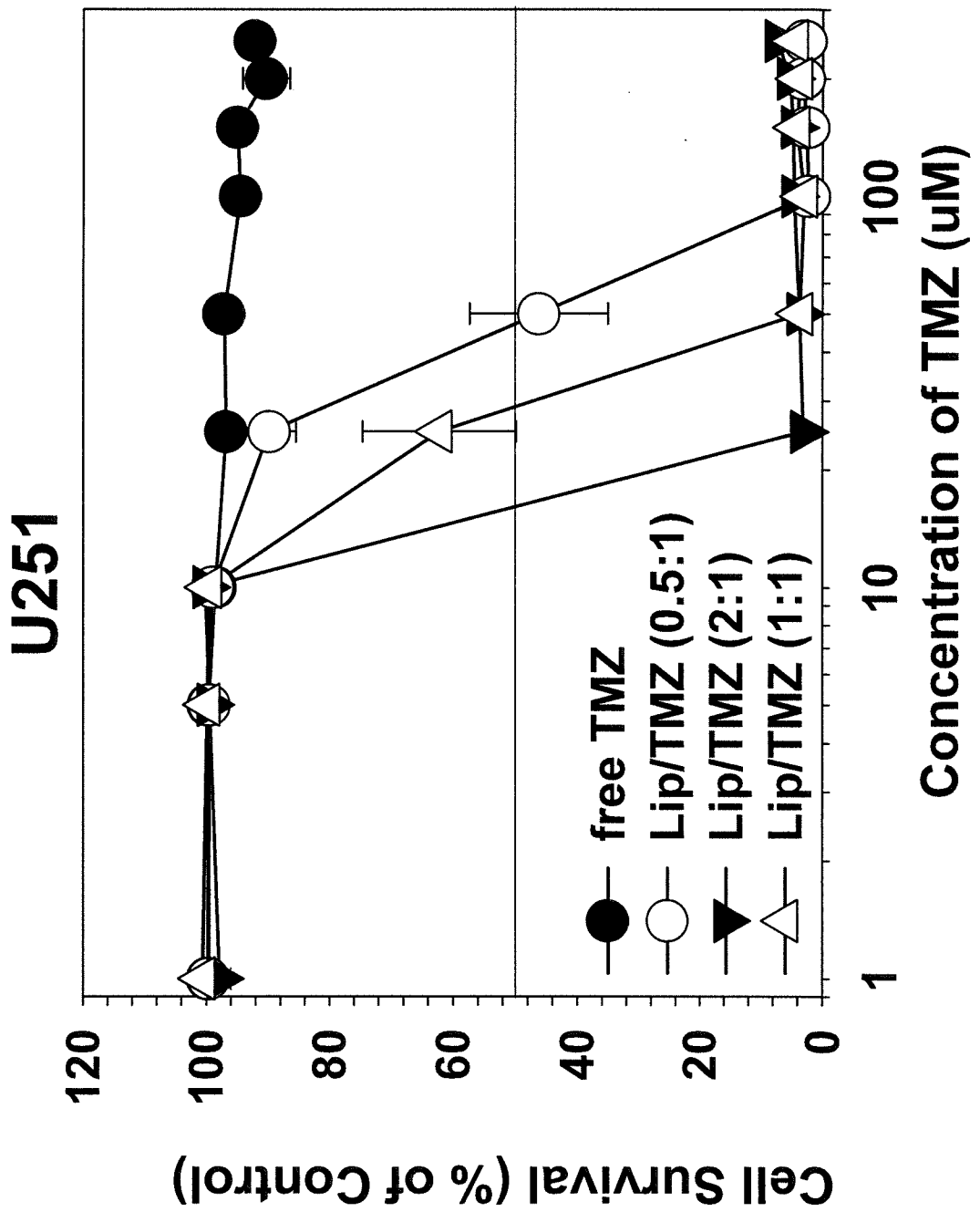

U251
Cell Survival (% of Control)
120
100
80
60
40
20
0
1
10
100
Concentration of TMZ (uM)
free TMZ
Lip/TMZ (0.5:1)
Lip/TMZ (2:1)
Lip/TMZ (1:1)

FIG. 1

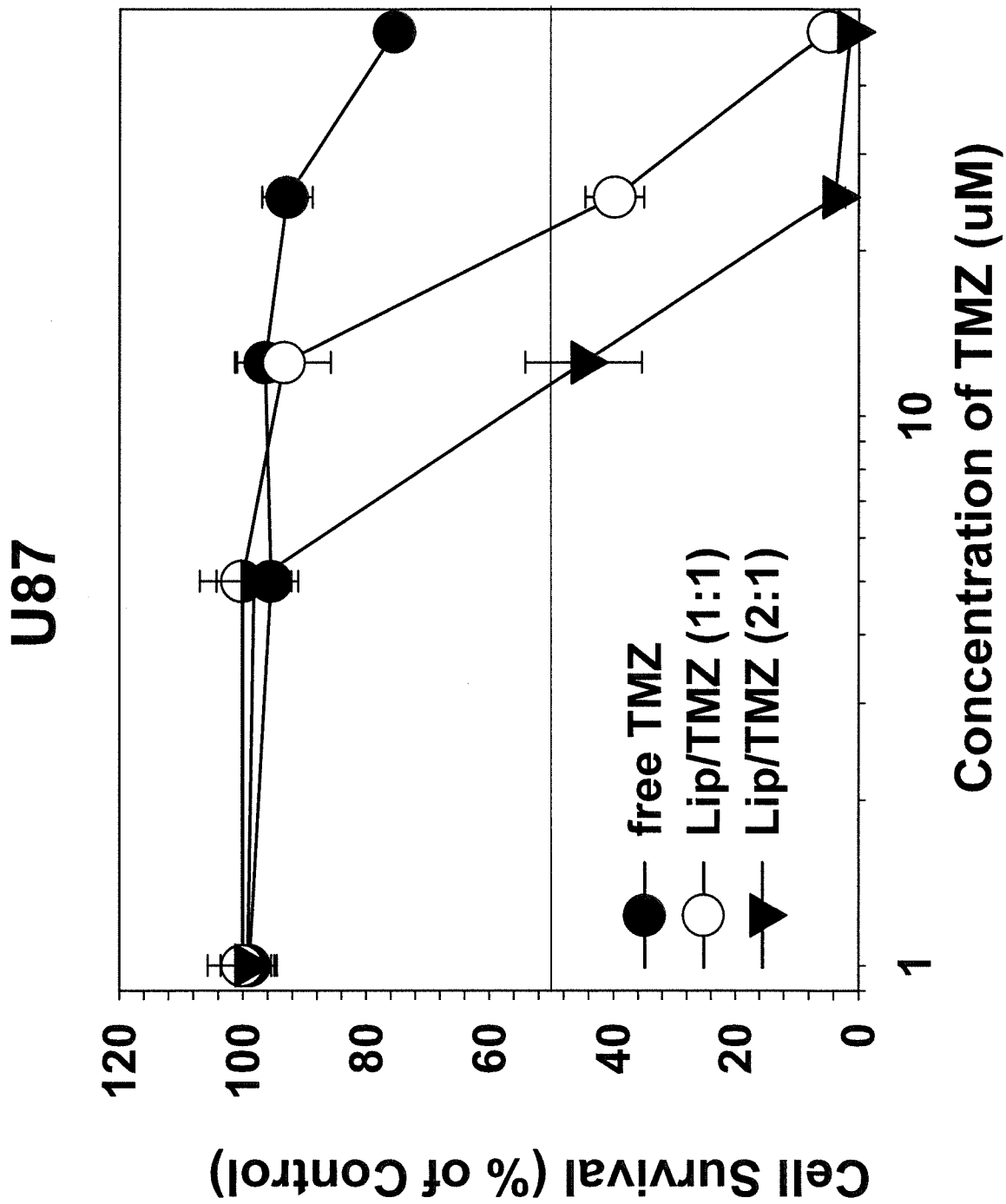

U87
Cell Survival (% of Control)
120
100
80
60
40
20
0
1
10
Concentration of TMZ (uM)
free TMZ
Lip/TMZ (1:1)
Lip/TMZ (2:1)

FIG. 2

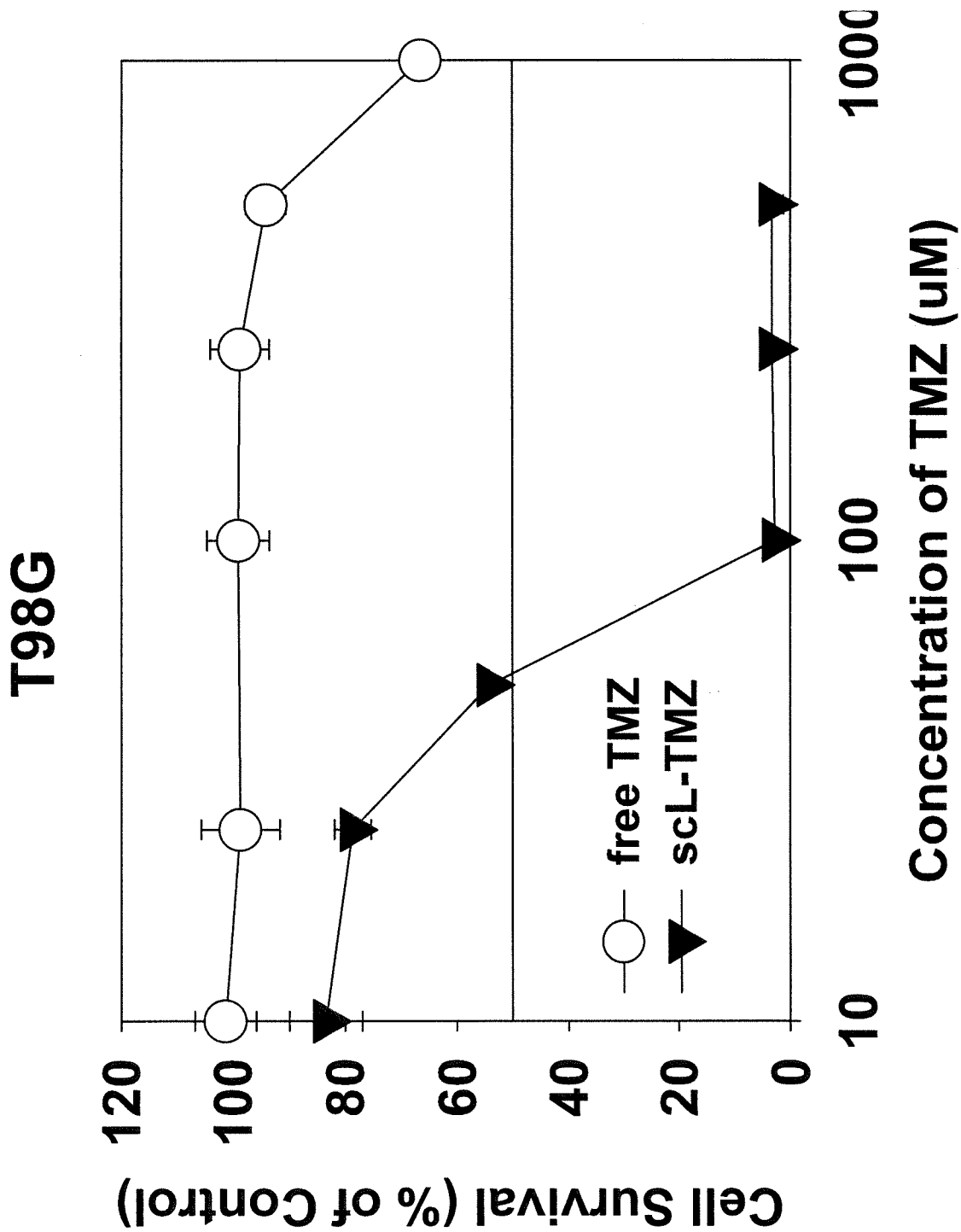

T98G
Cell Survival (% of Control)
120
100
80
60
40
20
0
10
100
1000
Concentration of TMZ (uM)
free TMZ
scL-TMZ

