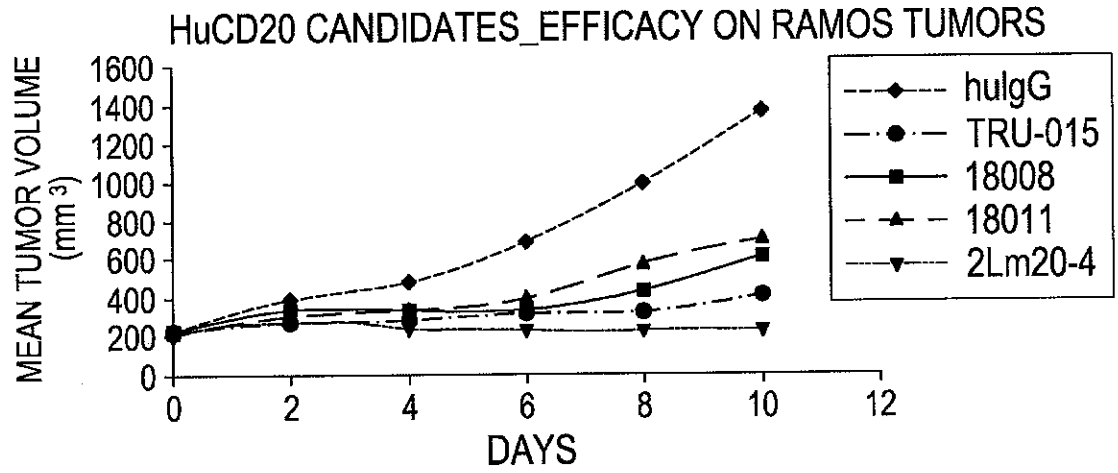


Figure 21C

p Value from Relevant Comparison in One-Way ANOVA with Indicated Post-Test

	Dunnett's - Comparison with hulgG as Control	Tukey's - Comparison of all groups
HulgG vs TRU-015	**< 0.05**	> 0.05
HulgG vs 18008	**< 0.01**	**< 0.01**
HulgG vs 18011	> 0.05	> 0.05
HulgG vs 2Lm20-4	> 0.05	> 0.05
TRU-015 vs 18008	---	> 0.05
TRU-015 vs 18011	---	> 0.05
TRU-015 vs 2Lm20-4	---	> 0.05
18008 vs 18011	---	> 0.05
18008 vs 2Lm20-4	---	> 0.05
18011 vs 2Lm20-4	---	> 0.05

p Value from Relevant Comparison in One-Way ANOVA with Indicated Post-Test

	Dunnett's - Comparison with hulgG as Control	Tukey's - Comparison of all groups
HulgG vs TRU-015	**< 0.05**	> 0.05
HulgG vs 18008	**< 0.01**	**< 0.001**
HulgG vs 18011	> 0.05	> 0.05
HulgG vs 2Lm20-4	**< 0.05**	> 0.05
TRU-015 vs 18008	---	> 0.05
TRU-015 vs 18011	---	> 0.05
TRU-015 vs 2Lm20-4	---	> 0.05
18008 vs 18011	---	> 0.05
18008 vs 2Lm20-4	---	> 0.05
18011 vs 2Lm20-4	---	> 0.05

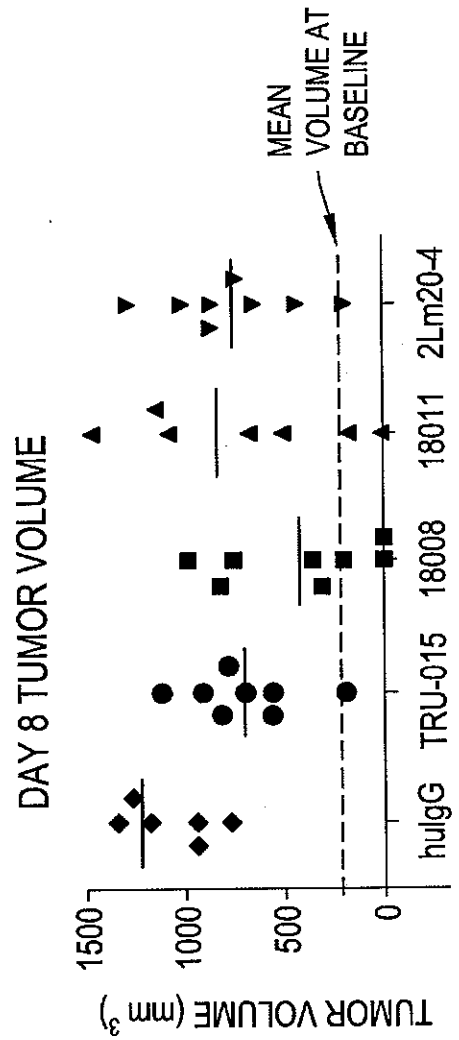
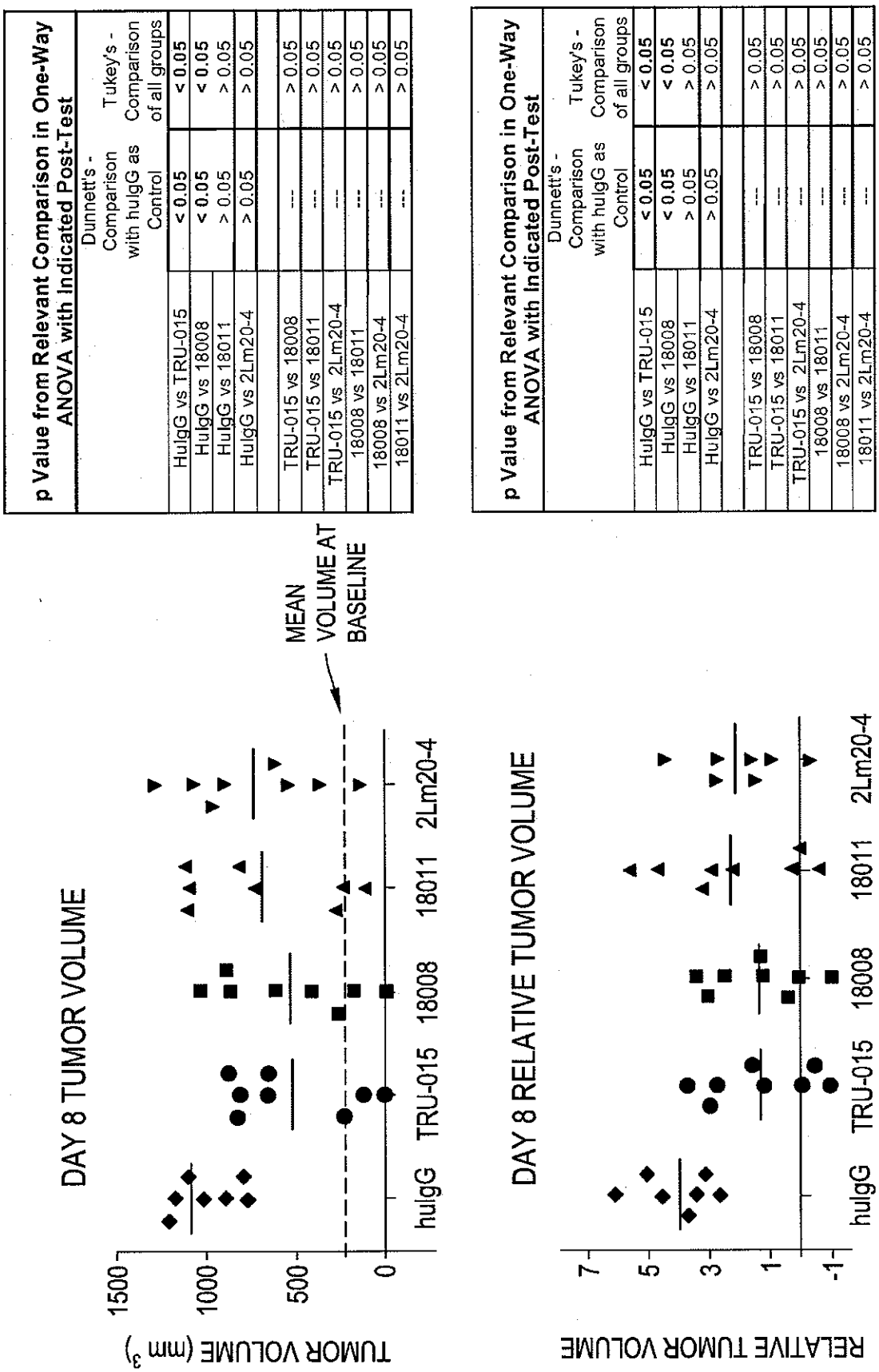


