**Figure 1**

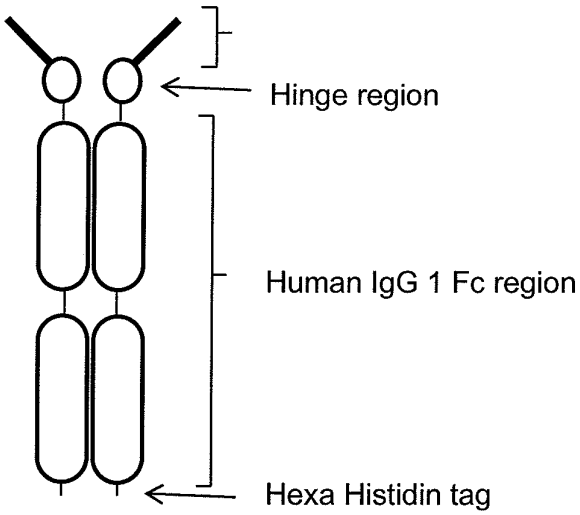
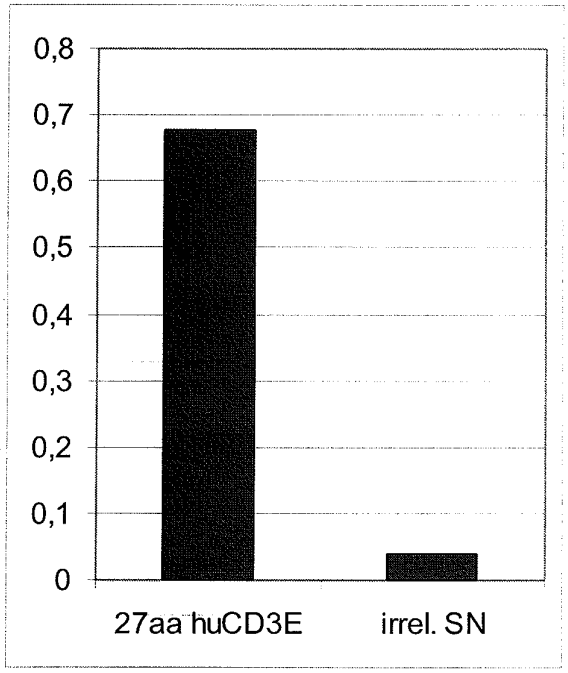



Figure 2



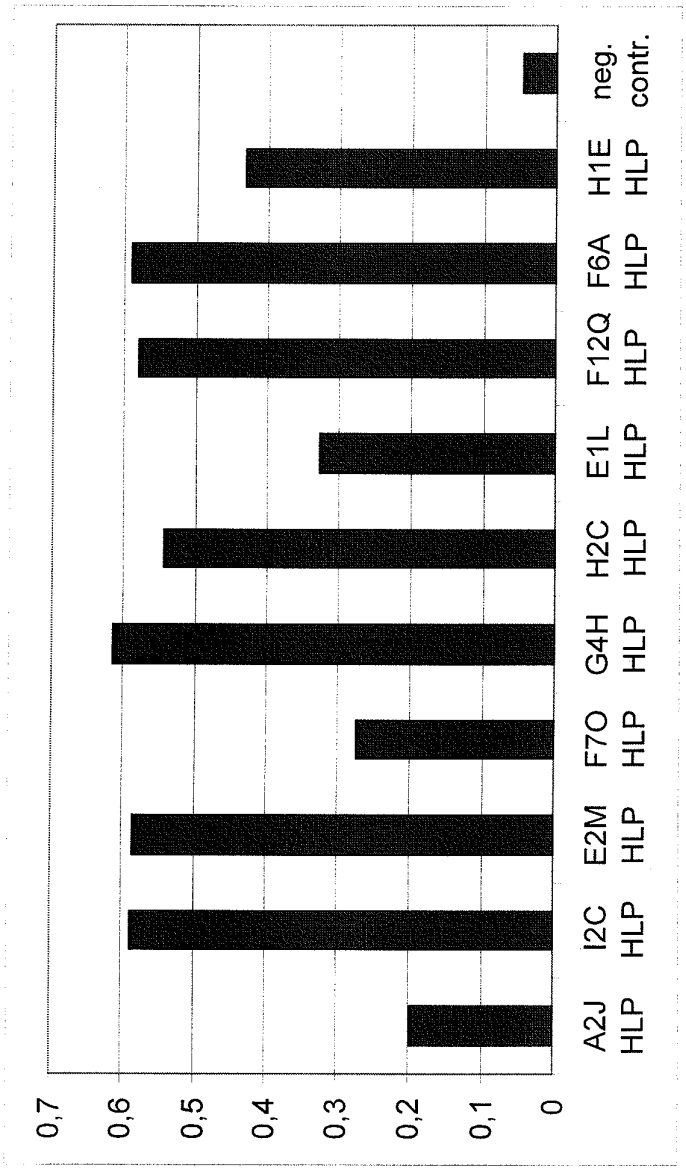

0,7
0,6
0,5
0,4
0,3
0,2
0,1
0
A2J HLP
I2C HLP
E2M HLP
F7O HLP
G4H HLP
H2C HLP
E1L HLP
F12Q HLP
F6A HLP
H1E HLP
neg. contr.