FIG. 3A

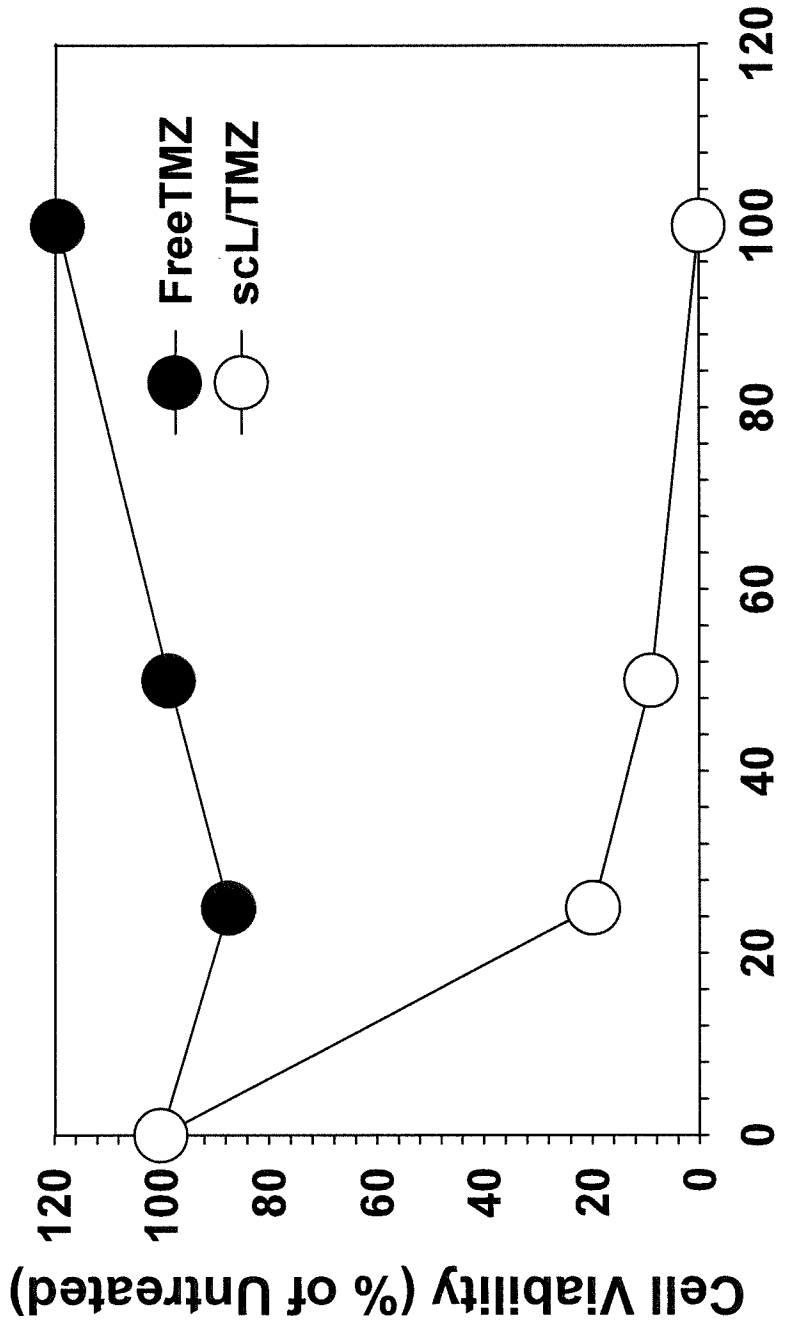


FIG. 3B

	IC_{50}
Free TMZ	> 100 uM
scL/TMZ	15.8 uM

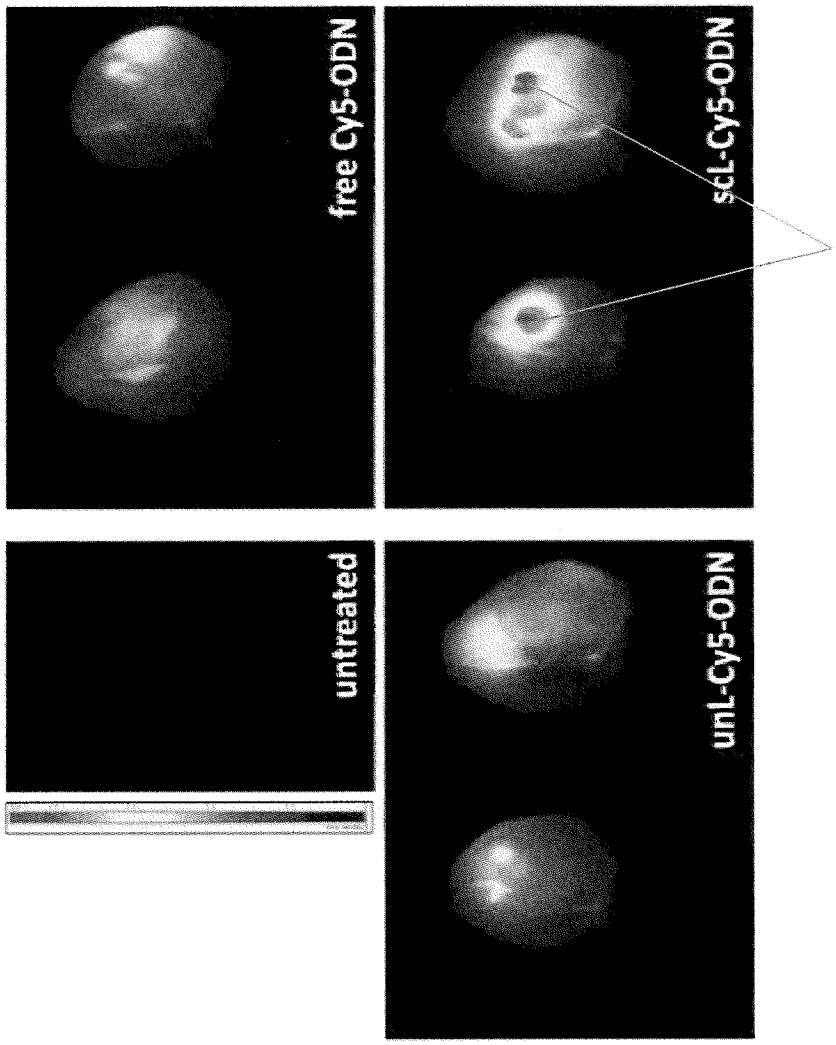

untreated
free Cy5-ODN
unL-Cy5-ODN
scL-Cy5-ODN
Targeted delivery to brain tissue

FIG. 4A

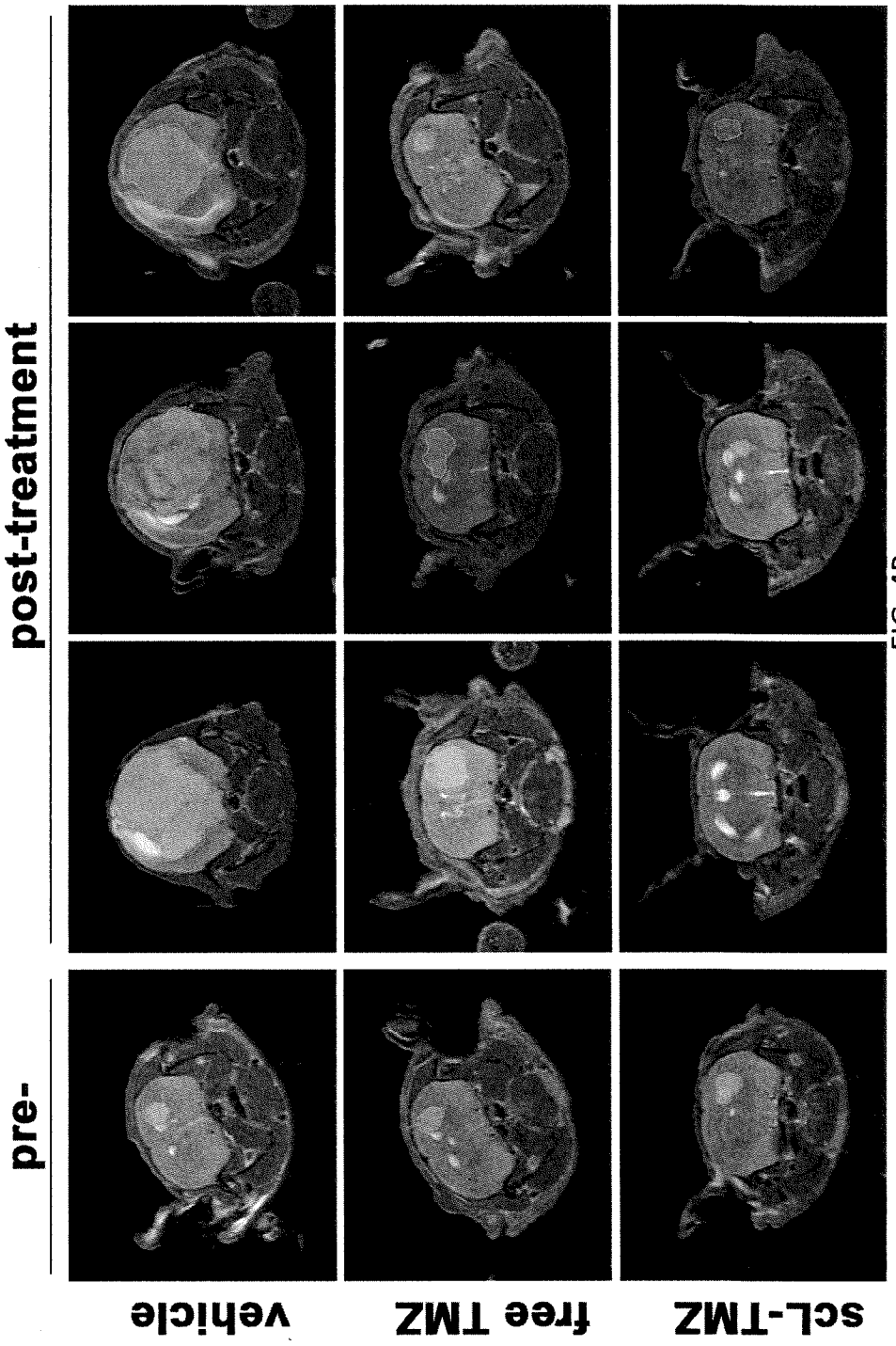


FIG. 4B

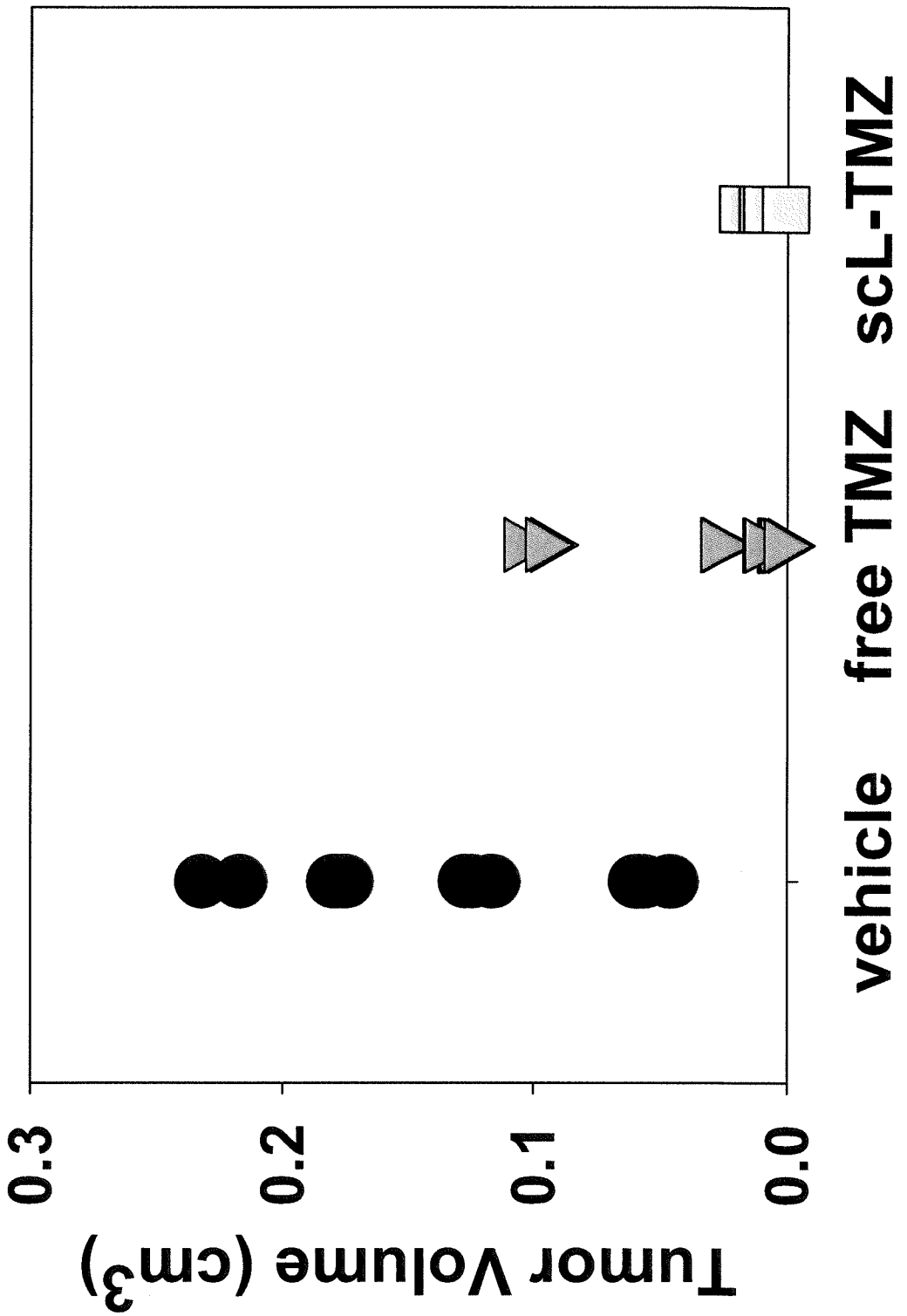


FIG. 5

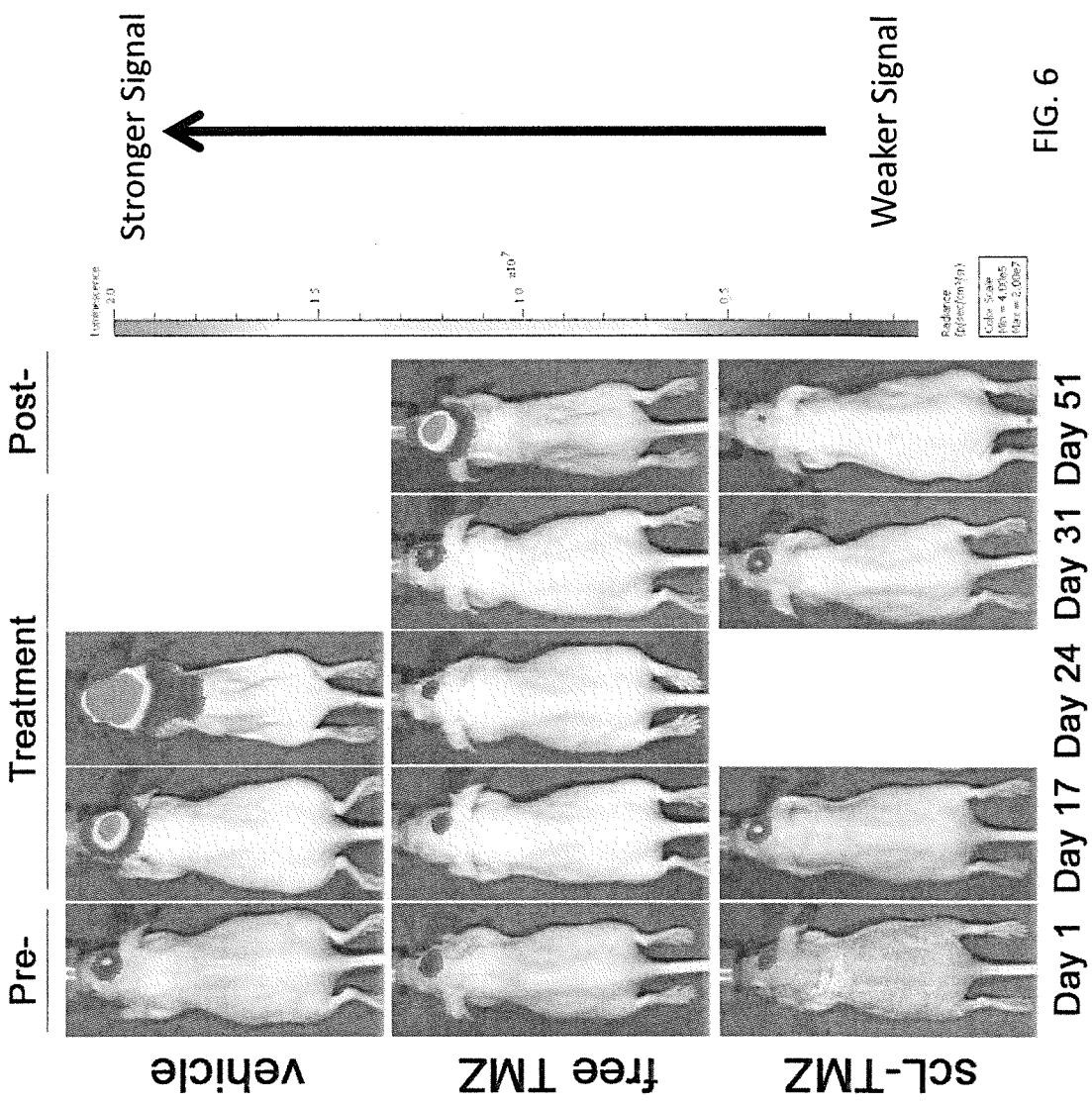

Stronger Signal
Weaker Signal
Pre-
Treatment
Post-
Day 1
Day 17
Day 24
Day 31
Day 51
vehicle
free TMZ
scL-TMZ

FIG. 6

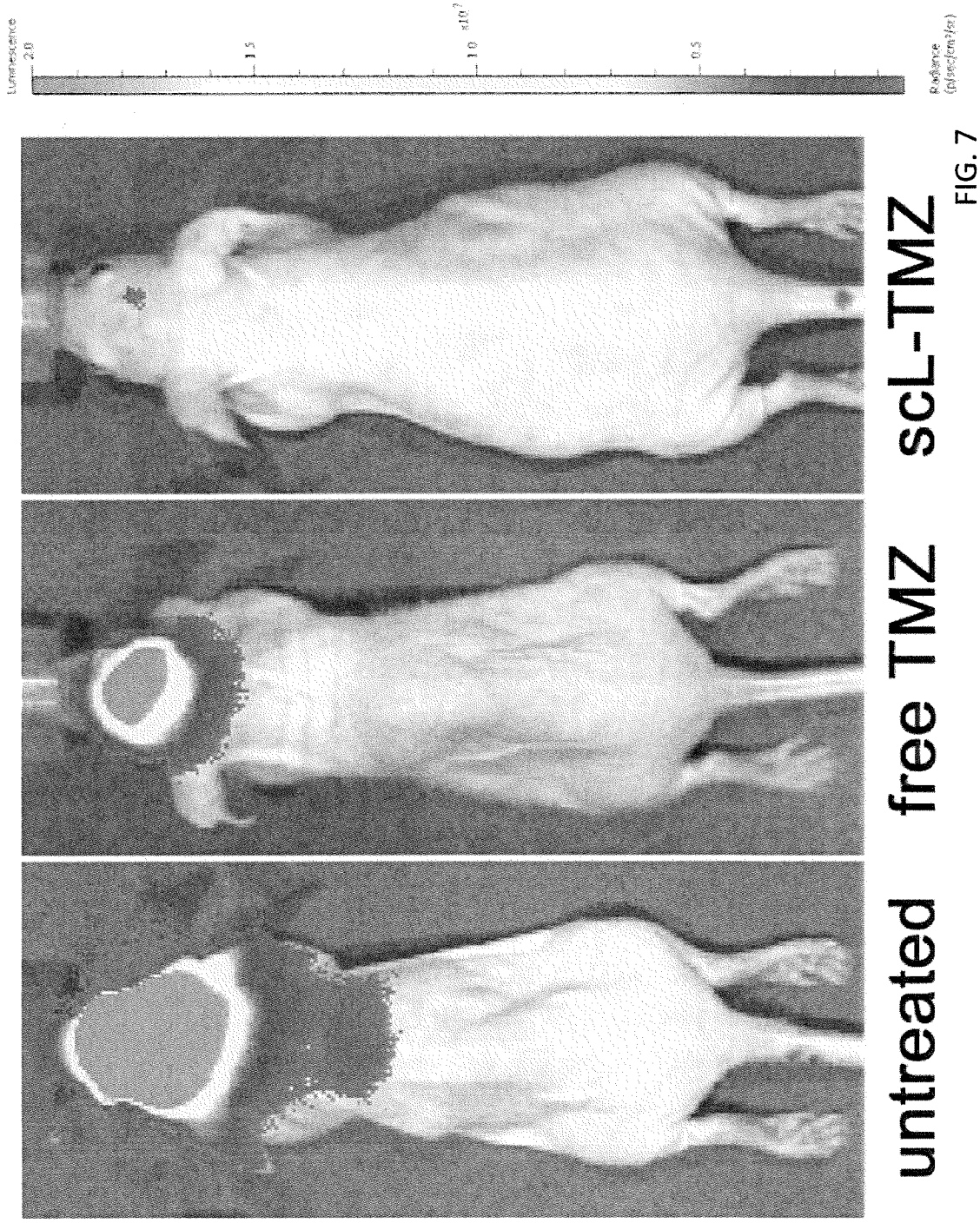

Luminescence
2.0
1.5
1.0 x10⁷
0.5
Radiance
(p/sec/cm²/sr)
untreated
free TMZ
scL-TMZ