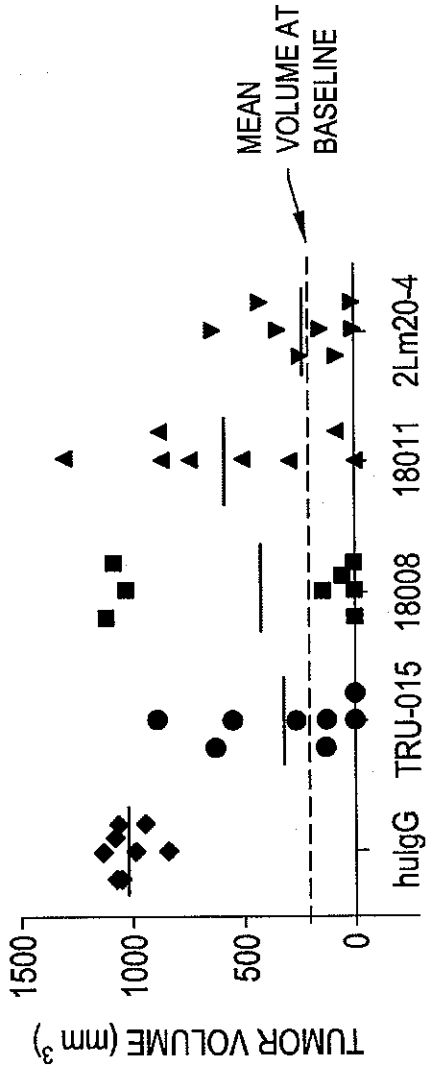
Figure 22A

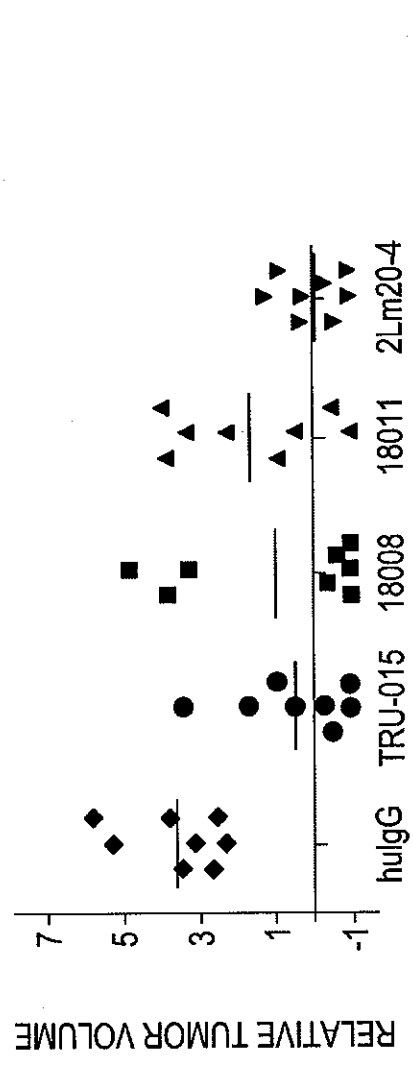


p Value from Relevant Comparison in One-Way ANOVA with Indicated Post-Test			
		Dunnett's - Comparison with hulgG as Control	Tukey's - Comparison of all groups
HulgG vs TRU-015		< 0.05	< 0.05
HulgG vs 18008		< 0.05	< 0.05
HulgG vs 18011		> 0.05	> 0.05
HulgG vs 2Lm20-4		> 0.05	> 0.05
TRU-015 vs 18008		---	> 0.05
TRU-015 vs 18011		---	> 0.05
TRU-015 vs 2Lm20-4		---	> 0.05
18008 vs 18011		---	> 0.05
18008 vs 2Lm20-4		---	> 0.05
18011 vs 2Lm20-4		---	> 0.05

p Value from Relevant Comparison in One-Way ANOVA with Indicated Post-Test			
		Dunnett's - Comparison with hulgG as Control	Tukey's - Comparison of all groups
HulgG vs TRU-015		< 0.05	< 0.05
HulgG vs 18008		< 0.05	< 0.05
HulgG vs 18011		> 0.05	> 0.05
HulgG vs 2Lm20-4		> 0.05	> 0.05
TRU-015 vs 18008		---	> 0.05
TRU-015 vs 18011		---	> 0.05
TRU-015 vs 2Lm20-4		---	> 0.05
18008 vs 18011		---	> 0.05
18008 vs 2Lm20-4		---	> 0.05
18011 vs 2Lm20-4		---	> 0.05