Figure 3

Figure 4

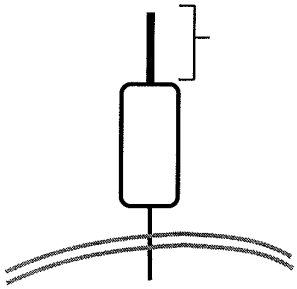


Figure 5

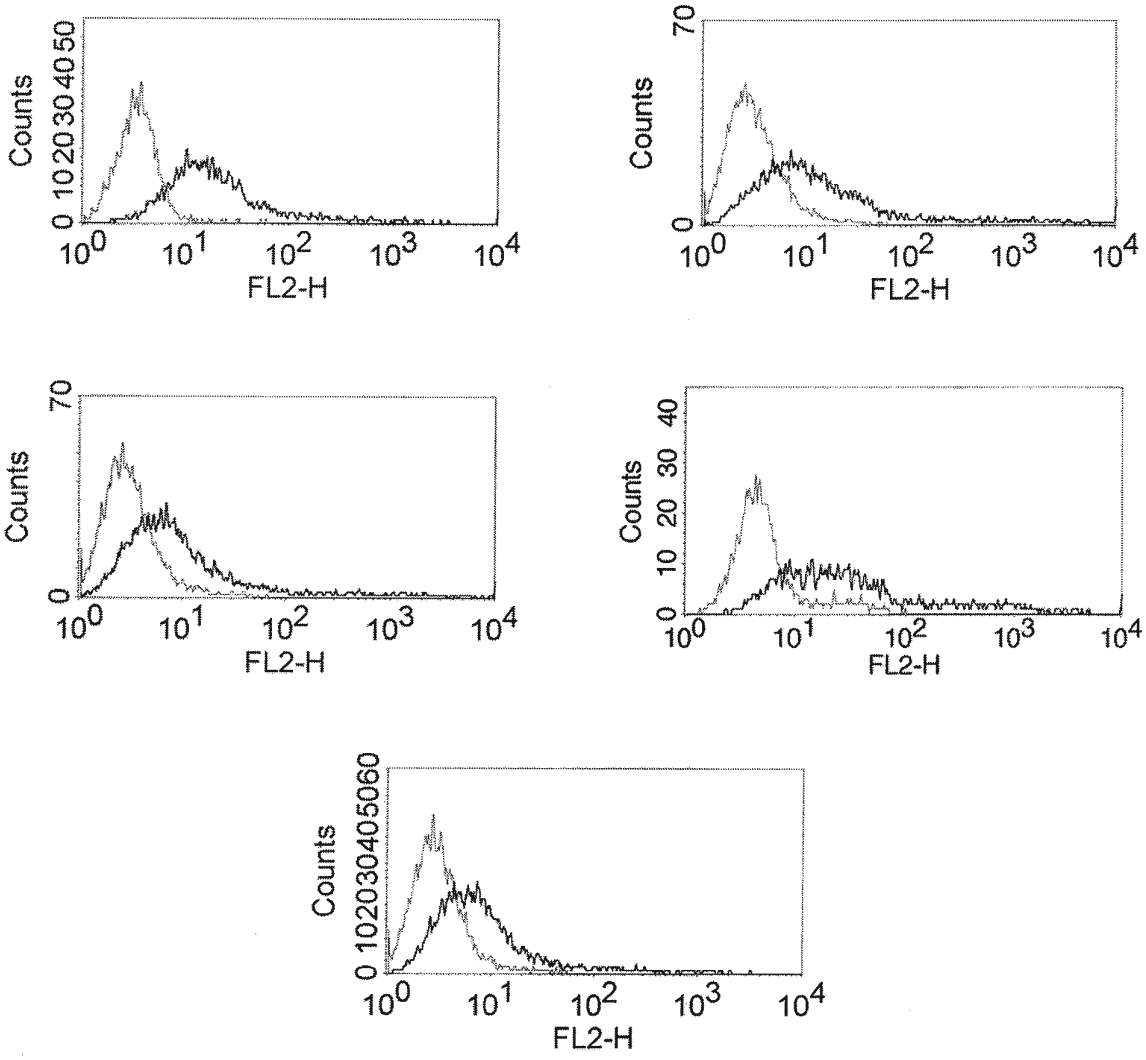
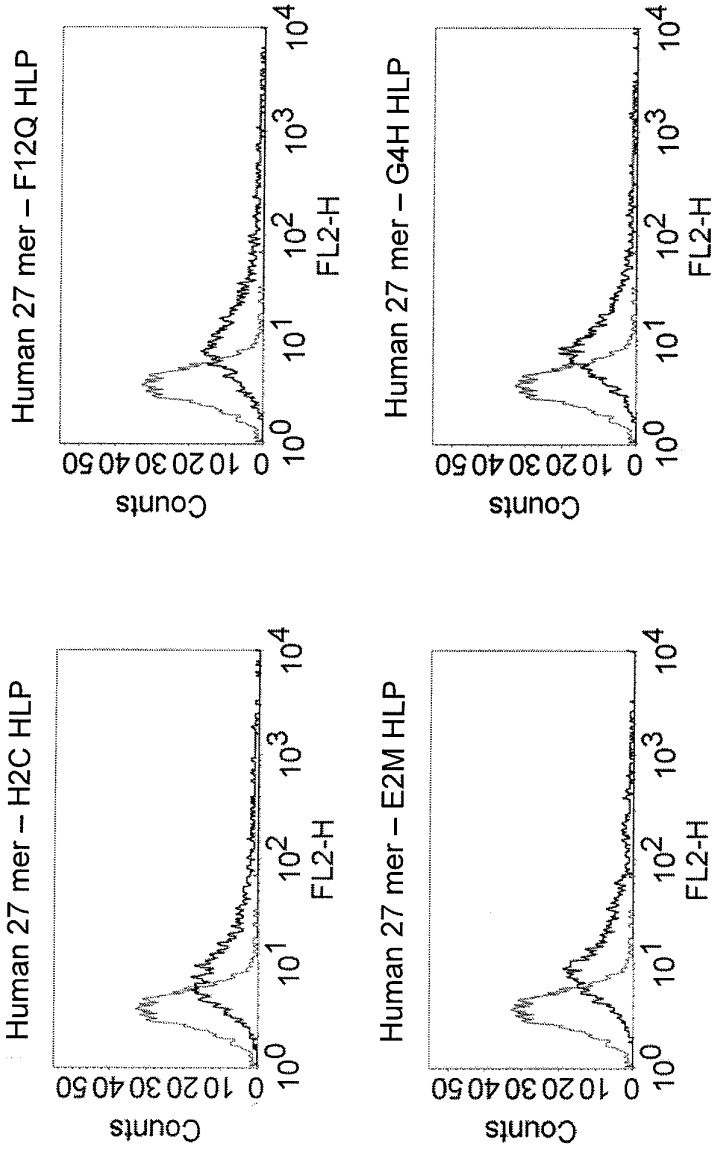