FIG. 7

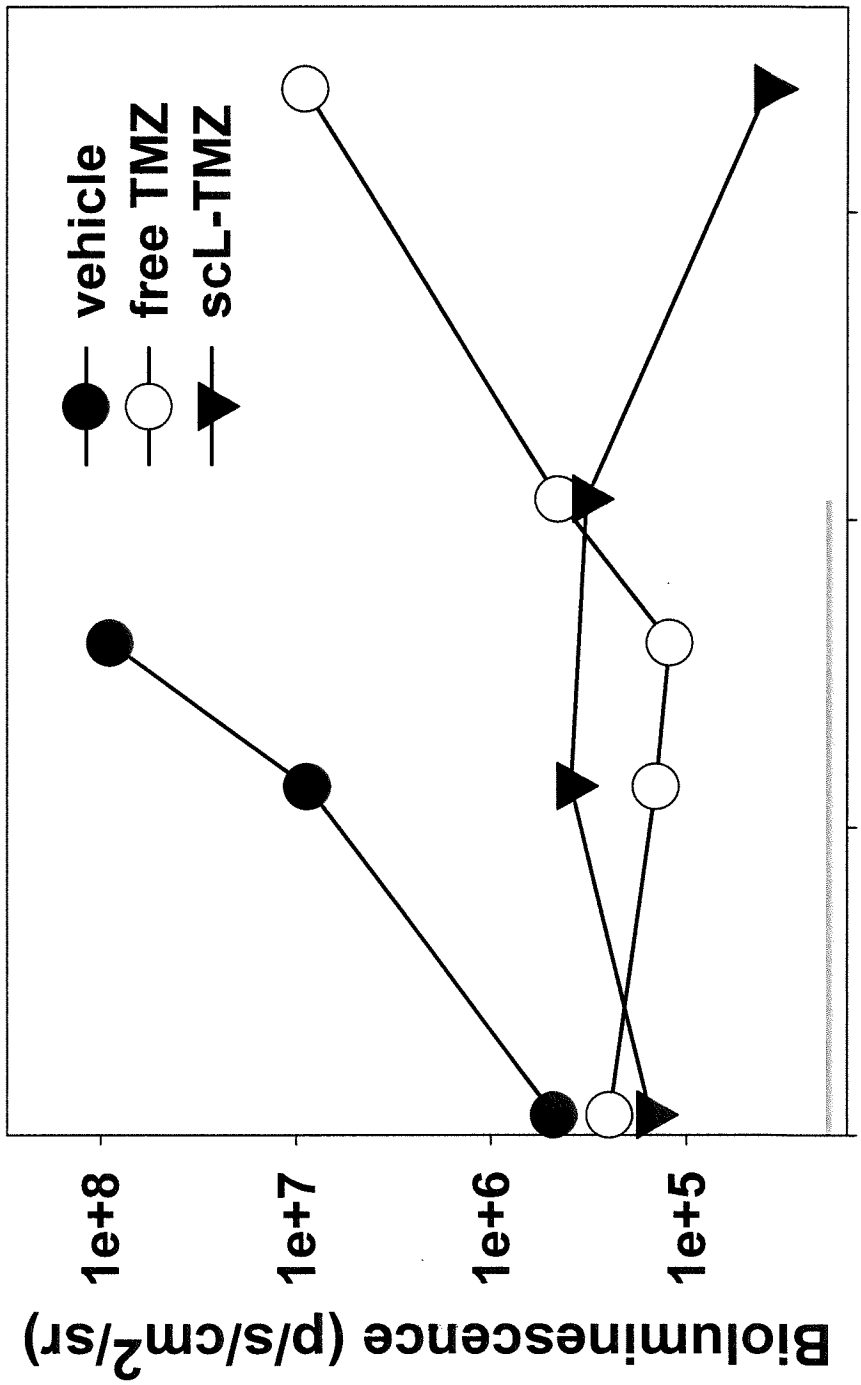

vehicle
free TMZ
scL-TMZ
Bioluminescence (p/s/cm²/sr)
1e+8
1e+7
1e+6
1e+5
0
15
30
45
Days of Treatment

FIG. 8

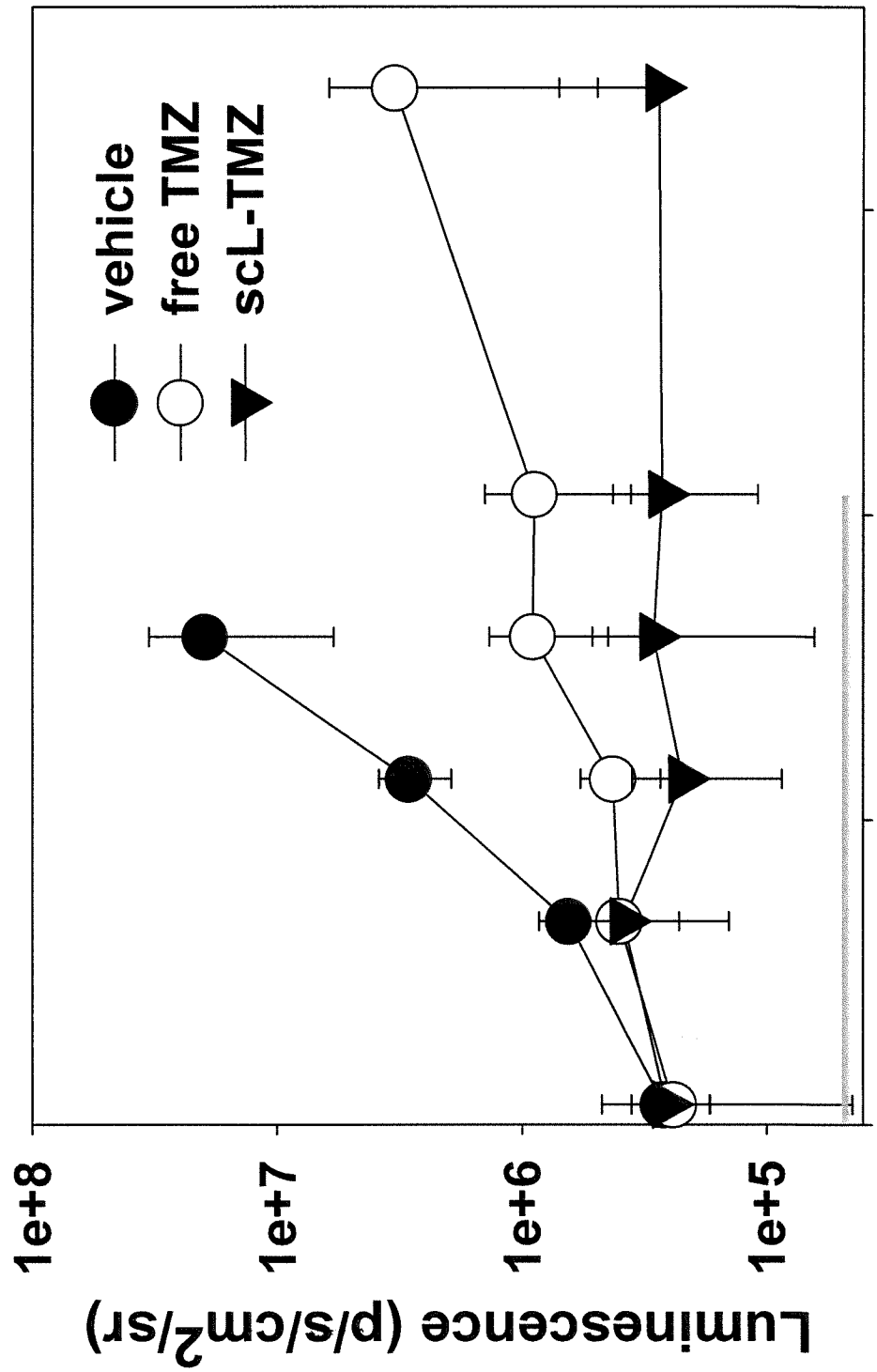

vehicle
free TMZ
scL-TMZ
1e+8
1e+7
1e+6
1e+5
Luminescence (p/s/cm2/sr)
0
15
30
45
Days of Treatment

FIG. 9

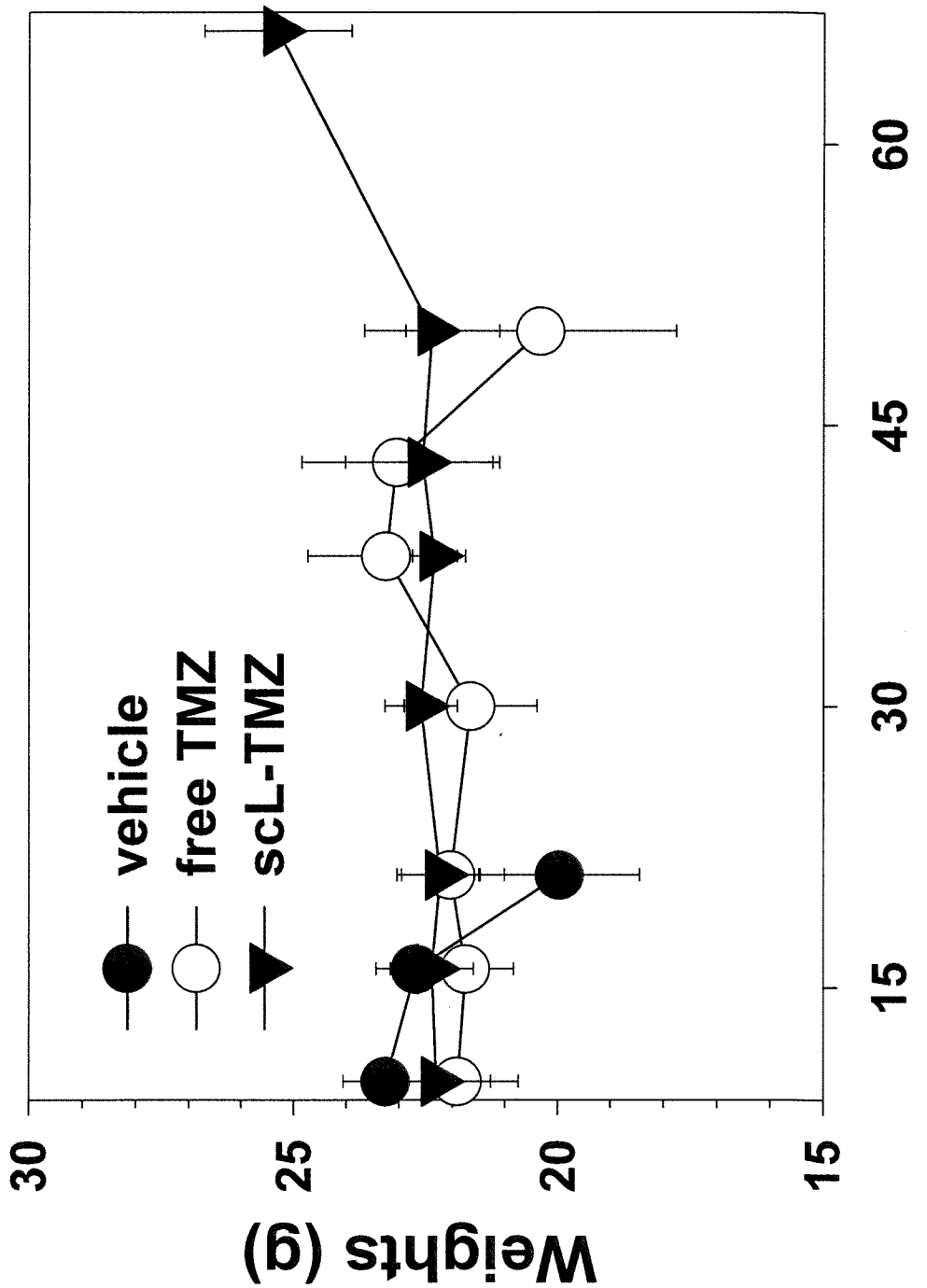

vehicle
free TMZ
scL-TMZ
Weights (g)
30
25
20
15
15
30
45
60
Days of Treatment

FIG. 10

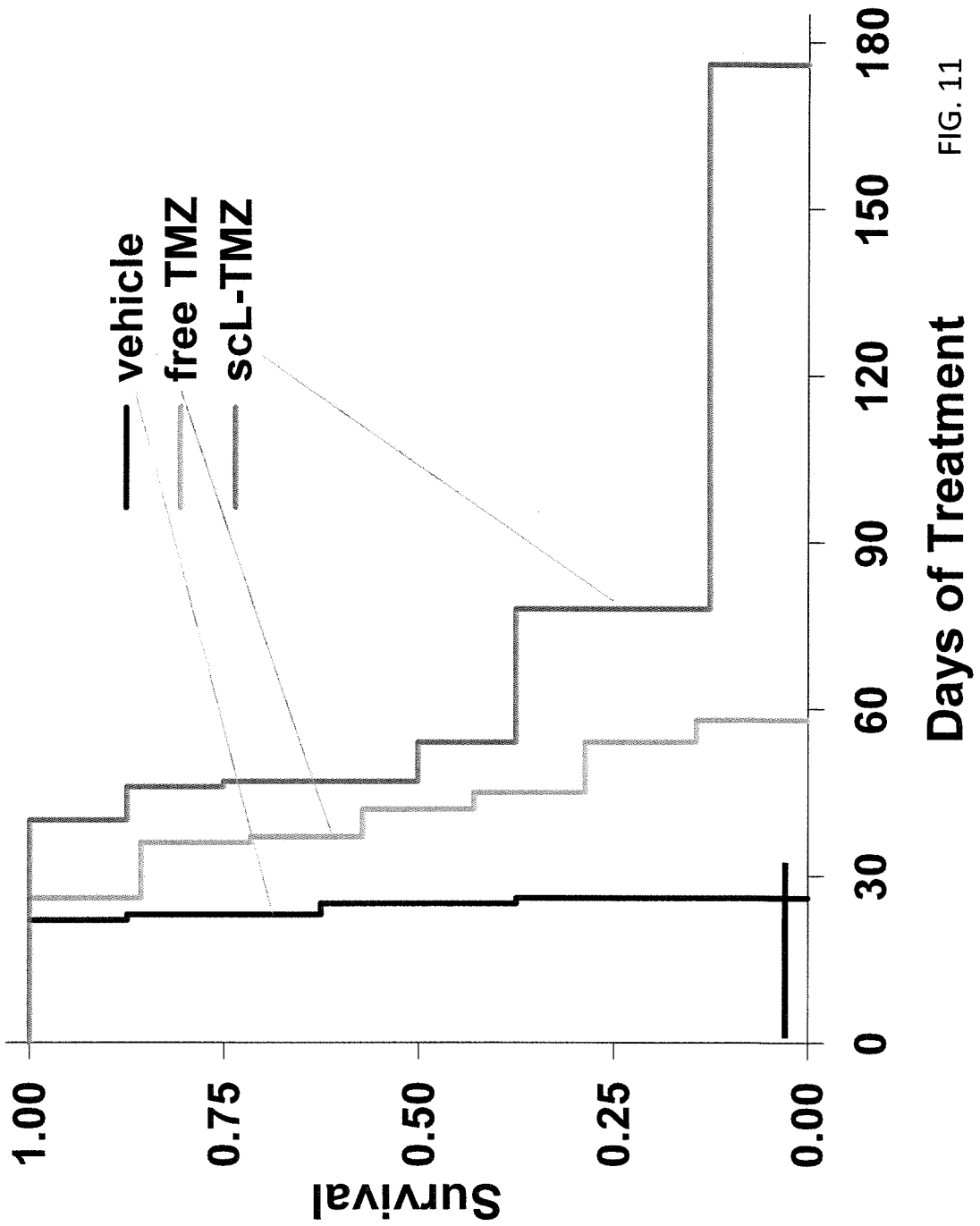

vehicle
free TMZ
scL-TMZ
Survival
1.00
0.75
0.50
0.25
0.00
0
30
60
90
120
150
180
Days of Treatment

FIG. 11

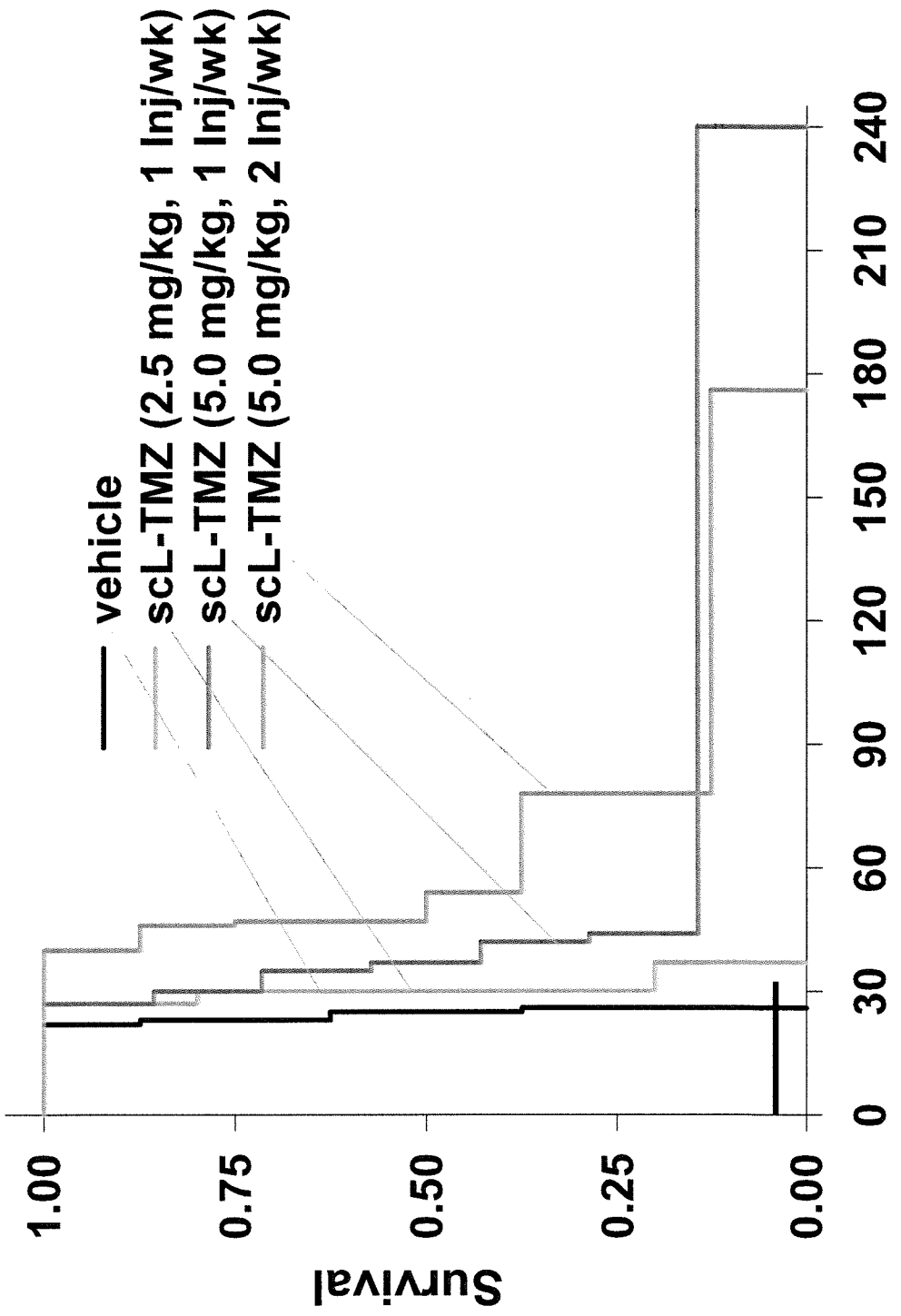

vehicle
scL-TMZ (2.5 mg/kg, 1 Inj/wk)
scL-TMZ (5.0 mg/kg, 1 Inj/wk)
scL-TMZ (5.0 mg/kg, 2 Inj/wk)
Survival
1.00
0.75
0.50
0.25
0.00
0
30
60
90
120
150
180
210
240
Days of Treatment