Figure 22B





p Value from Relevant Comparison in One-Way ANOVA with Indicated Post-Test	Dunnett's - Comparison with hulgG as Control	Tukey's - Comparison of all groups
HulgG vs TRU-015	P < 0.01	P < 0.01
HulgG vs 18008	P < 0.01	P < 0.05
HulgG vs 18011	P > 0.05	P > 0.05
HulgG vs 2Lm20-4	P < 0.01	P < 0.001
TRU-015 vs 18008	---	> 0.05
TRU-015 vs 18011	---	> 0.05
TRU-015 vs 2Lm20-4	---	> 0.05
18008 vs 18011	---	> 0.05
18008 vs 2Lm20-4	---	> 0.05
18011 vs 2Lm20-4	---	> 0.05

p Value from Relevant Comparison in One-Way ANOVA with Indicated Post-Test	Dunnett's - Comparison with hulgG as Control	Tukey's - Comparison of all groups
HulgG vs TRU-015	P < 0.01	P < 0.01
HulgG vs 18008	P < 0.05	P < 0.05
HulgG vs 18011	P > 0.05	P > 0.05
HulgG vs 2Lm20-4	P < 0.01	P < 0.01
TRU-015 vs 18008	---	> 0.05
TRU-015 vs 18011	---	> 0.05
TRU-015 vs 2Lm20-4	---	> 0.05
18008 vs 18011	---	> 0.05
18008 vs 2Lm20-4	---	> 0.05
18011 vs 2Lm20-4	---	> 0.05