Counts
0 10 20 30 40 50
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
Counts
0 70
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
Counts
0 70
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
Counts
0 10 20 30 40
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
Counts
0 10 20 30 40 50 60
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

Figure 6A


Human 27 mer – F12Q HLP
Human 27 mer – G4H HLP
Human 27 mer – H2C HLP
Human 27 mer – E2M HLP
Counts
FL2-H
0
10
20
30
40
50
$10^0$
$10^1$
$10^2$
$10^3$
$10^4$

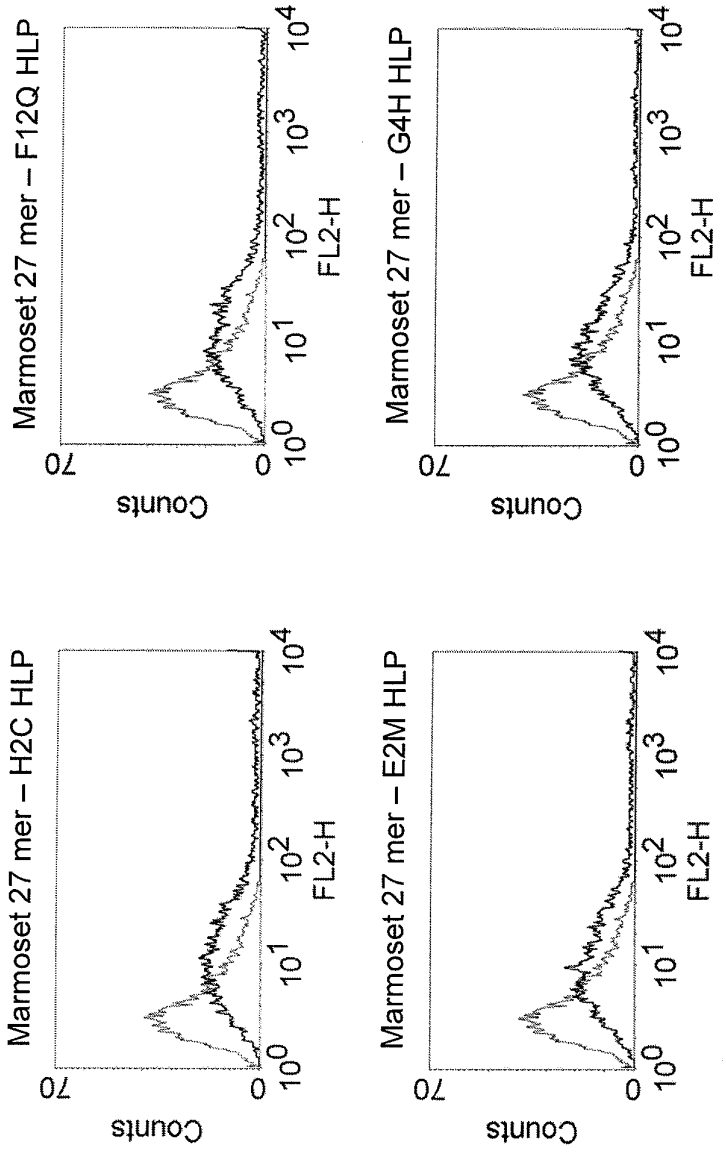

Marmoset 27 mer – F12Q HLP
Marmoset 27 mer – G4H HLP
Marmoset 27 mer – H2C HLP
Marmoset 27 mer – E2M HLP
Counts
FL2-H
0
70
$10^0$
$10^1$
$10^2$
$10^3$
$10^4$