FIG. 12

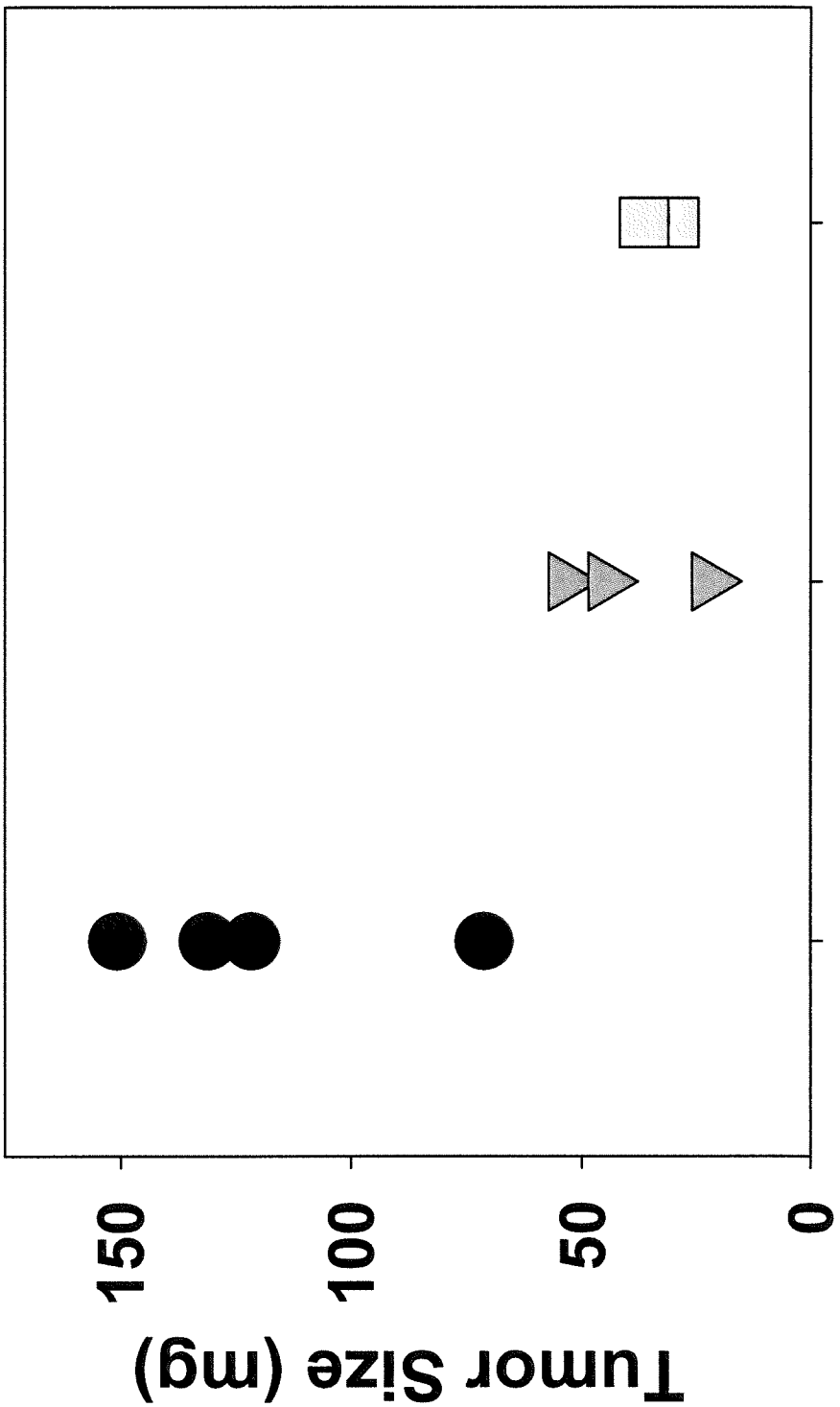


FIG. 13

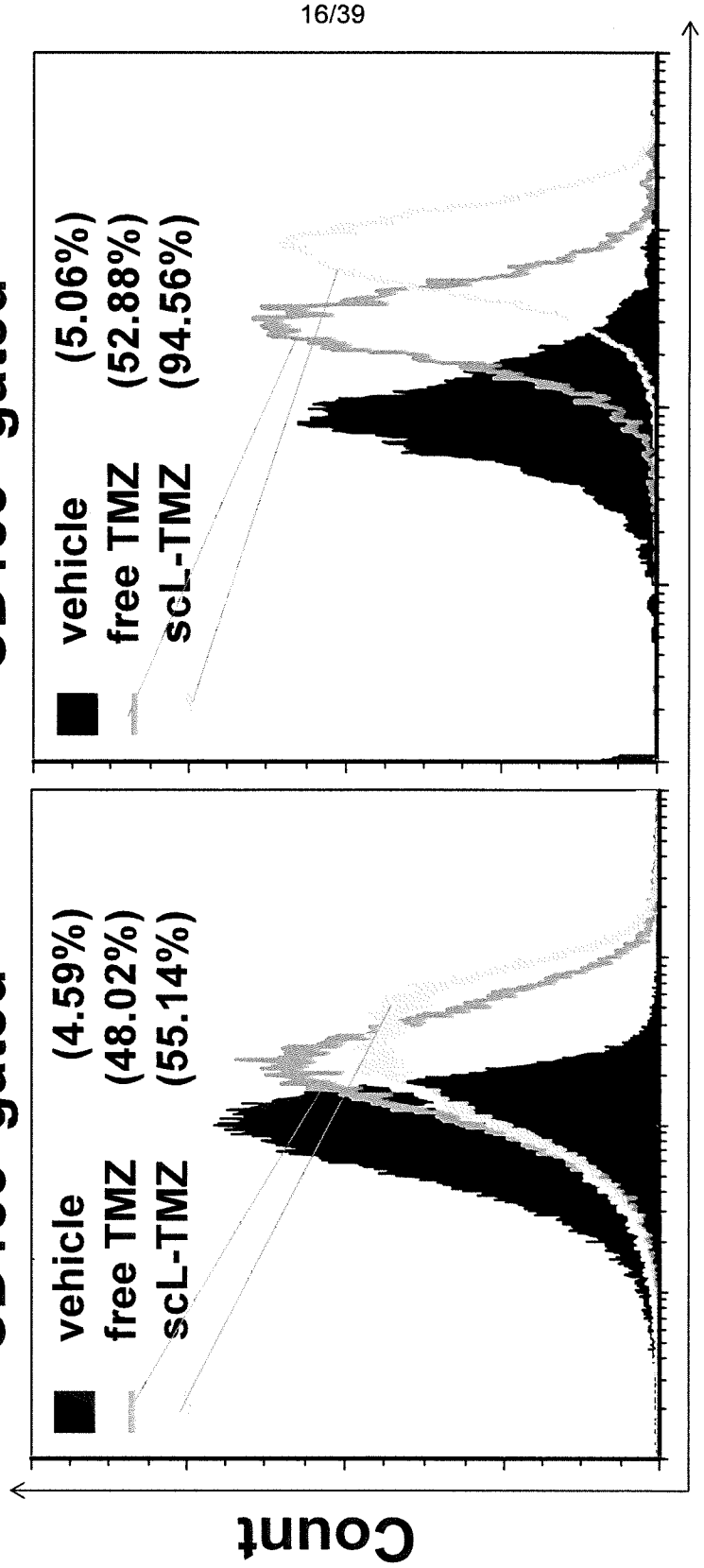

CD133- gated
vehicle (4.59%)
free TMZ (48.02%)
scL-TMZ (55.14%)
CD133+ gated
vehicle (5.06%)
free TMZ (52.88%)
scL-TMZ (94.56%)
Count
Cleaved Caspase-3

FIG. 14

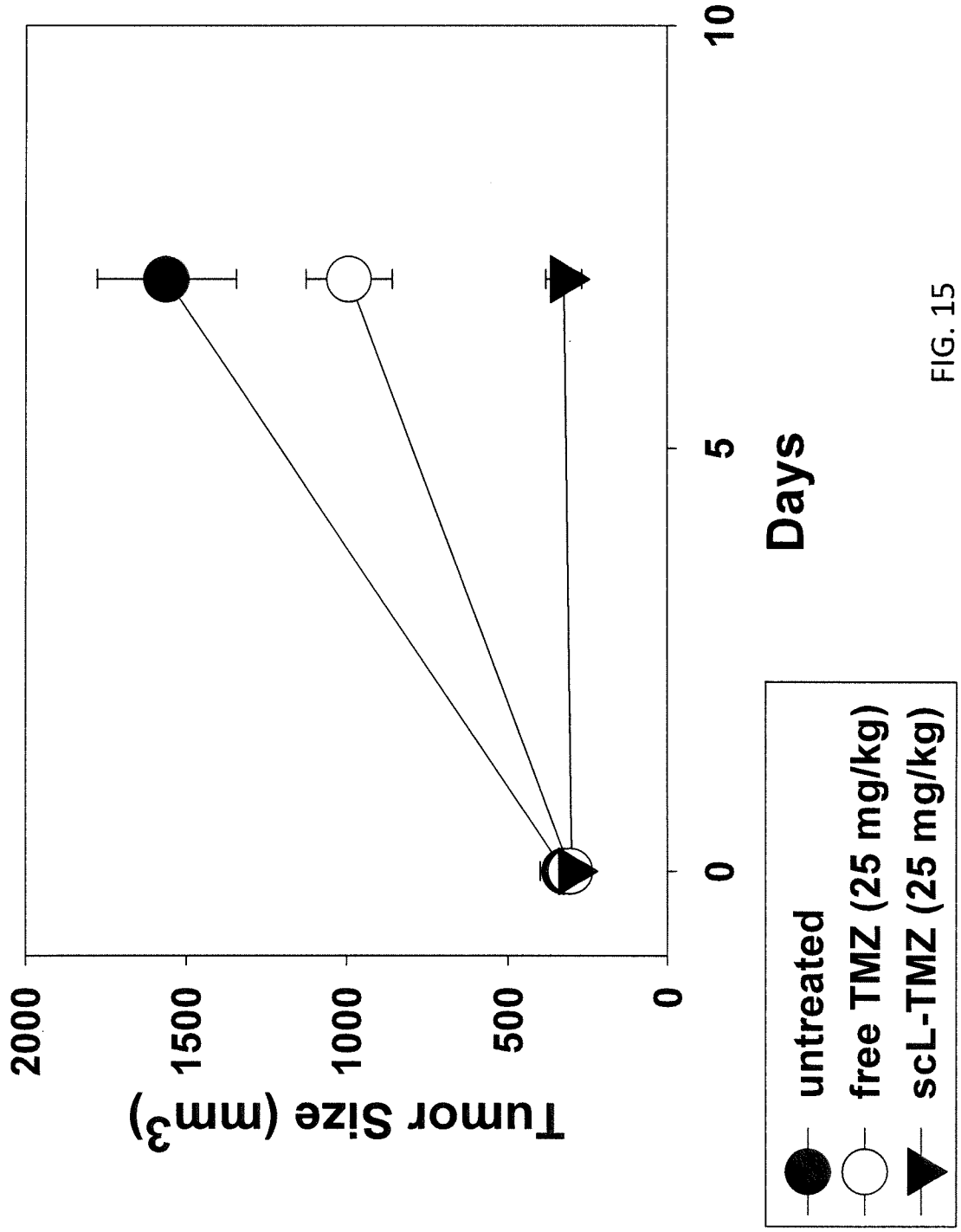

Tumor Size (mm3)
2000
1500
1000
500
0
0
5
10
Days
untreated
free TMZ (25 mg/kg)
scL-TMZ (25 mg/kg)

FIG. 15

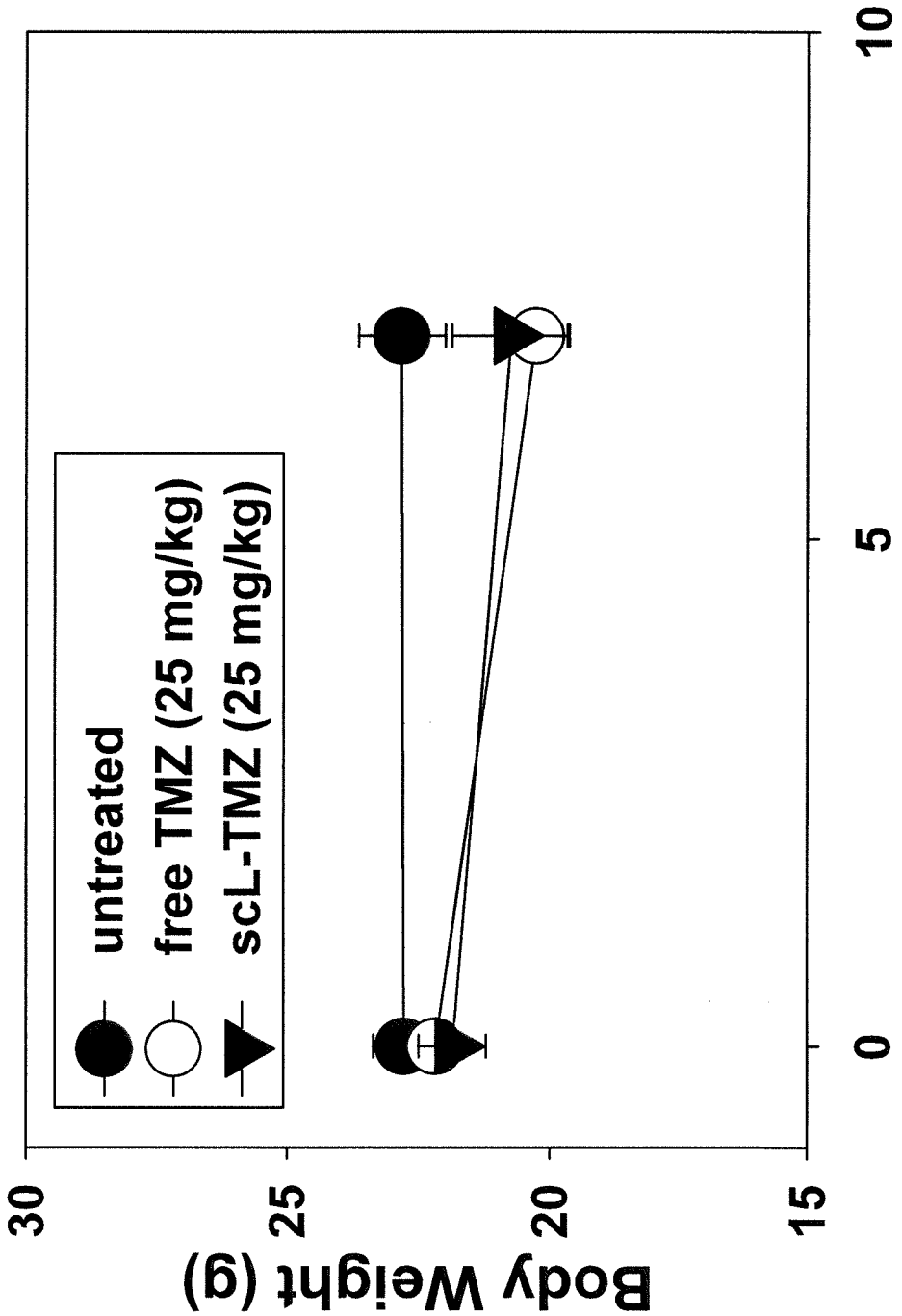

Body Weight (g)
30
25
20
15
0
5
10
Days
untreated
free TMZ (25 mg/kg)
scL-TMZ (25 mg/kg)