Figure 22C

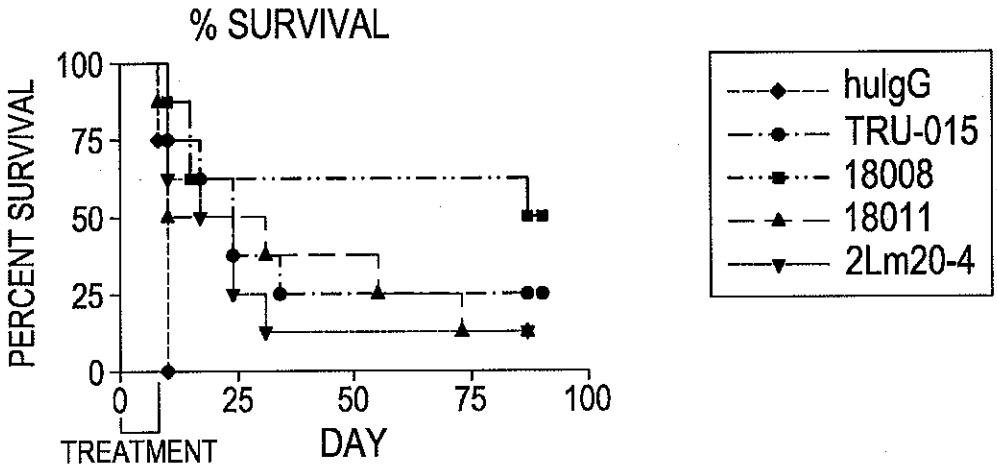


Figure 23A

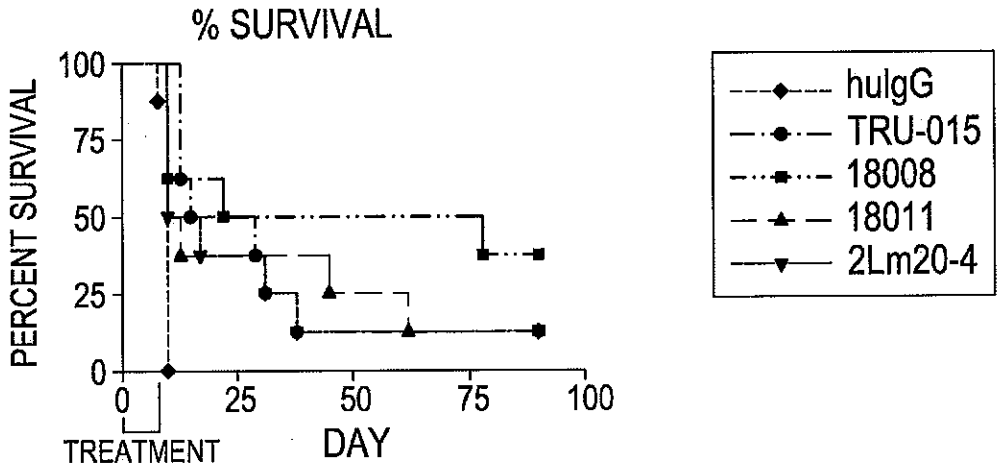


Figure 23B

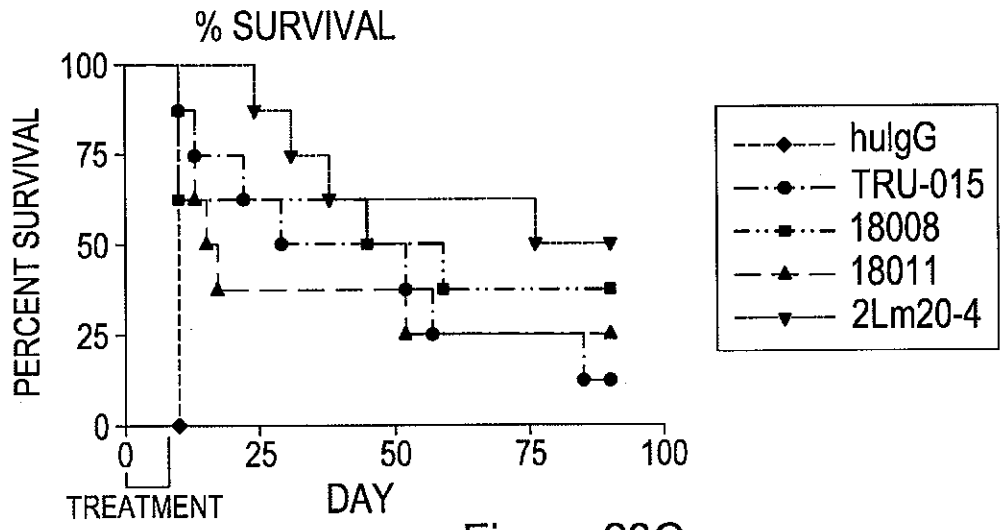


Figure 23C

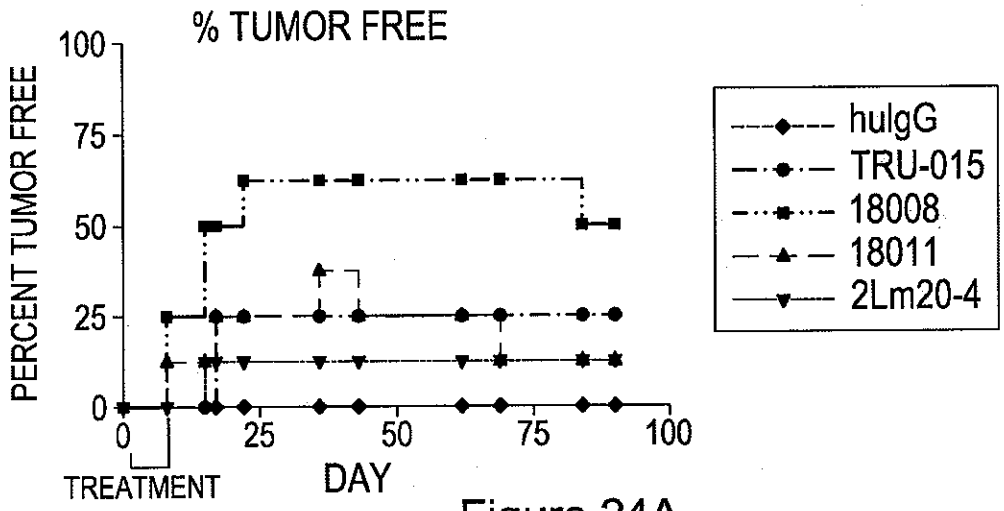


Figure 24A