Figure 6B

Figure 6C

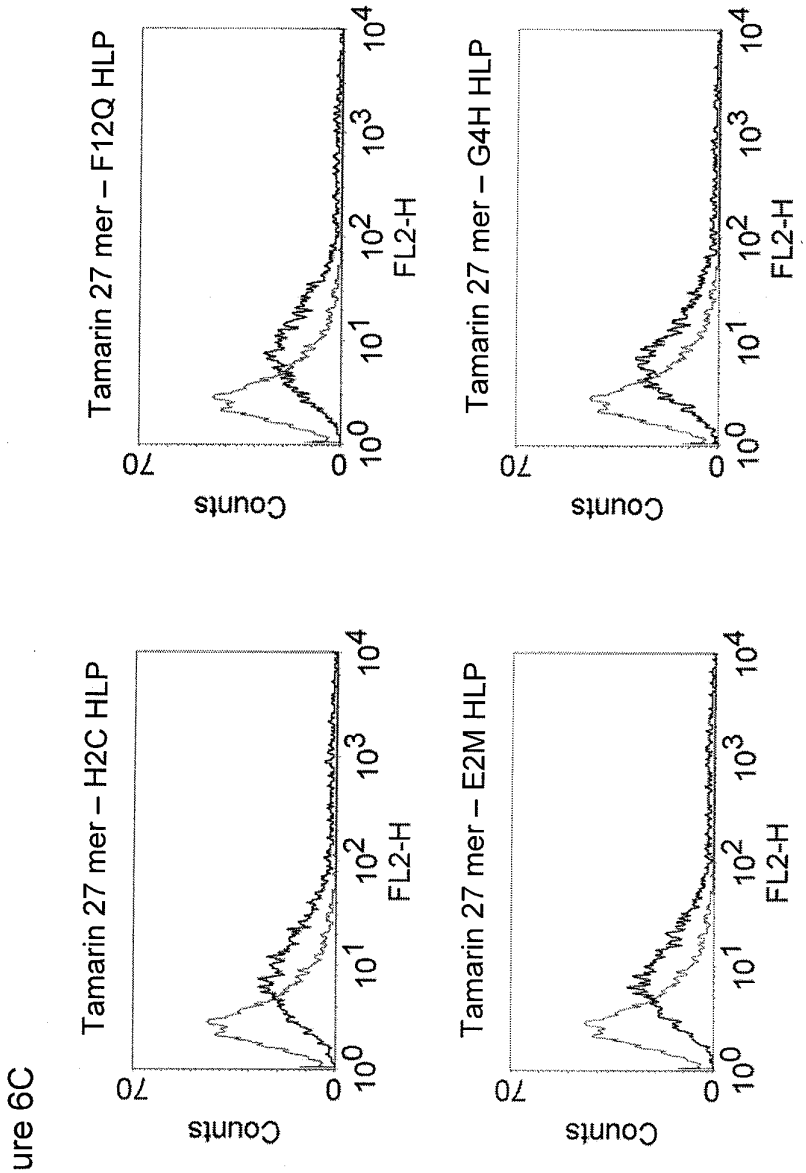

Tamarin 27 mer – F12Q HLP
Tamarin 27 mer – G4H HLP
Tamarin 27 mer – H2C HLP
Tamarin 27 mer – E2M HLP
Counts
FL2-H
0
70
$10^0$
$10^1$
$10^2$
$10^3$
$10^4$

Figure 6D

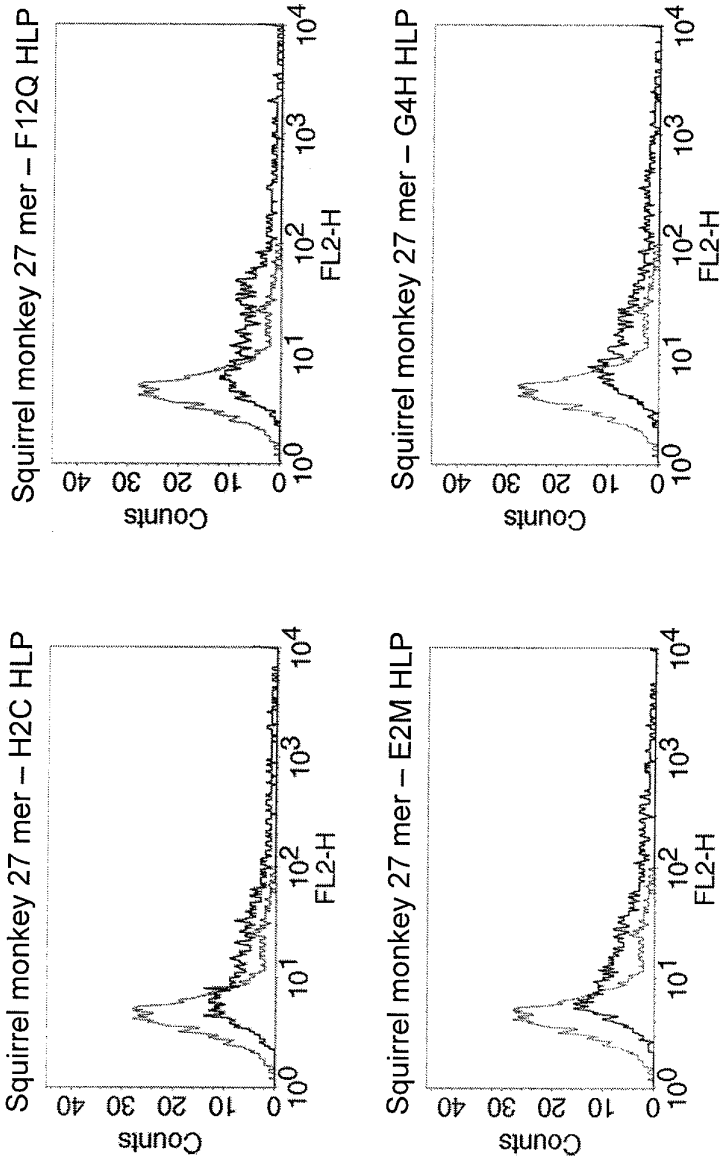

Squirrel monkey 27 mer – F12Q HLP
Squirrel monkey 27 mer – G4H HLP
Squirrel monkey 27 mer – H2C HLP
Squirrel monkey 27 mer – E2M HLP
Counts
FL2-H
0
10
20
30
40
$10^0$
$10^1$
$10^2$
$10^3$
$10^4$