FIG. 16

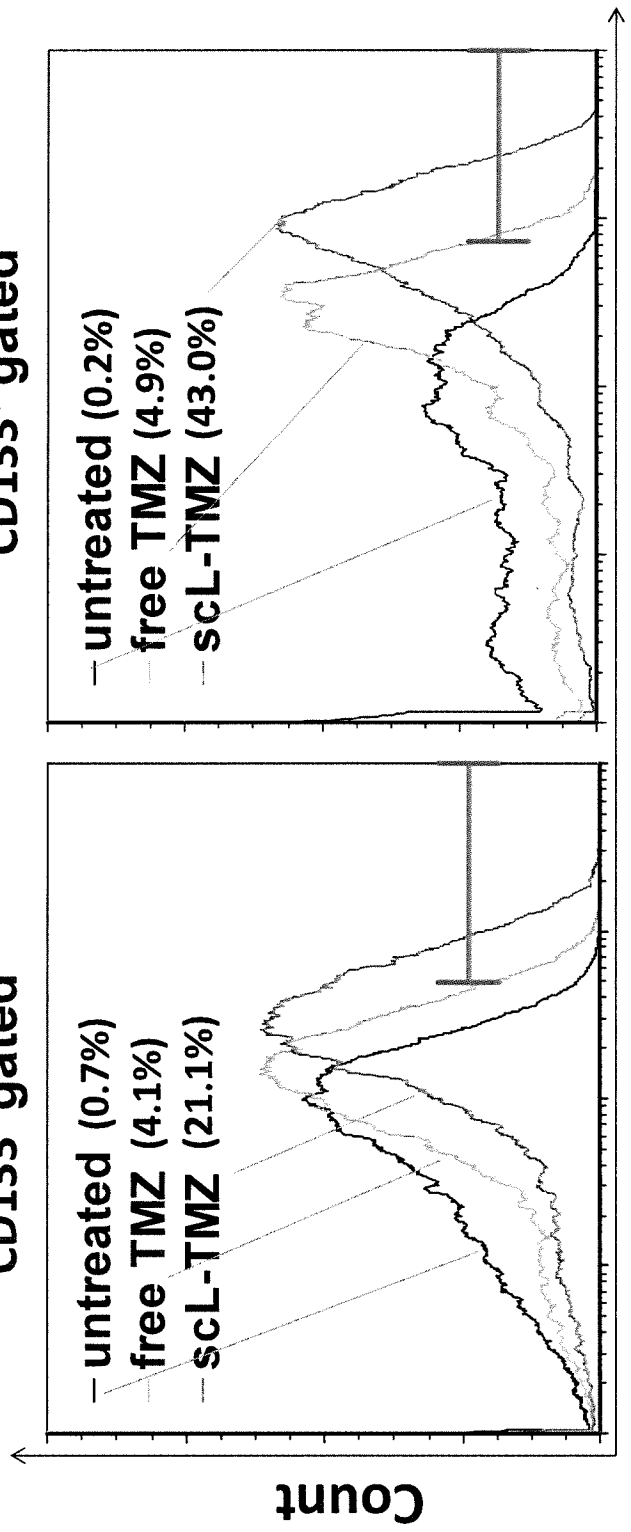

CD133- gated
untreated (0.7%)
free TMZ (4.1%)
scL-TMZ (21.1%)
CD133+ gated
untreated (0.2%)
free TMZ (4.9%)
scL-TMZ (43.0%)
Count
TUNEL

FIG. 17

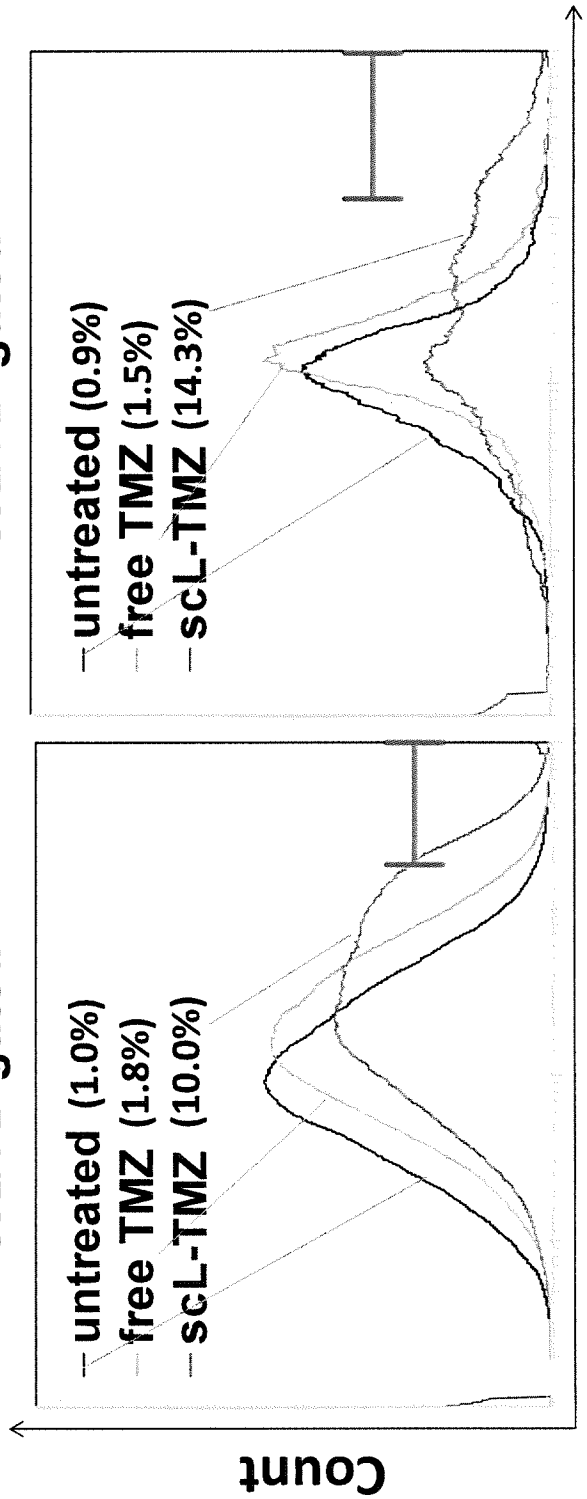

SSEA-1⁻ gated
SSEA-1⁺ gated
untreated (1.0%)
free TMZ (1.8%)
scL-TMZ (10.0%)
untreated (0.9%)
free TMZ (1.5%)
scL-TMZ (14.3%)
Count
Cleaved Caspase-3

FIG. 18

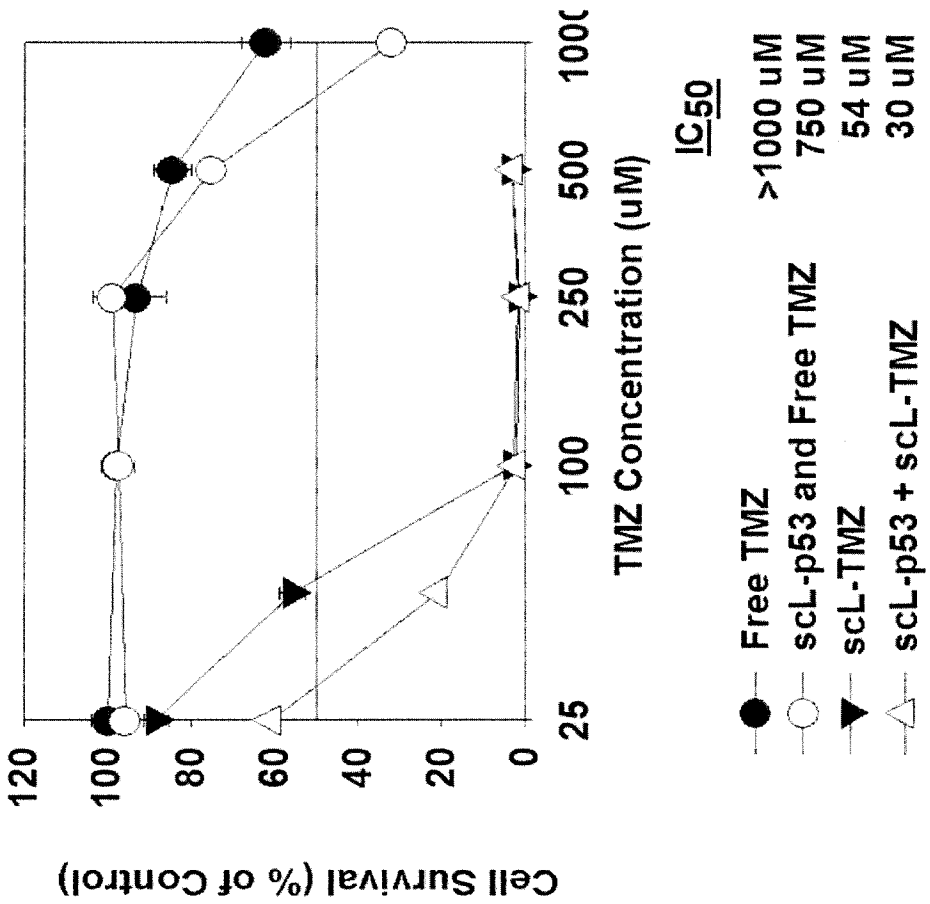

Cell Survival (% of Control)
120
100
80
60
40
20
0
25
100
250
500
100(
TMZ Concentration (uM)
IC50
Free TMZ >1000 uM
scL-p53 and Free TMZ 750 uM
scL-TMZ 54 uM
scL-p53 + scL-TMZ 30 uM