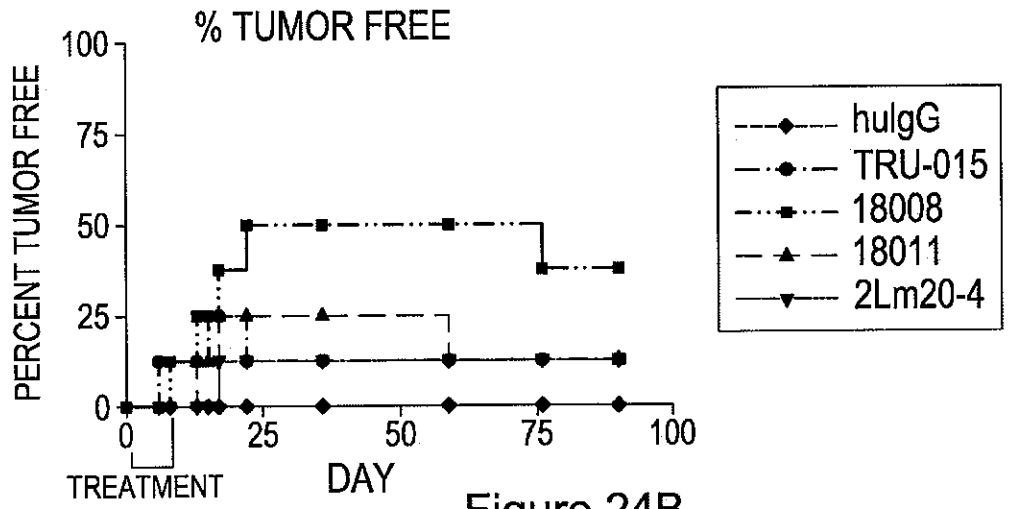


Figure 24B

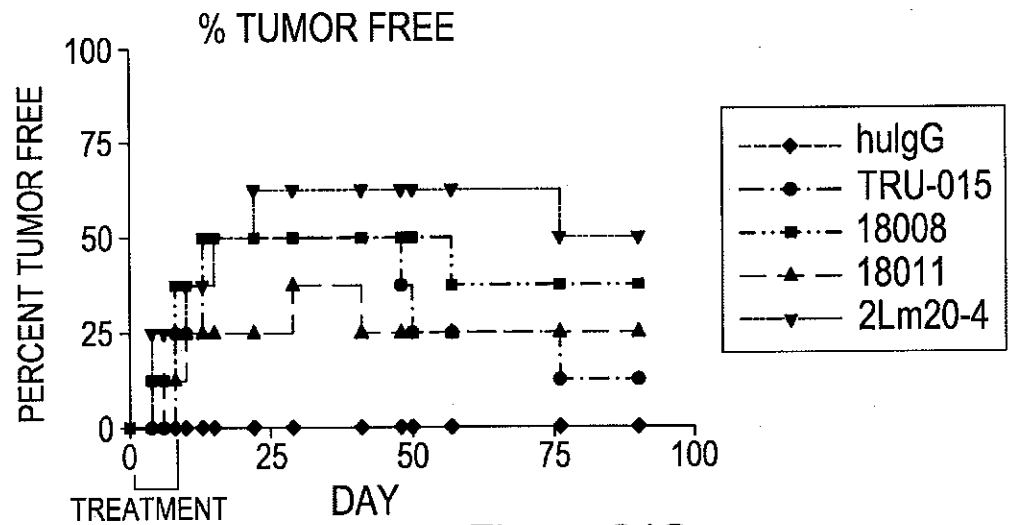


Figure 24C

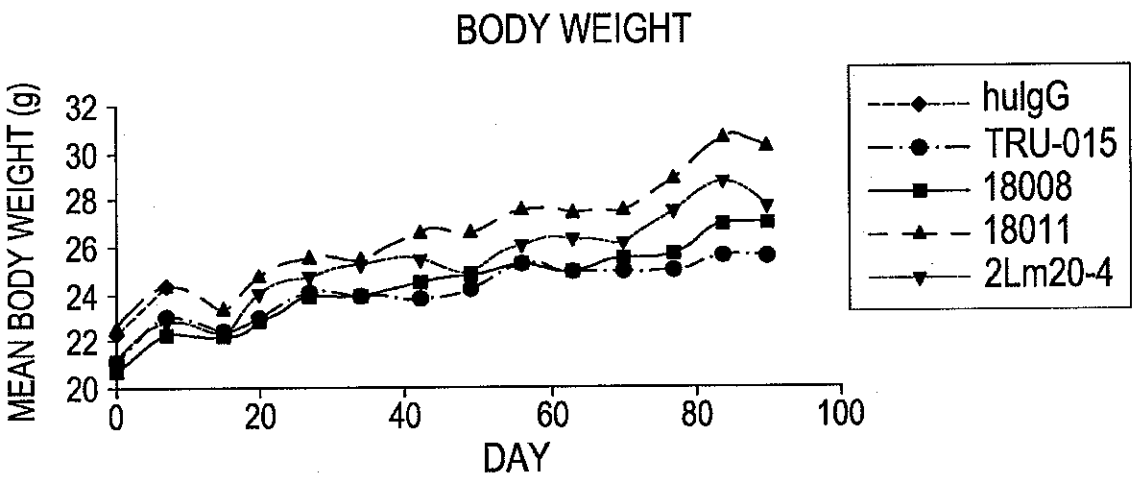


Figure 25A

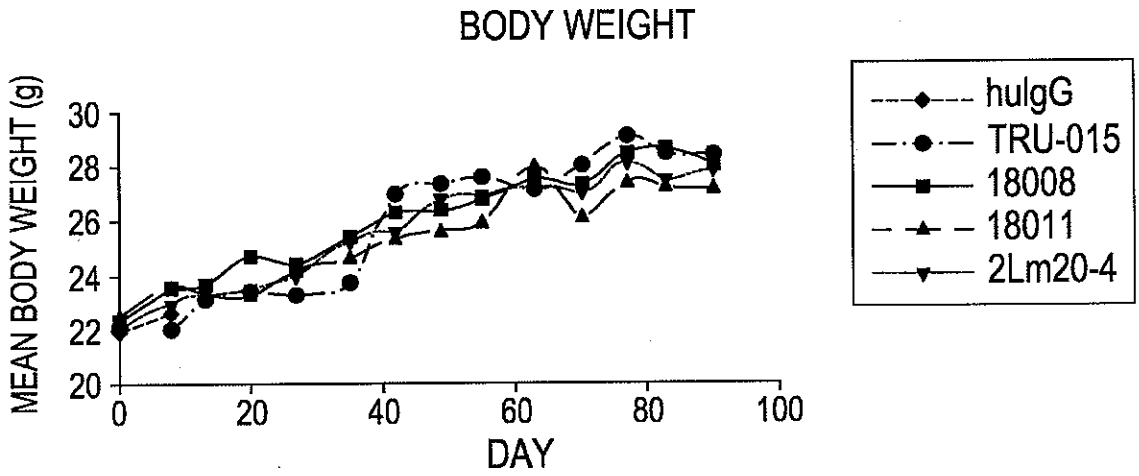


Figure 25B