Figure 6E

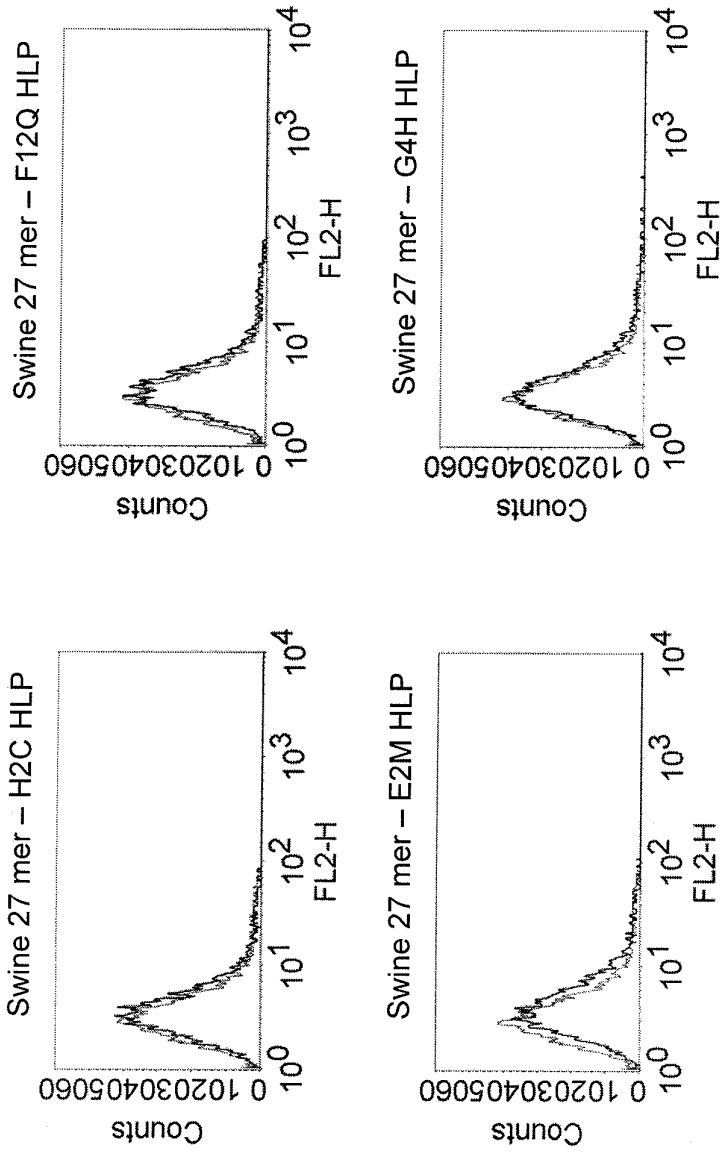
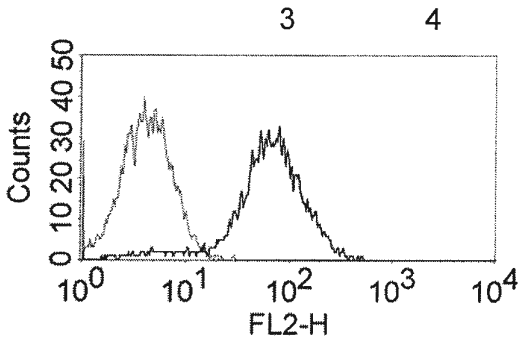

Swine 27 mer – F12Q HLP
Swine 27 mer – G4H HLP
Swine 27 mer – H2C HLP
Swine 27 mer – E2M HLP
Counts
FL2-H
0
10
20
30
40
50
60
$10^0$
$10^1$
$10^2$
$10^3$
$10^4$