FIG. 19

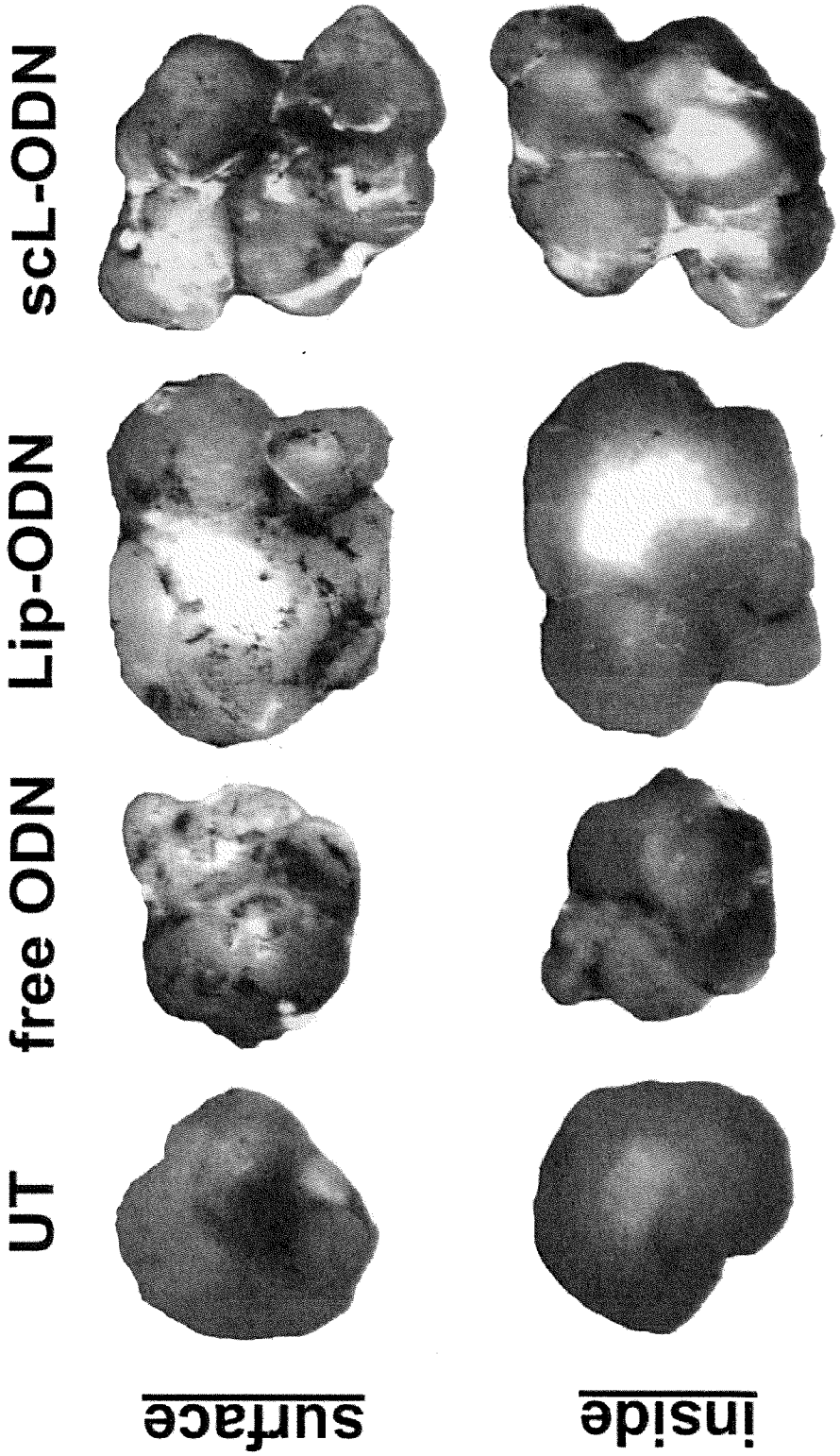


FIG. 20

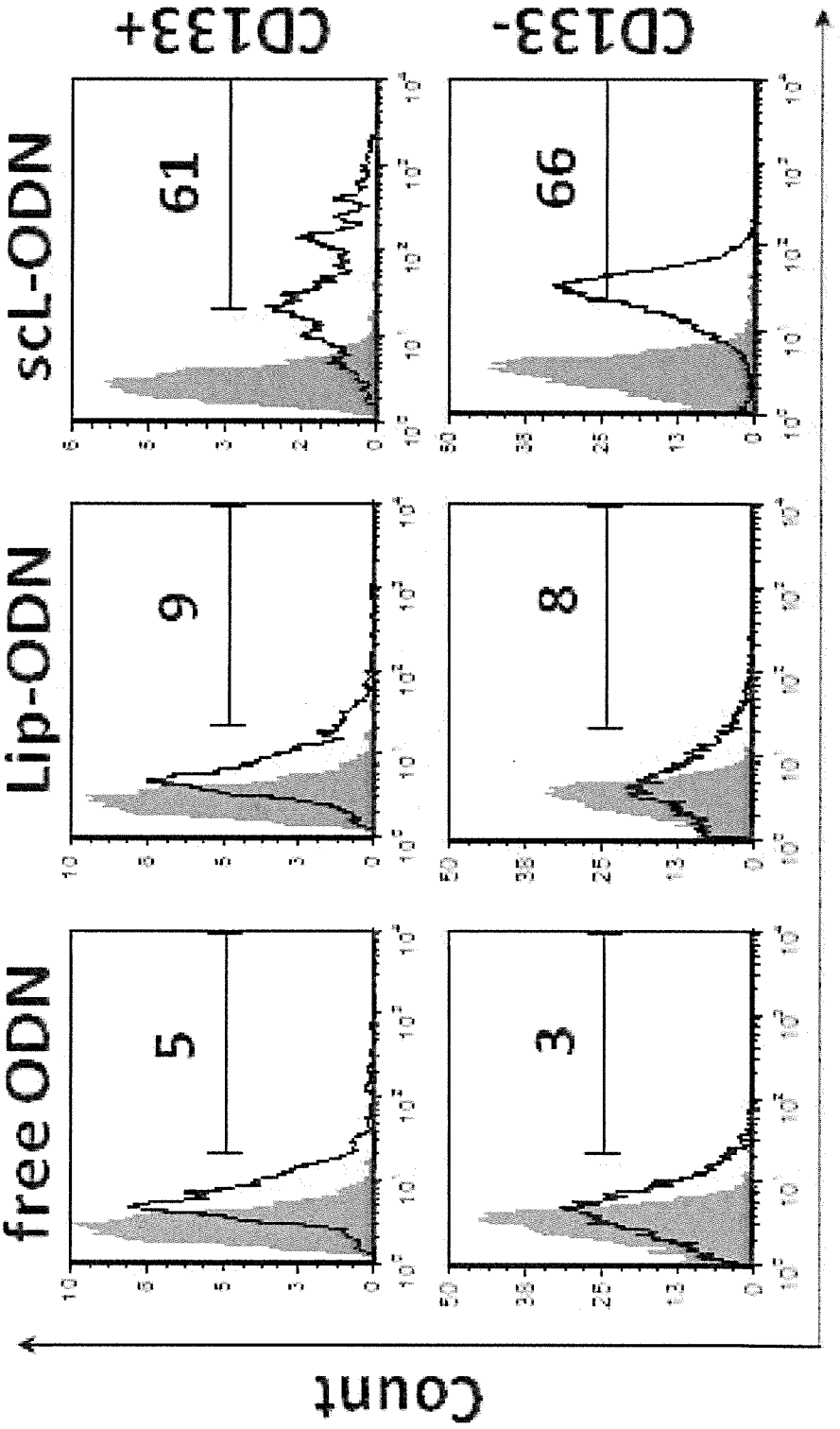


FIG. 21

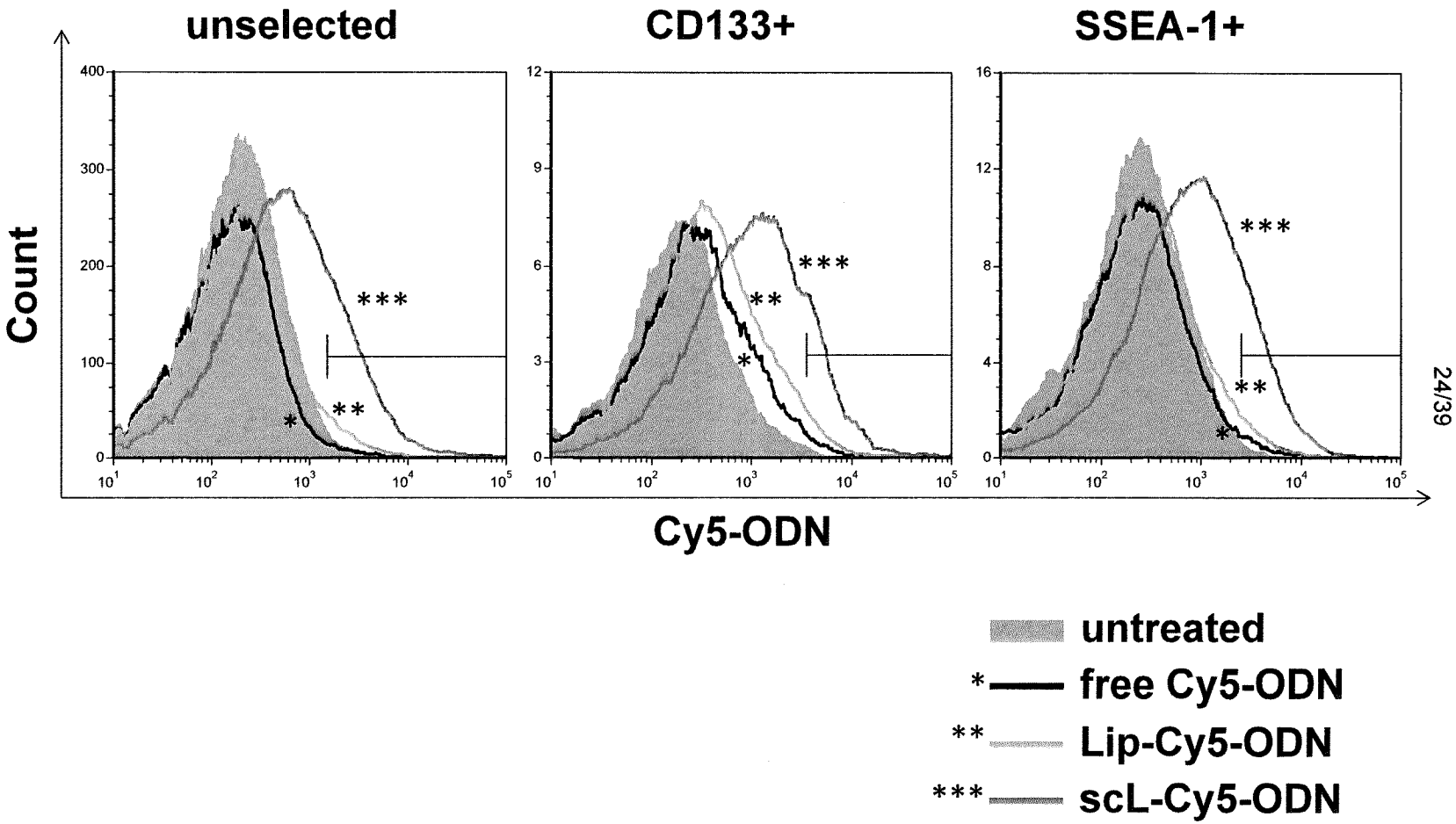

unselected
CD133+
SSEA-1+
Count
Cy5-ODN
untreated
* free Cy5-ODN
** Lip-Cy5-ODN
*** scL-Cy5-ODN

FIG. 22

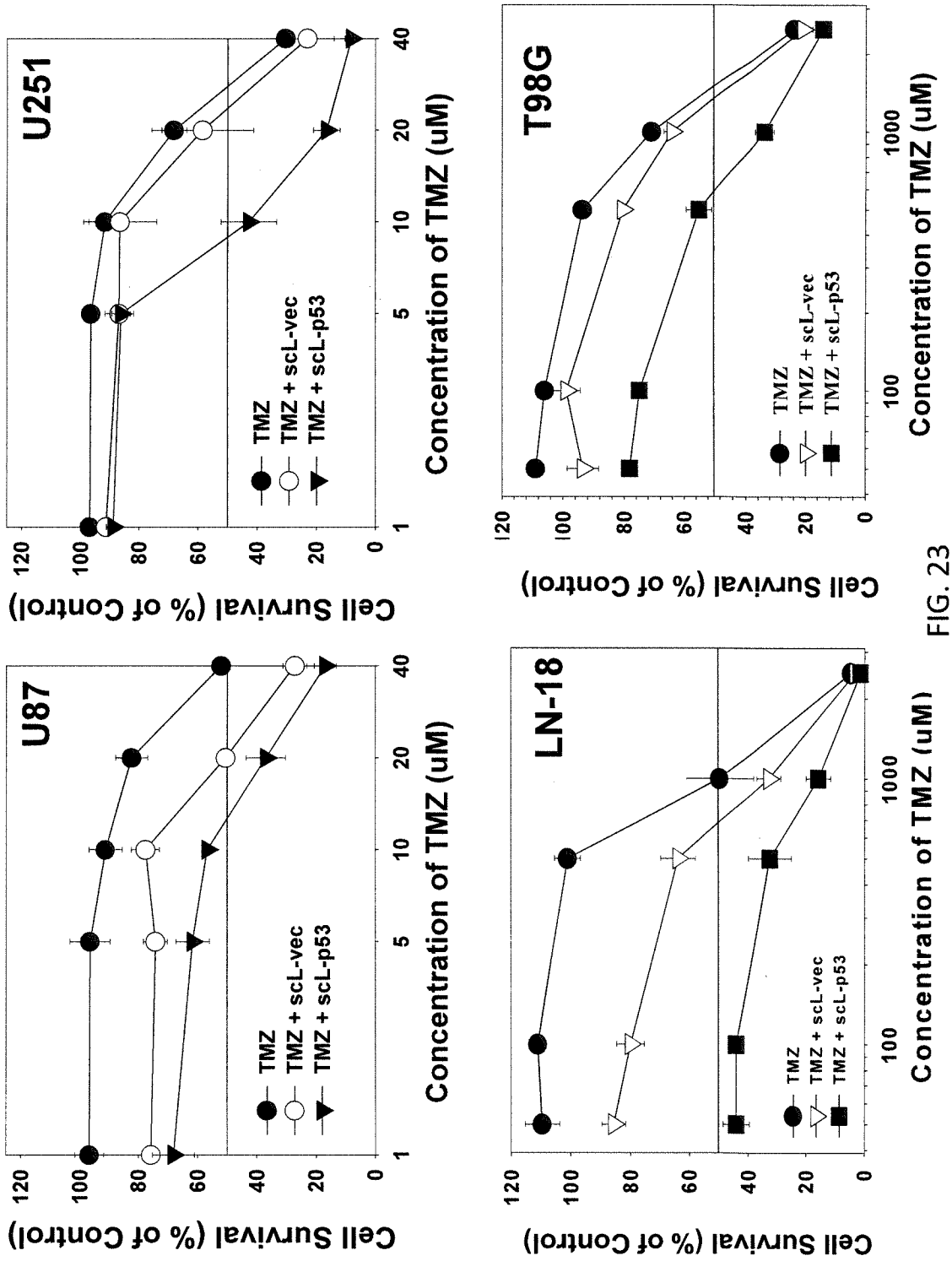

U251
T98G
U87
LN-18
Cell Survival (% of Control)
Concentration of TMZ (uM)
TMZ
TMZ + scL-vec
TMZ + scL-p53
0
20
40
60
80
100
120
1
5
10
20
40
100
1000

FIG. 23

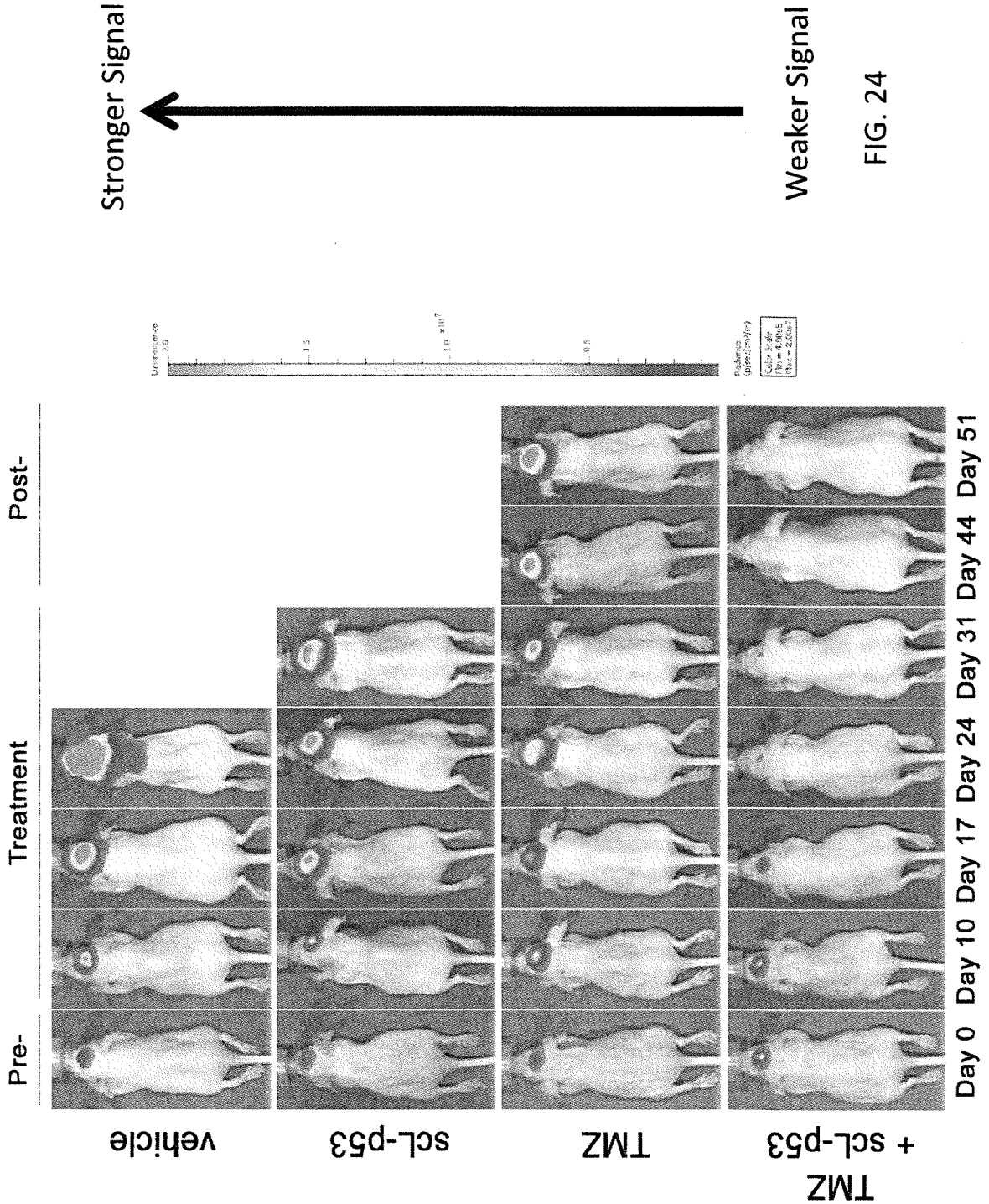

Stronger Signal
Weaker Signal
Pre-
Treatment
Post-
Day 0
Day 10
Day 17
Day 24
Day 31
Day 44
Day 51
vehicle
scL-p53
TMZ
TMZ + scL-p53