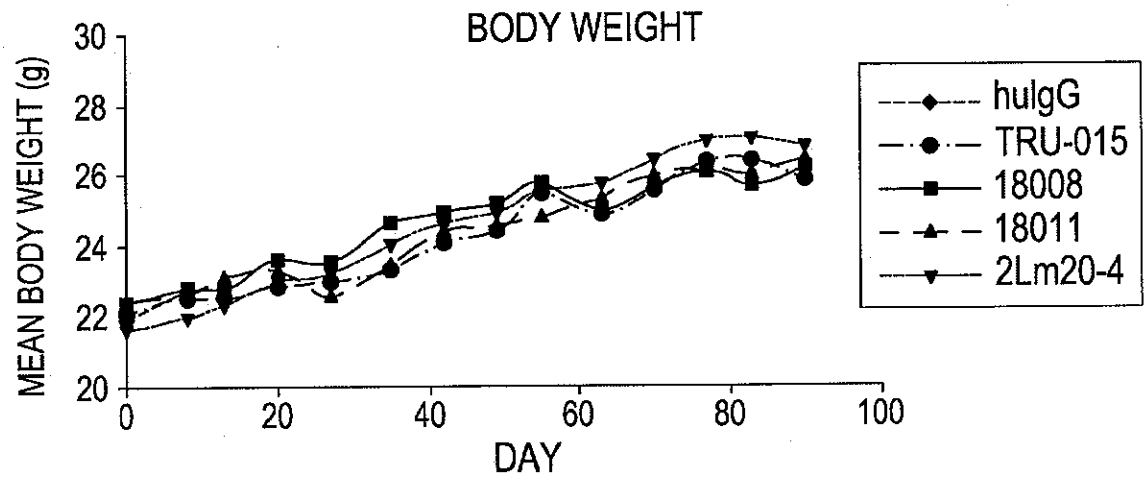


Figure 25C

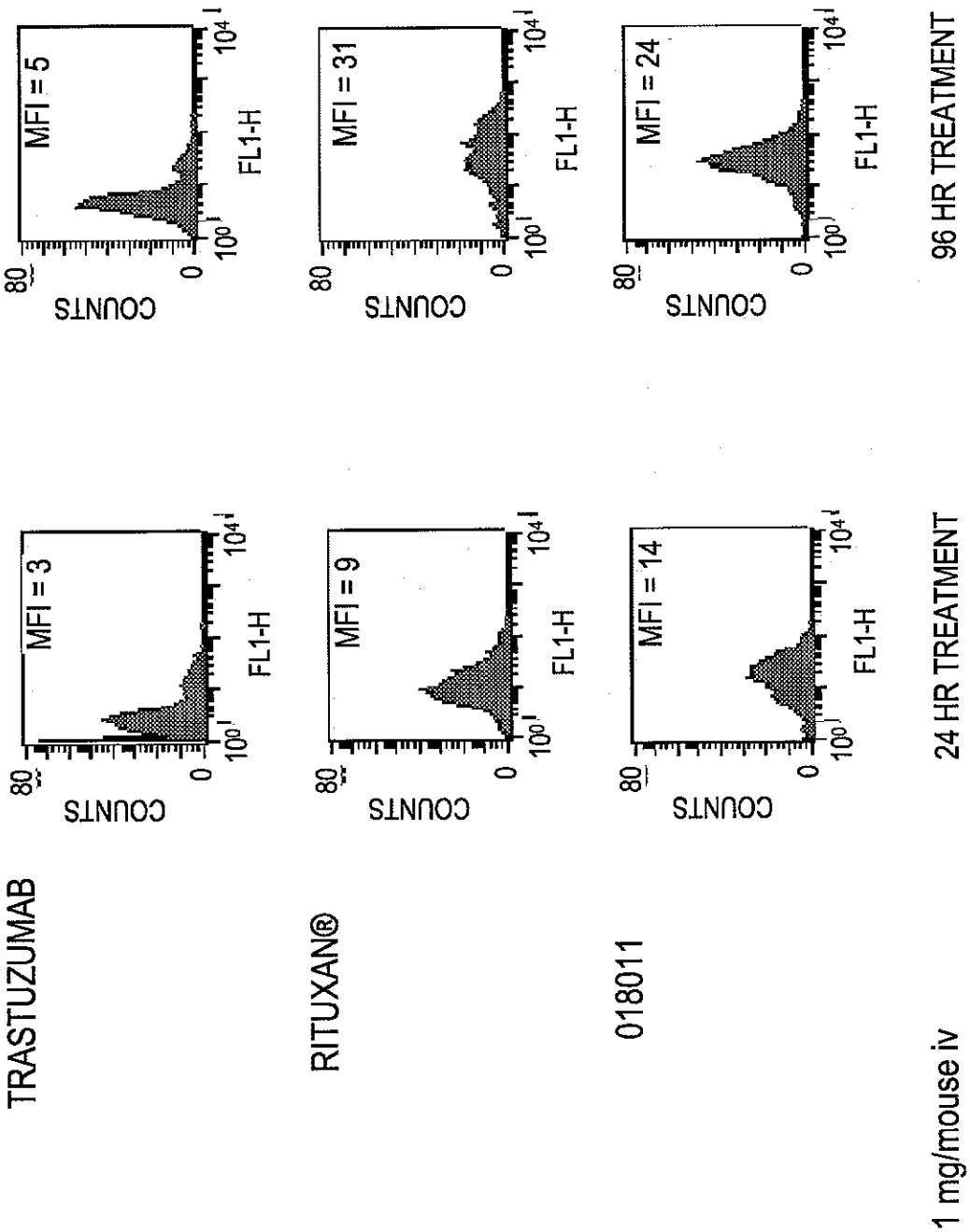

TRASTUZUMAB
RITUXAN®
018011
1 mg/mouse iv
24 HR TREATMENT
96 HR TREATMENT
MFI = 3
MFI = 9
MFI = 14
MFI = 5
MFI = 31
MFI = 24
COUNTS
FL1-H
0
80
10^0
10^1
10^4