Figure 7



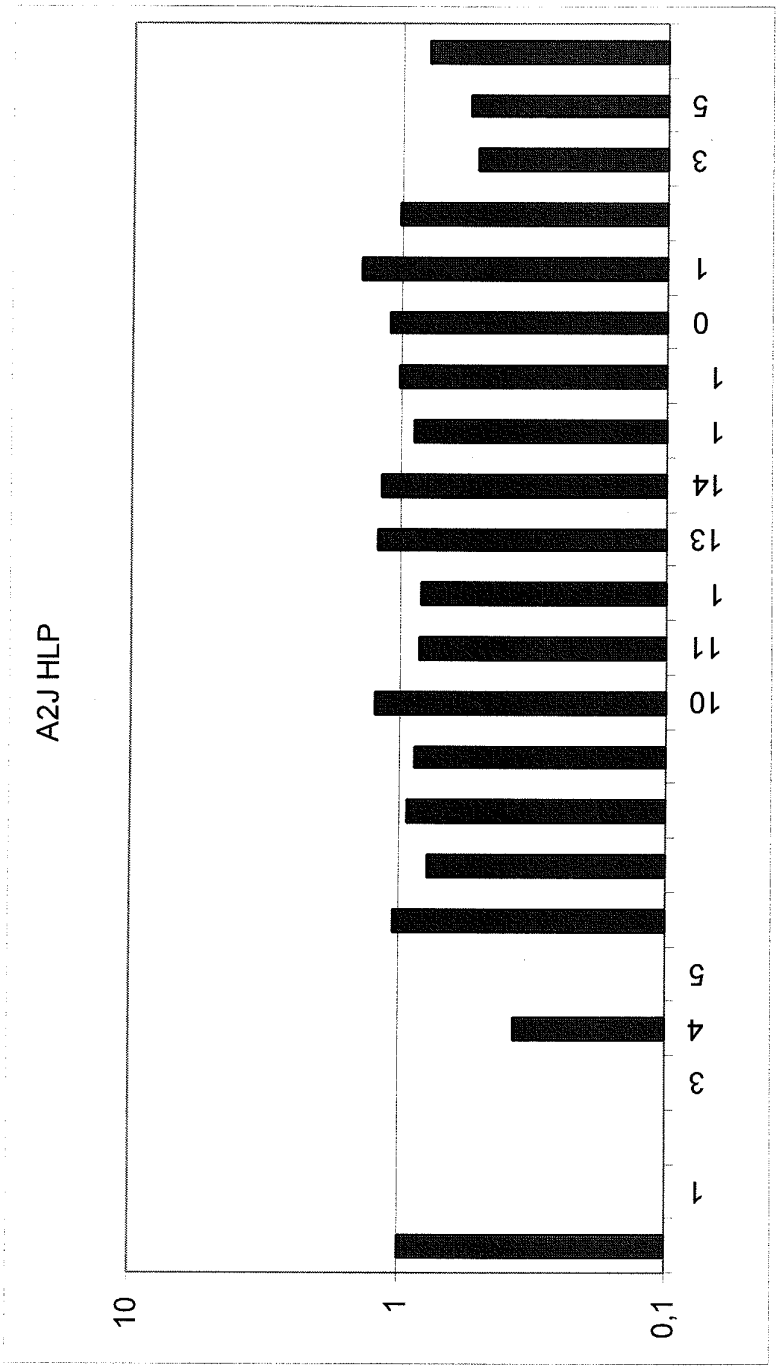



Figure 8A

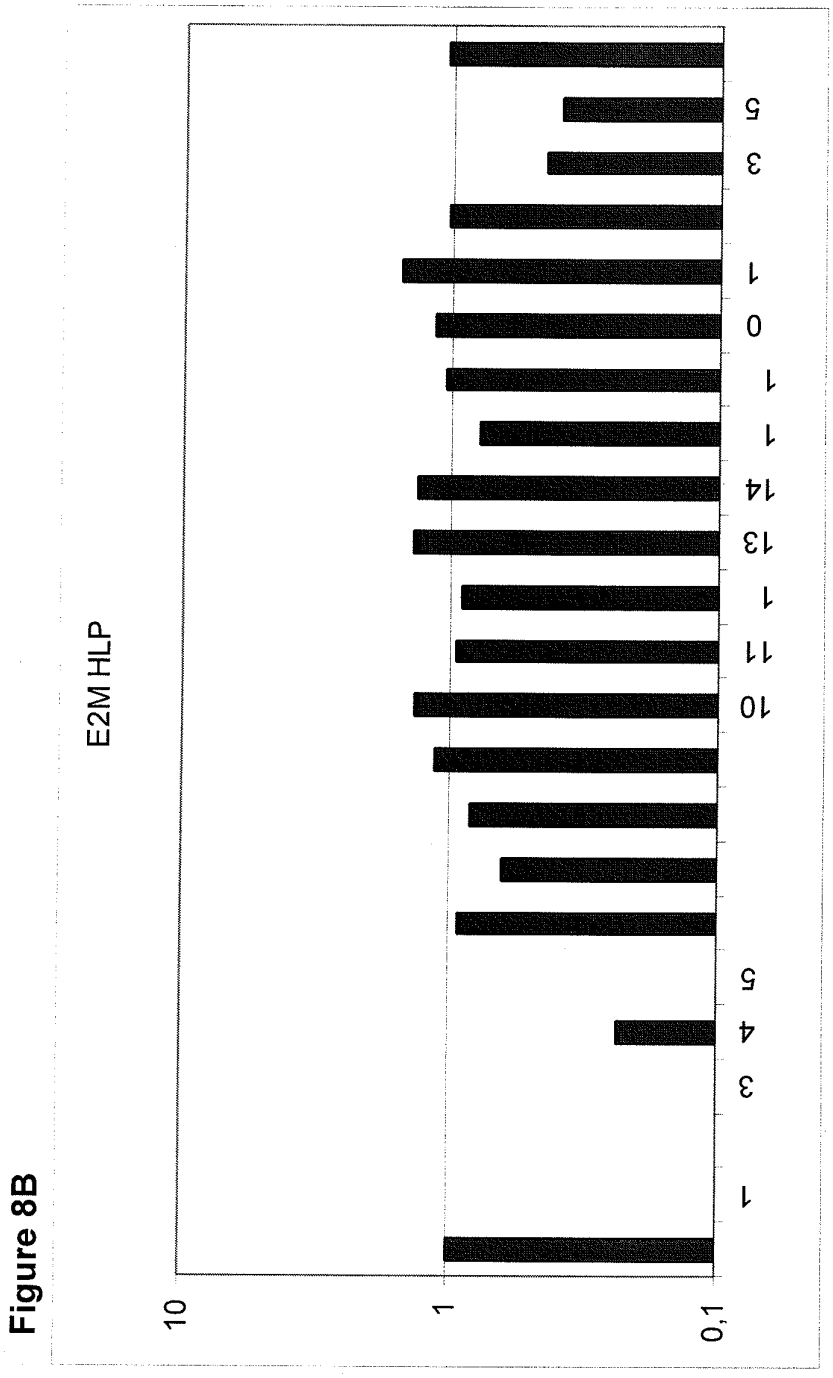