FIG. 24

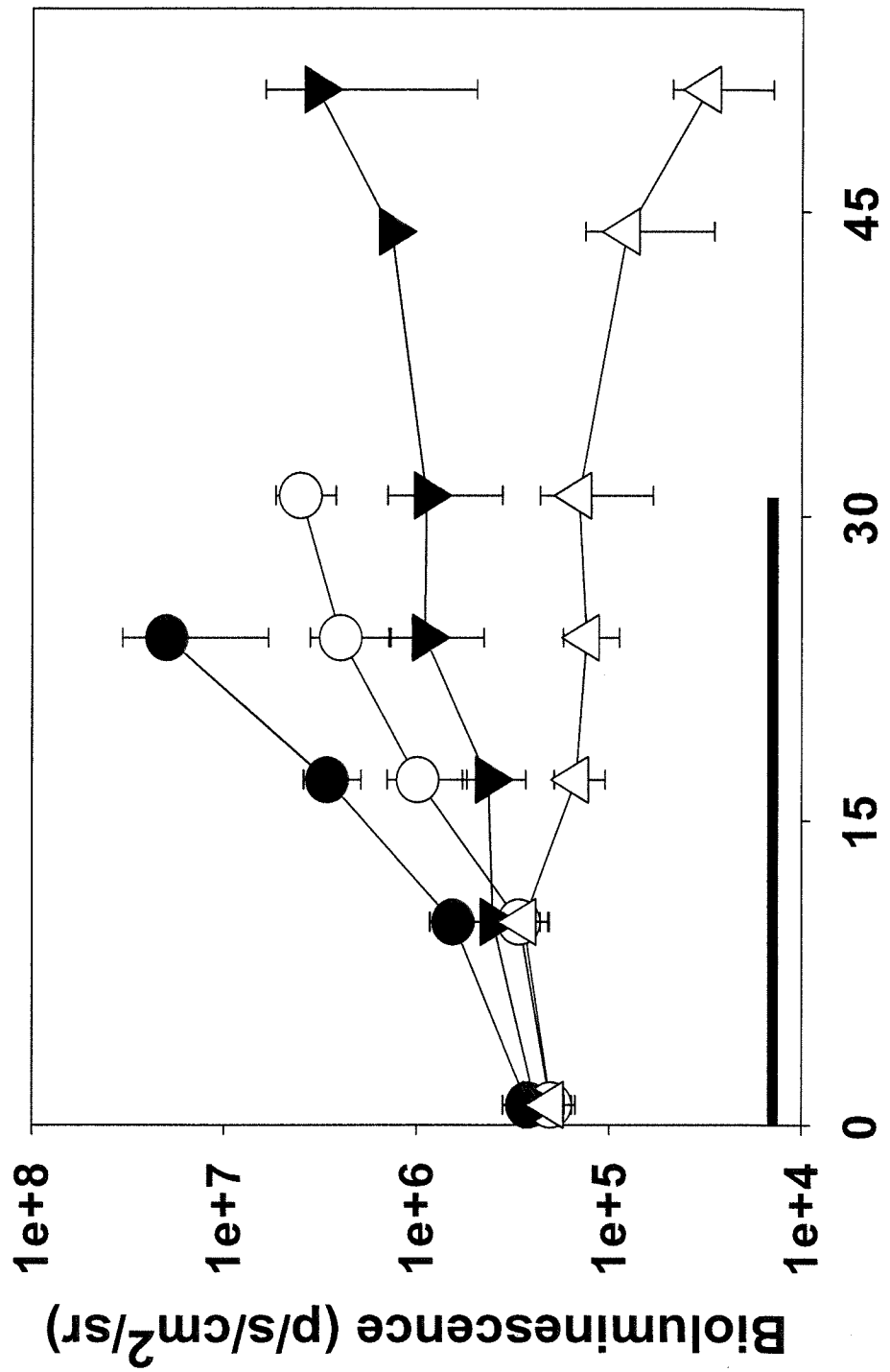


FIG. 25

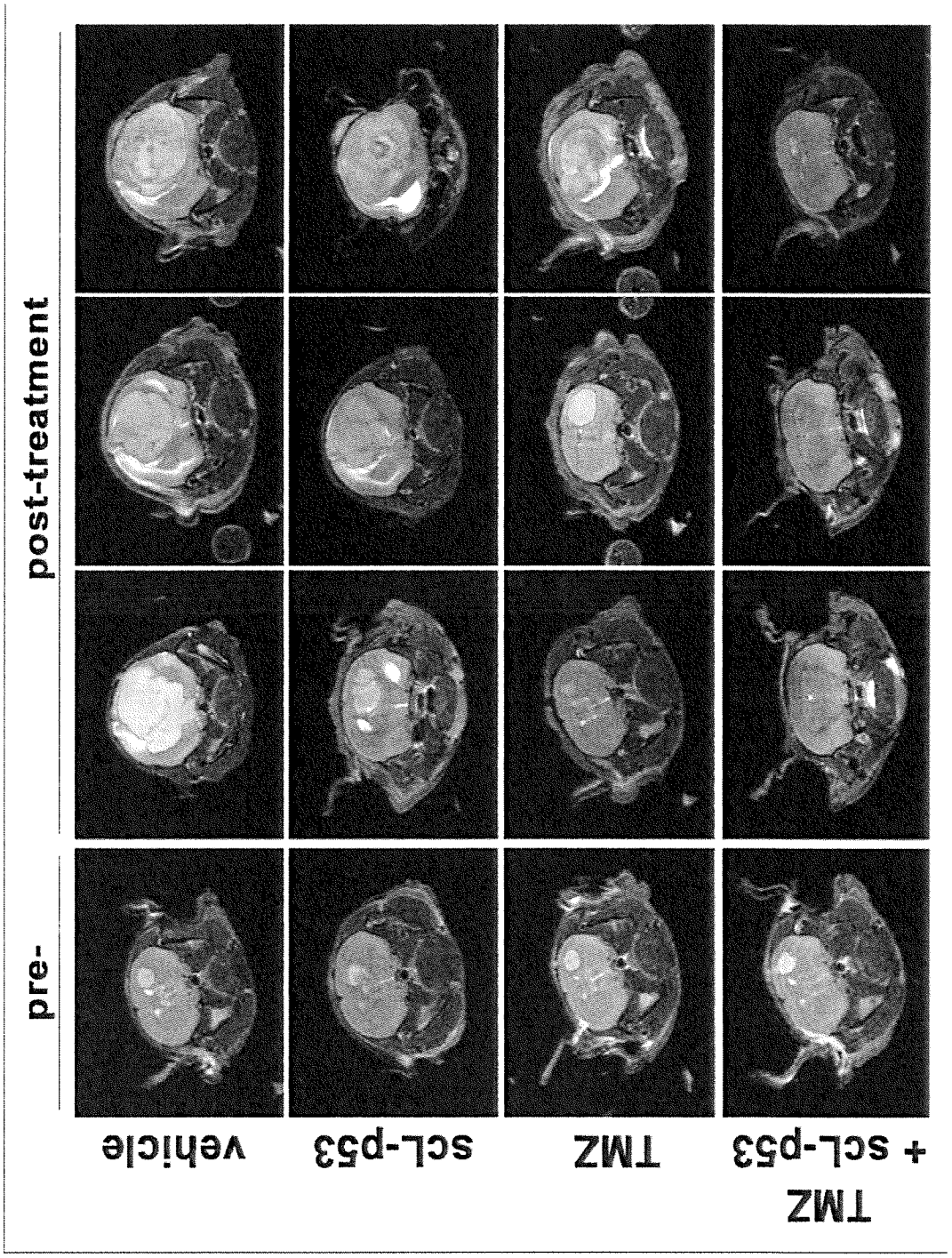


FIG. 26

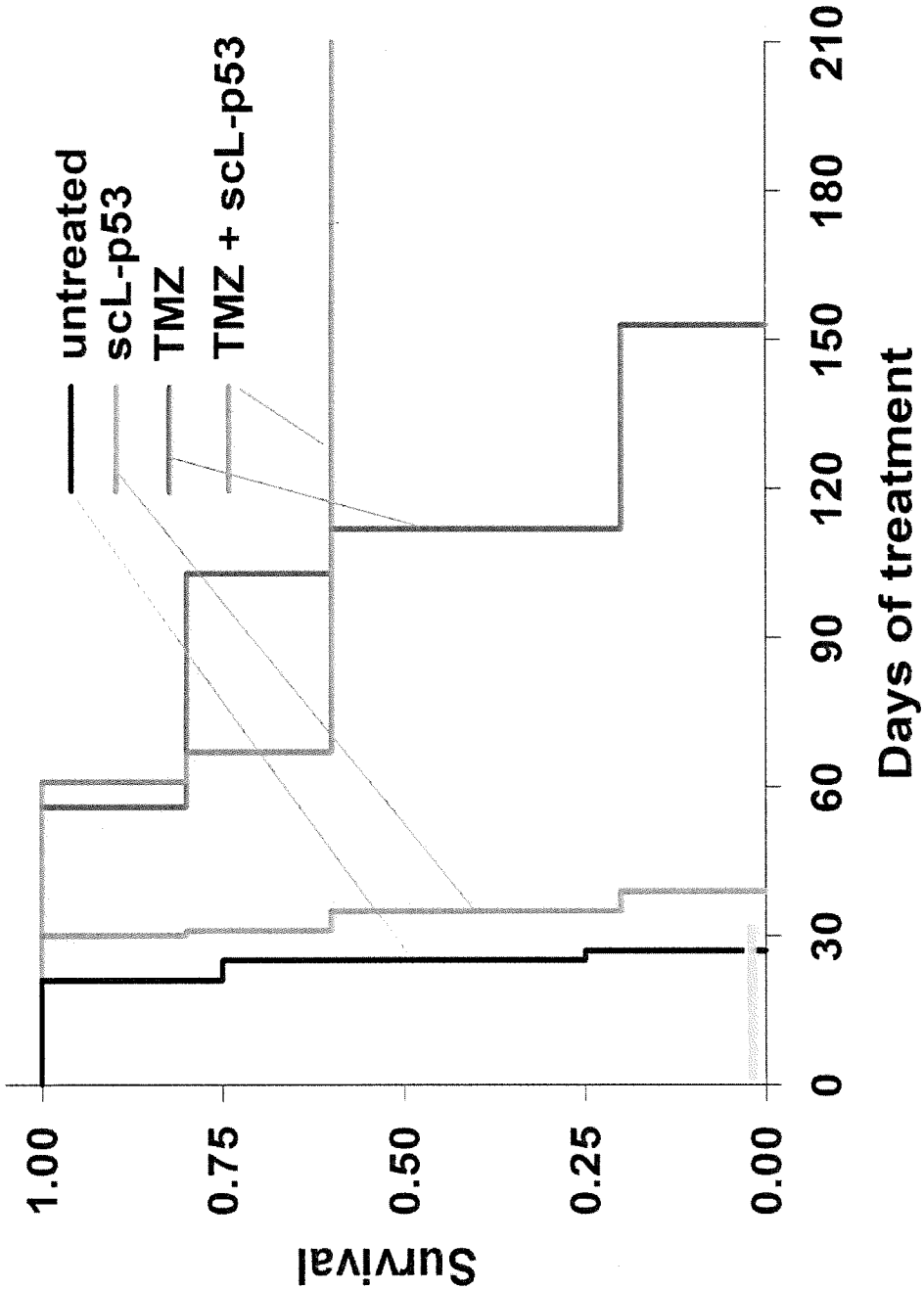

untreated
scL-p53
TMZ
TMZ + scL-p53
Survival
1.00
0.75
0.50
0.25
0.00
0
30
60
90
120
150
180
210
Days of treatment

FIG. 27

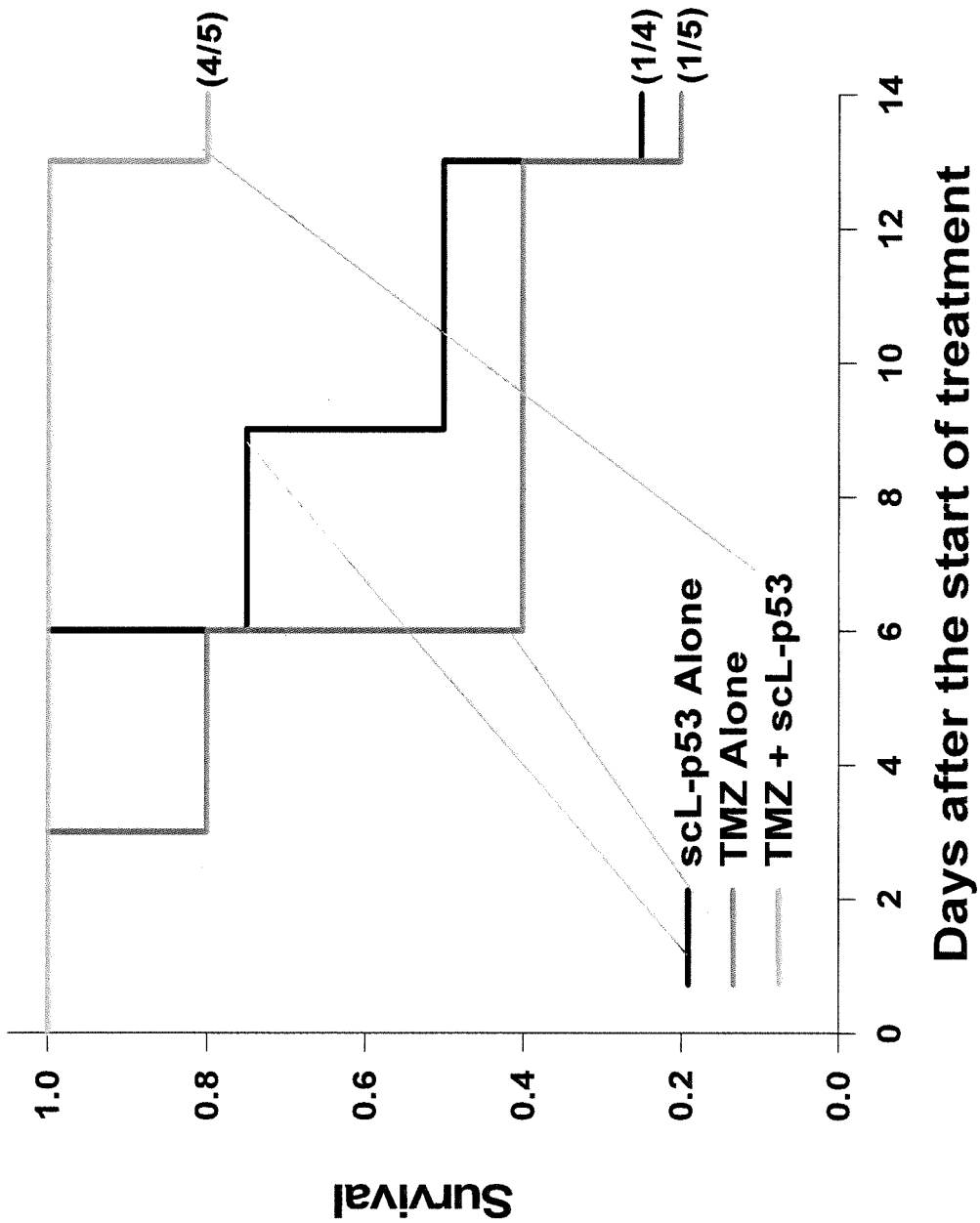

Survival
1.0
0.8
0.6
0.4
0.2
0.0
0
2
4
6
8
10
12
14
Days after the start of treatment
scL-p53 Alone
TMZ Alone
TMZ + scL-p53
(4/5)
(1/4)
(1/5)

FIG. 28

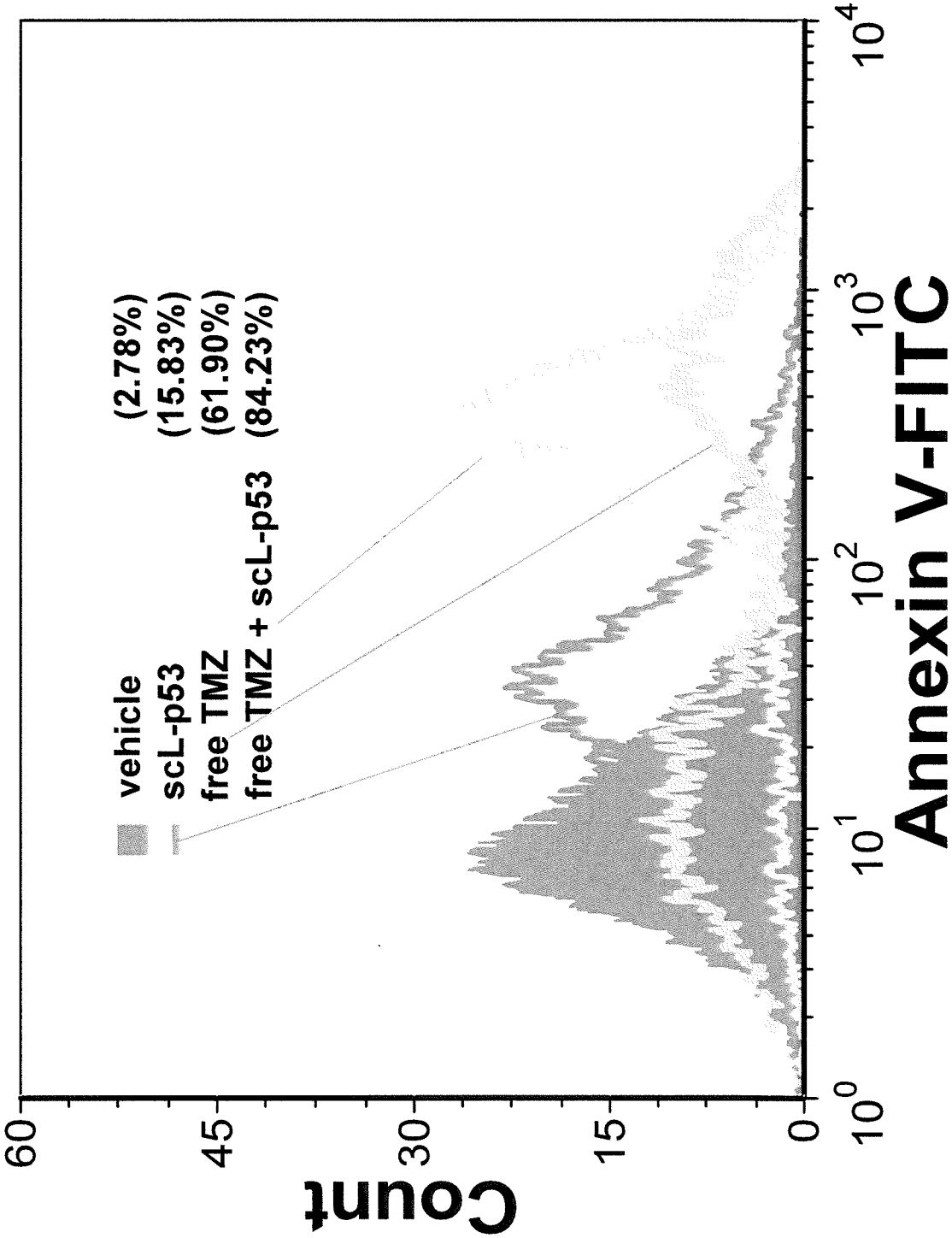

vehicle (2.78%)
scL-p53 (15.83%)
free TMZ (61.90%)
free TMZ + scL-p53 (84.23%)
Count
60
45
30
15
0
10^0
10^1
10^2
10^3
10^4
Annexin V-FITC

FIG. 29

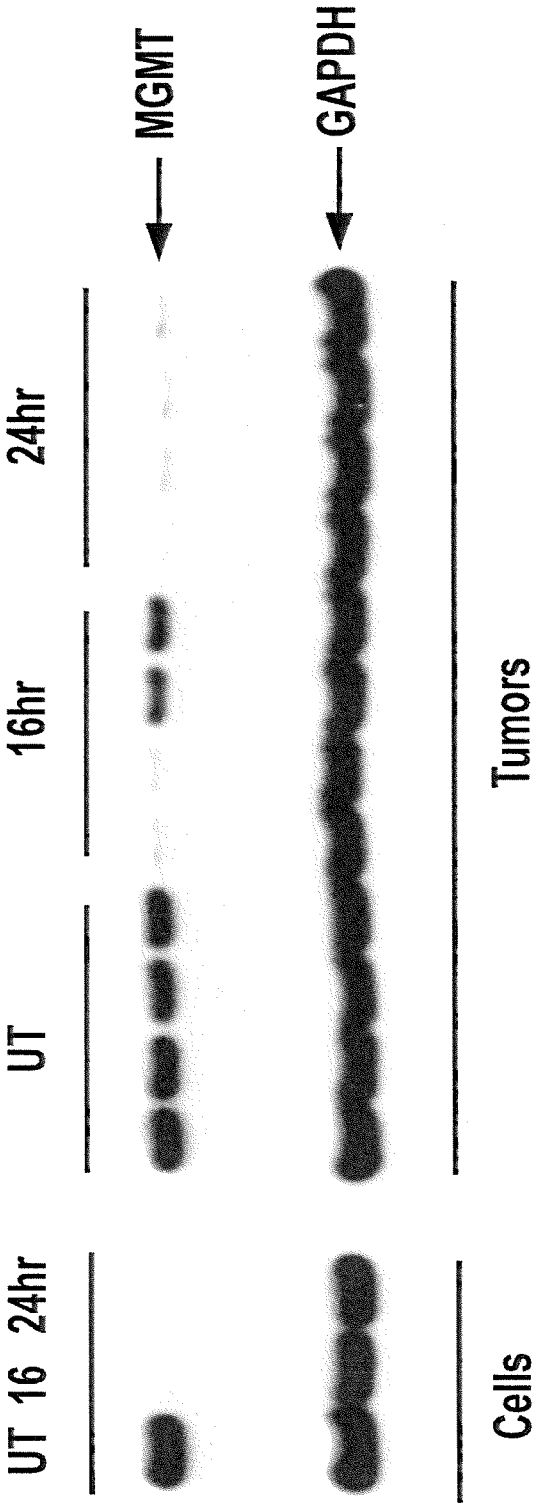


FIG. 30

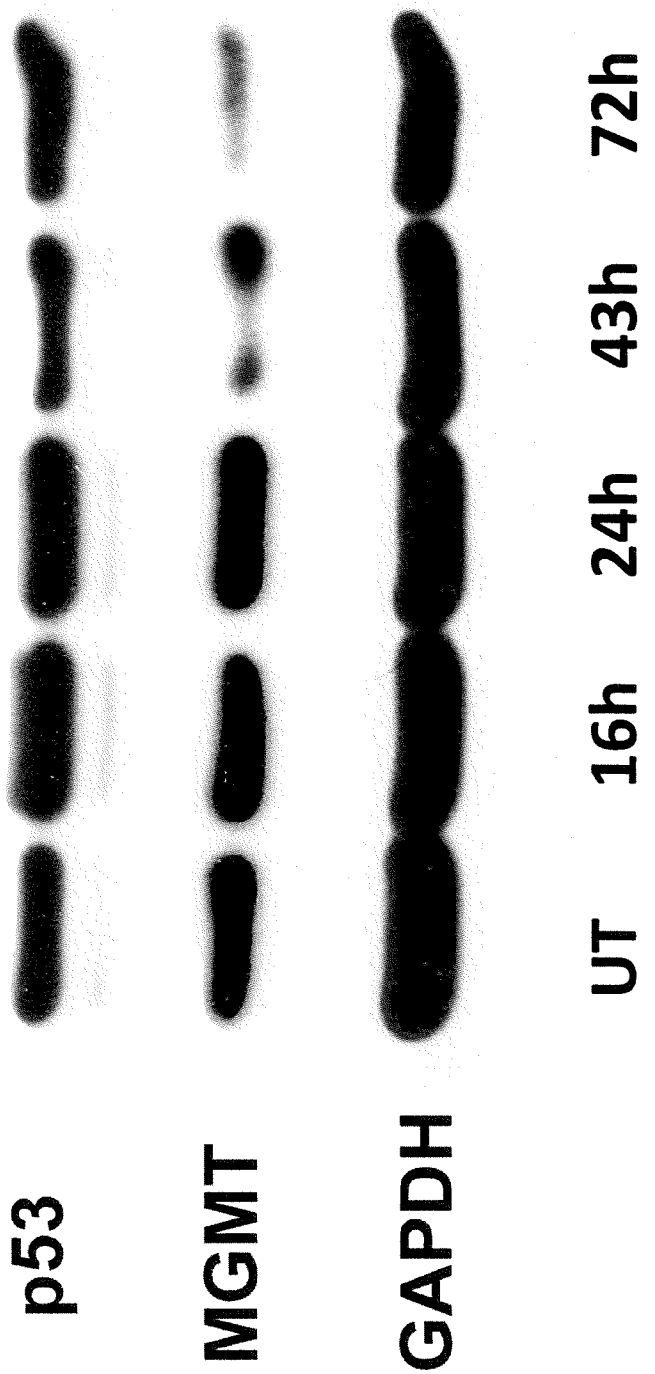
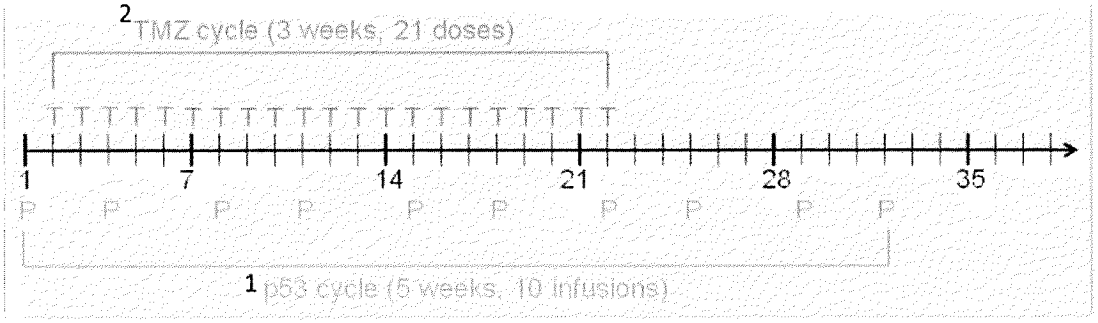