Figure 26

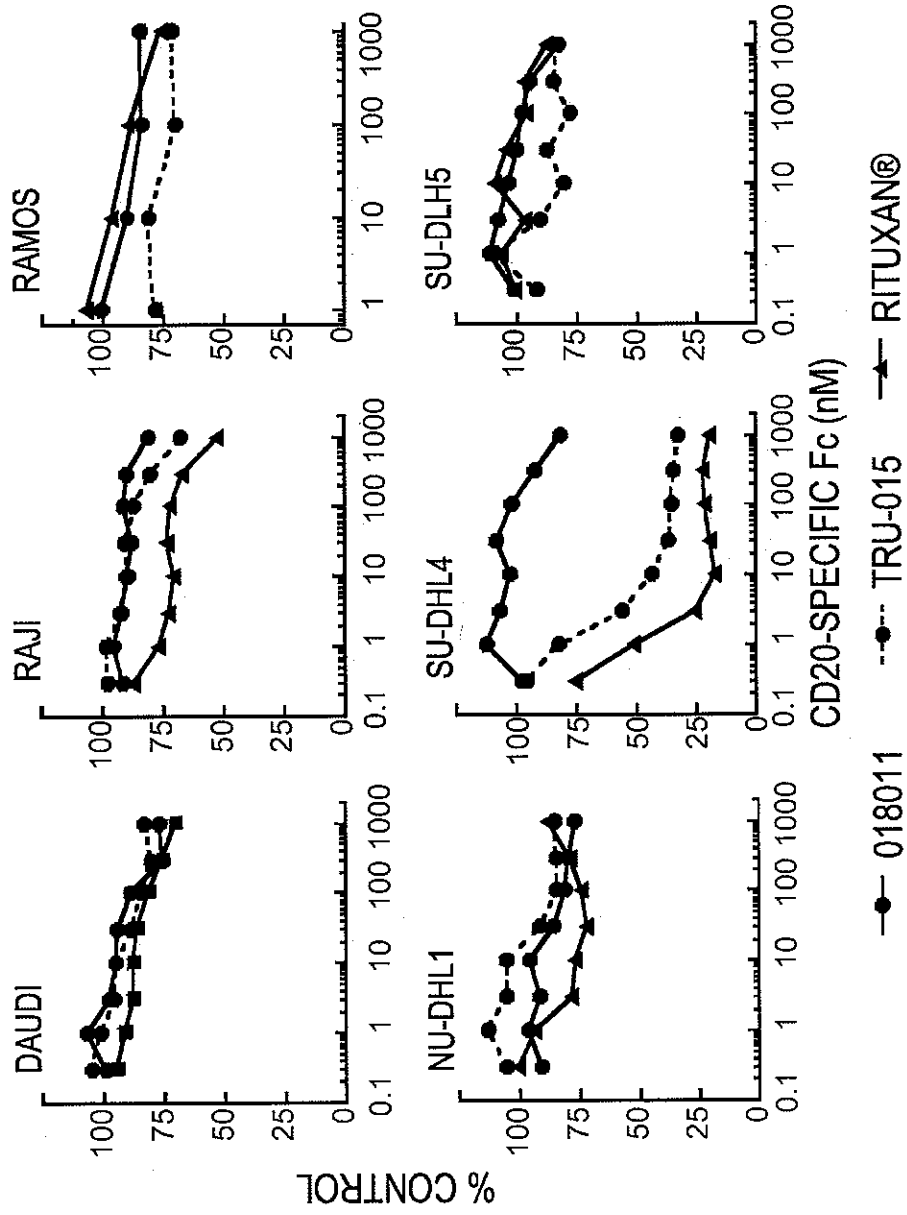

RAMOS
SU-DLH5
RAJI
SU-DHL4
DAUDI
NU-DHL1
% CONTROL
CD20-SPECIFIC Fc (nM)
018011
TRU-015
RITUXAN®

Figure 27

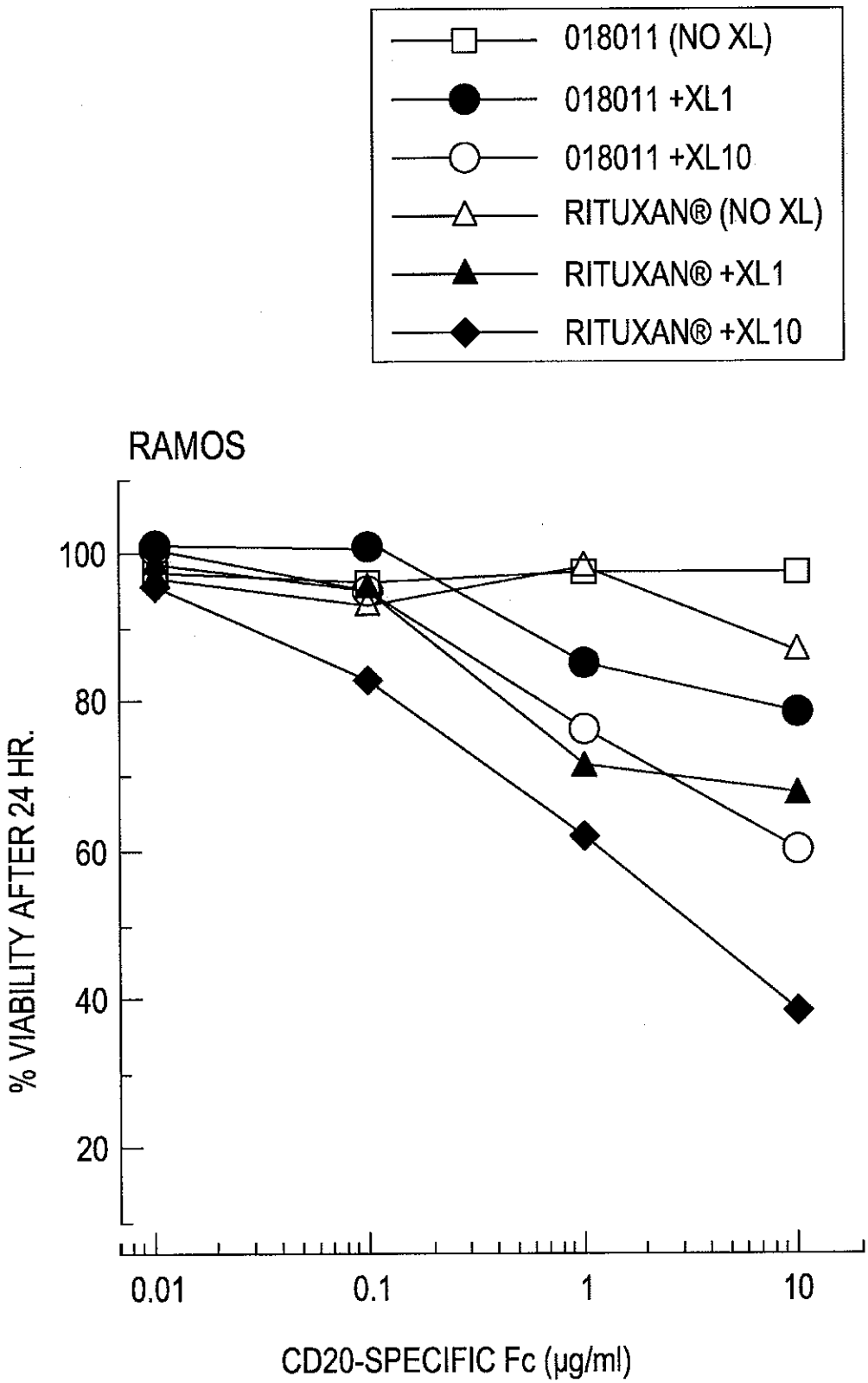

018011 (NO XL)
018011 +XL1
018011 +XL10
RITUXAN® (NO XL)
RITUXAN® +XL1
RITUXAN® +XL10
RAMOS
100
80
60
40
20
% VIABILITY AFTER 24 HR.
0.01
0.1
1
10
CD20-SPECIFIC Fc (µg/ml)

Figure 28

HUMANIZED ANTI-CD20 SMIP SUMMARY

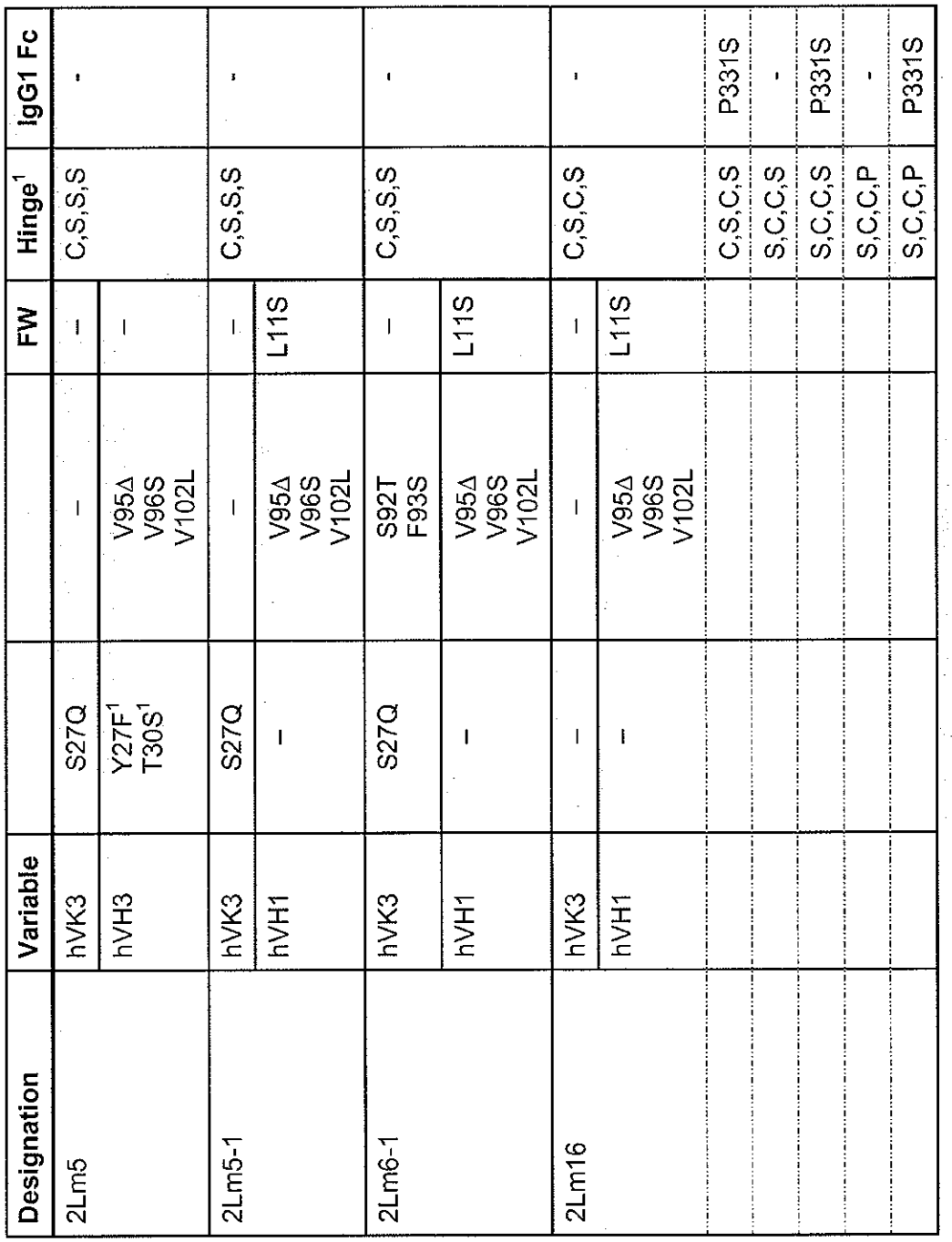
Designation	Variable			FW	Hinge[1]	IgG1 Fc
018008	hVK3	S27Q	–	–	C,S,C,S	-
	hVH5	T28S	V102L	–		
					C,S,C,S	P331S
					S,C,C,S	-
					S,C,C,P	-
018009	hVK3	S27Q	–	–	C,S,C,S	-
	hVH5	T28S[1]	V95Δ V96S V102L	–		
					C,S,C,S	P331S
					S,C,C,S	-
					S,C,C,P	-
					S,C,C,P	P331S
018010	hVK3	S27Q M33I H34V	–	–	C,S,C,S	-
	hVH5	T28S[1]	V102L	–		
					C,S,C,S	P331S
					S,C,C,S	-

[1] Hinge positions in wild-type: C220, C226, C229, and P230.

Figure 29 (part 1)

Designation	Variable			FW	Hinge[1]	IgG1 Fc
018011	hVK3	S27Q M33I H34V	–	–	C,S,C,S	-
	hVH5	T28S[1]	V95Δ V96S V102L	–		
					S,C,C,S	-
					S,C,C,P	-
					S,C,C,P	P331S
018014	mVK	–	–	–	C,S,C,S	-
	hVH5	T28S[1]	V102L	–		
					C,S,C,S	P331S
					S,C,C,S	-
					S,C,C,P	-
018015	mVK	–	–	–	C,S,C,S	-
	hVH5	T28S[1]	V95Δ V96S V102L	–		
					C,S,C,S	P331S
					S,C,C,S	-
					S,C,C,P	-

Figure 29 (part 2)



Designation	Variable			FW	Hinge[1]	IgG1 Fc
2Lm5	hVK3	S27Q	–	–	C,S,S,S	-
	hVH3	Y27F[1] T30S[1]	V95Δ V96S V102L	–		
2Lm5-1	hVK3	S27Q	–	–	C,S,S,S	-
	hVH1	–	V95Δ V96S V102L	L11S		
2Lm6-1	hVK3	S27Q	S92T F93S	–	C,S,S,S	-
	hVH1	–	V95Δ V96S V102L	L11S		
2Lm16	hVK3	–	–	–	C,S,C,S	-
	hVH1	–	V95Δ V96S V102L	L11S		
					C,S,C,S	P331S
					S,C,C,S	-
					S,C,C,S	P331S
					S,C,C,P	-
					S,C,C,P	P331S

Figure 29 (part 3)

Designation	Variable			FW	Hinge[1]	IgG1 Fc
2Lm16-1	hVK3	S27Q	S92T F93S	–	C,S,S,S	-
	hVH1	–	V95Δ V96S V102L	L11S		
2Lm19-3	hVK3	S27Q M33I H34V	–	–	C,S,C,S	-
	hVH1	–	V95Δ V96S V102L	L11S		
					C,S,C,S	P331S
					S,C,C,S	-
					S,C,C,P	-
					S,C,C,P	P331S
2Lm20-4	hVK3	M33I H34V	–	–	C,S,C,S	-
	hVH1	–	V95Δ V96S V102L	L11S		
					C,S,C,S	P331S
					S,C,C,S	-
					S,C,C,P	-
					S,C,C,P	P331S

Figure 29 (part 4)