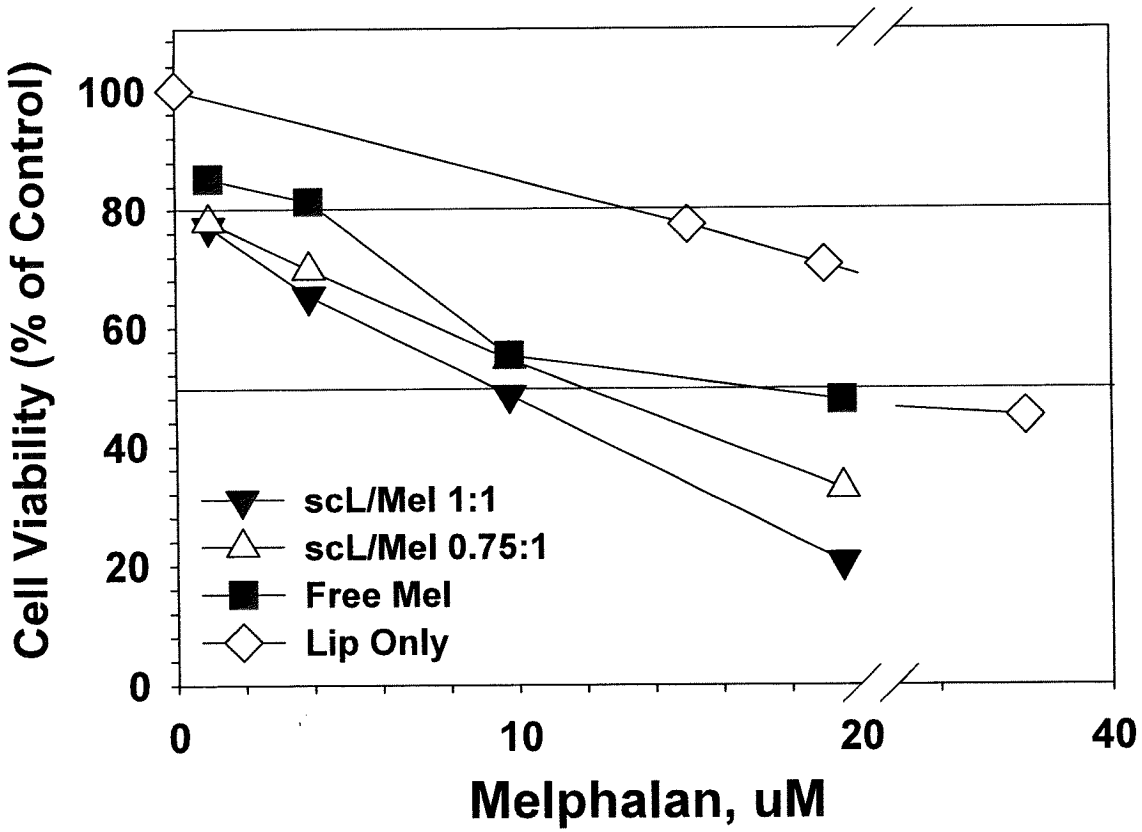
FIG. 31



[1]scL-p53 = Dose = 1.2 to 3.6 mg per infusion. scL-p53 to be given on day 1. scL-p53 infusions should take place on Monday-Thursday or Tuesday-Friday of each week. In case of holiday or other logistic issues, schedule will allow for Tuesday-Thursday, or Monday-Friday infusions of scL-p53. scL-p53 injections will end on Day 32, or 10 after infusions.

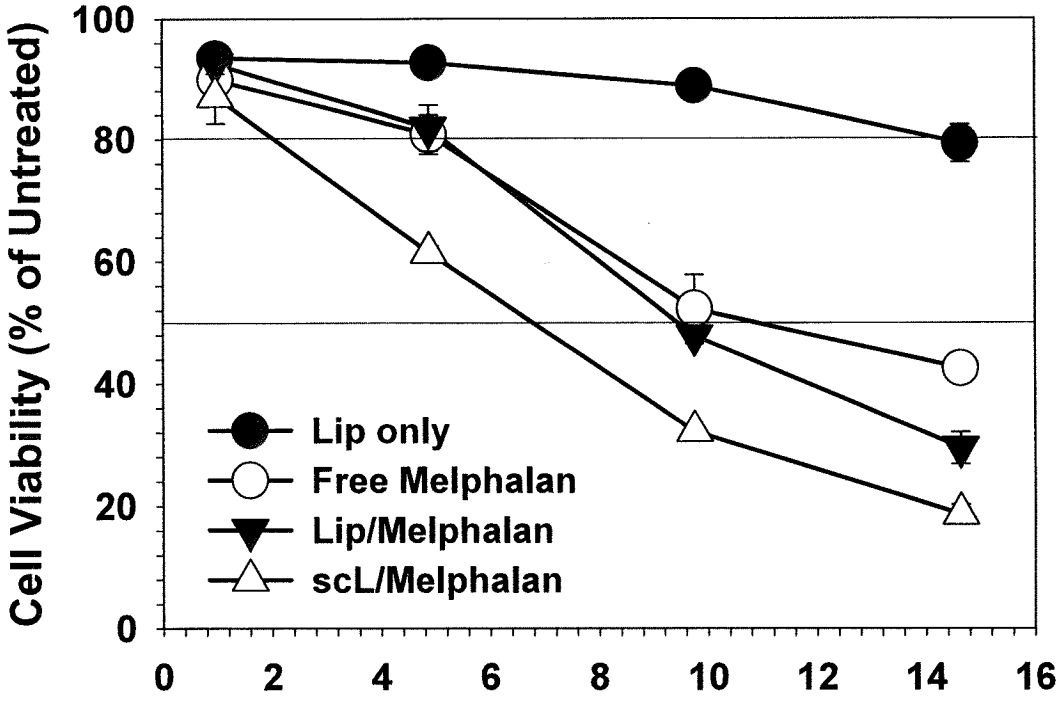
[2]TMZ = Temozolomide treatment will begin on Day 2. Temozolomide will be administered orally at 100-250mg/m^2 every day (including weekends) from day 1 to day 21

FIG. 32



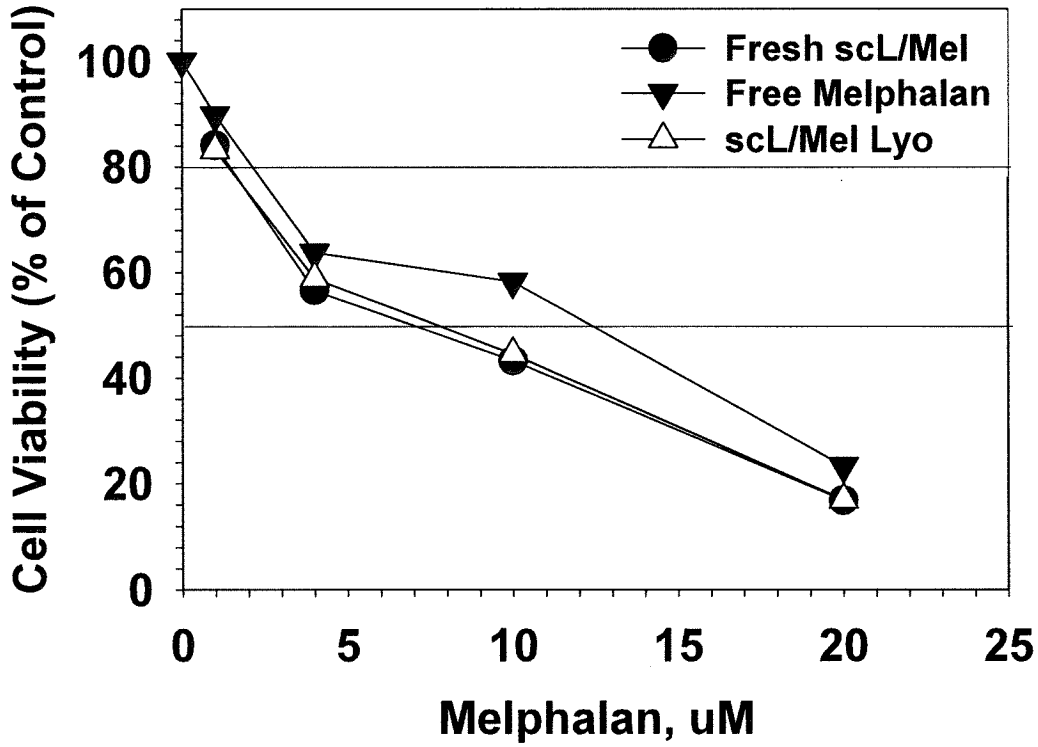
	IC50	IC30
scL/Mel 1:1	9.6 uM	2.25 uM
scL/Mel 0.75:1	12.3 uM	3.22 uM
Free Mel	17.6 uM	6.02 uM
Lip Only	33.4 uM	18.30 uM

FIG. 33



	IC_{50}	IC_{20}
Lip Only		14.20 uM
Free Mel	10.90 uM	4.93 uM
Lip/Mel	9.48 uM	5.08 uM
scL/Mel	6.82 uM	2.03 uM

FIG. 34



Treatment	IC_{50}	IC_{20}
Fresh scL/Mel	7.03 uM	1.46 uM
scL/Mel Lyo	7.76 uM	1.46 uM
Free Mel	12.5 uM	2.10 uM

FIG. 35

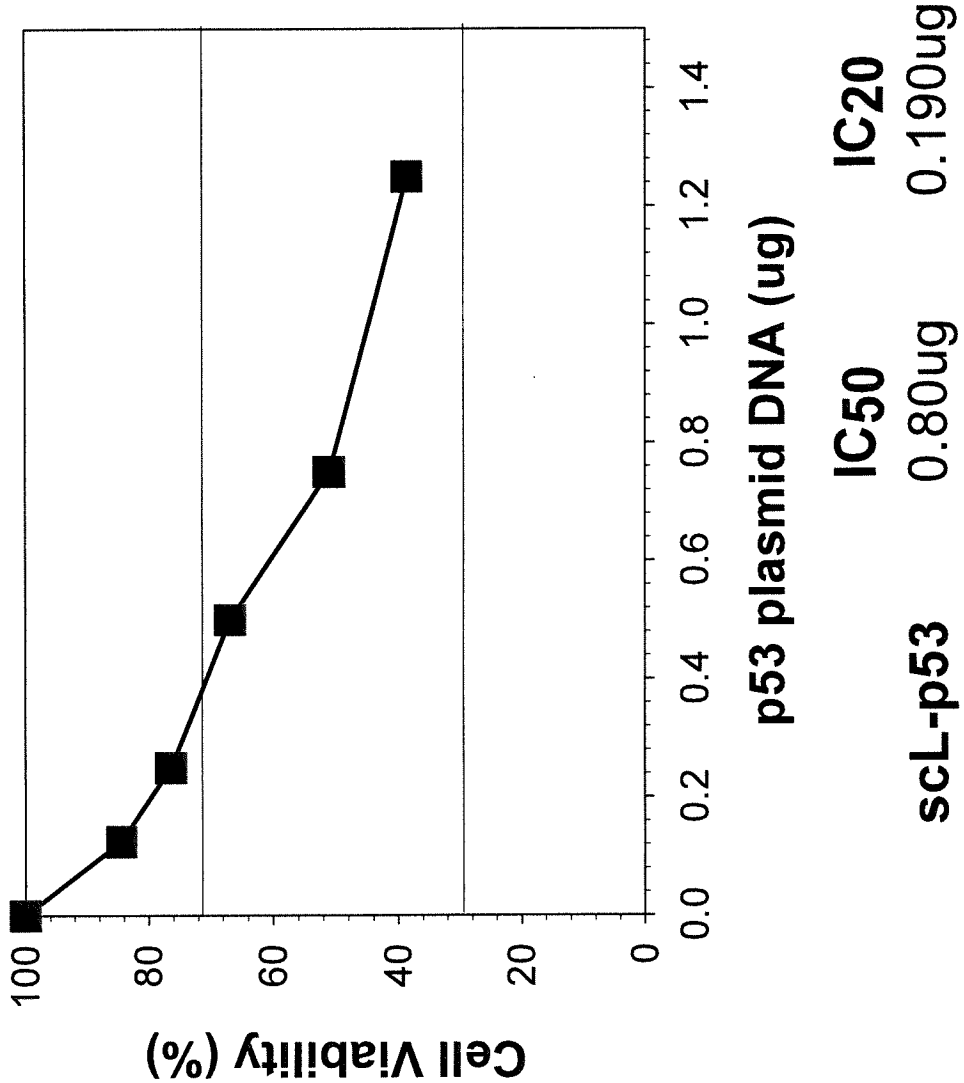
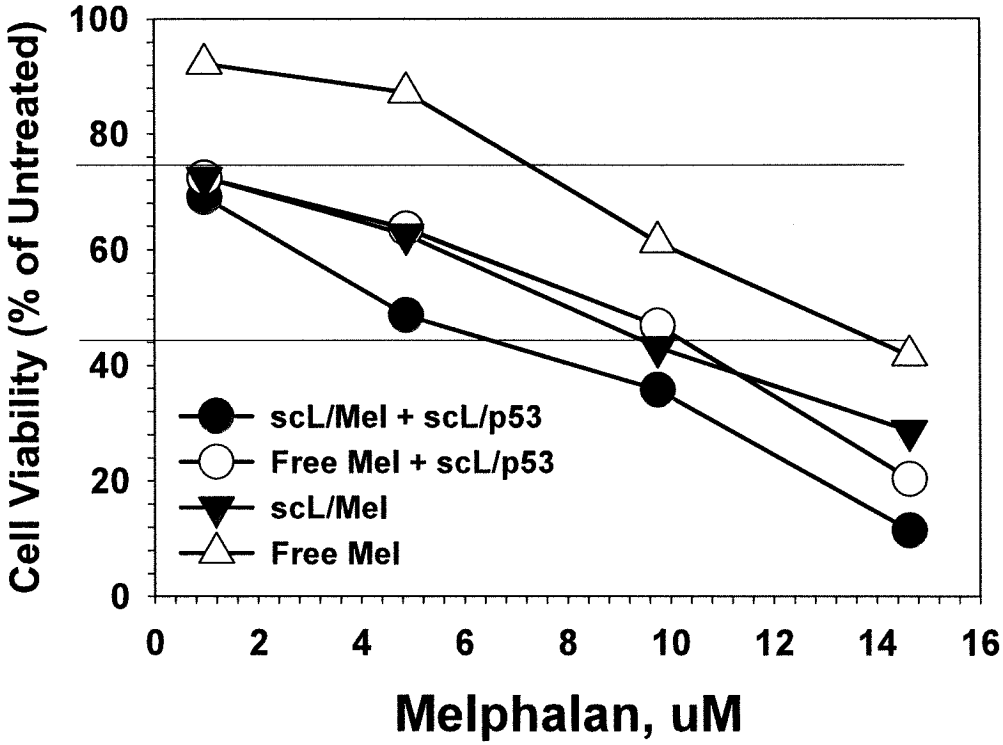

Cell Viability (%)
100
80
60
40
20
0
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
p53 plasmid DNA (ug)
IC50
IC20
scL-p53
0.80ug
0.190ug

FIG. 36



	IC_{50}	IC_{20}
Free Mel	10.90 uM	6.21 uM
Free Mel + scL/p53	8.80 uM	
scL/Mel	8.06 uM	
scL/Mel + scL/p53	4.57 uM	

FIG. 37