Figure 8B

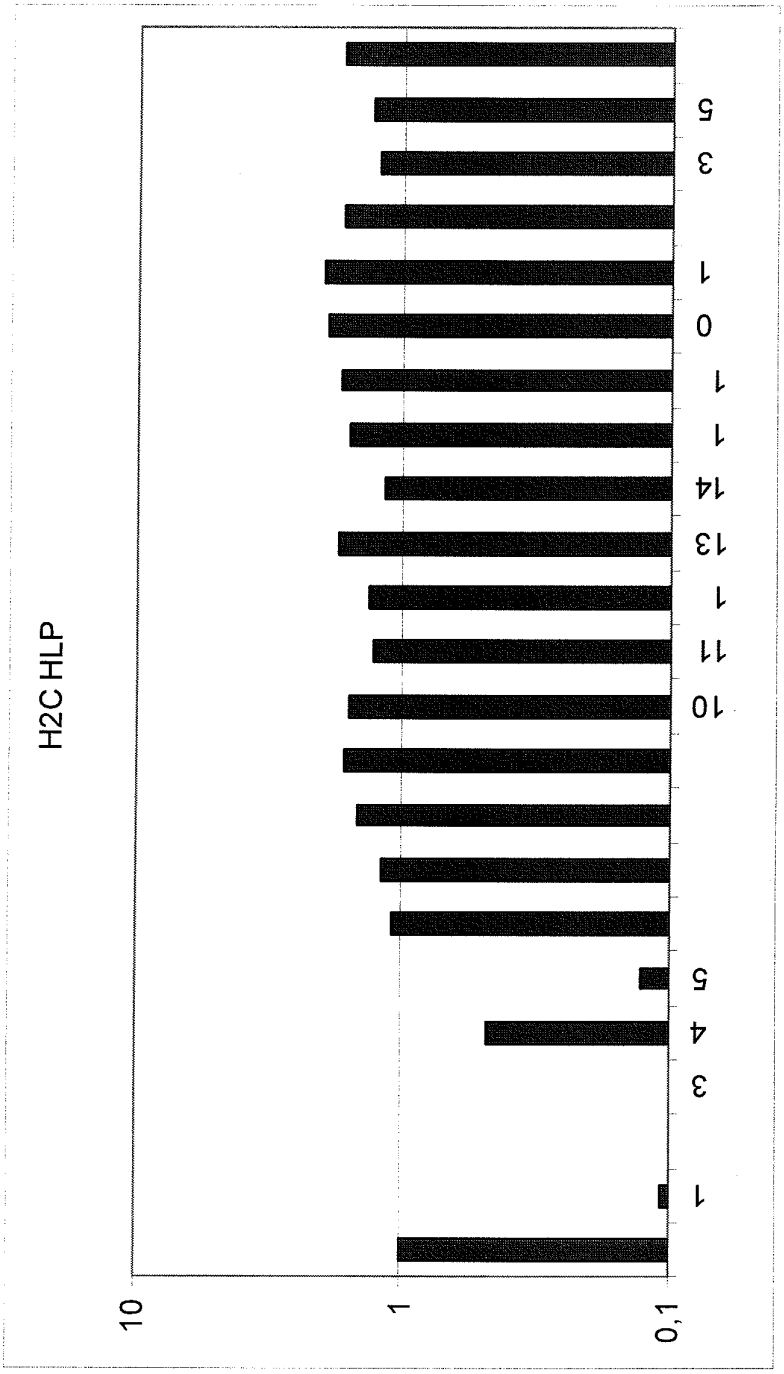



Figure 8C

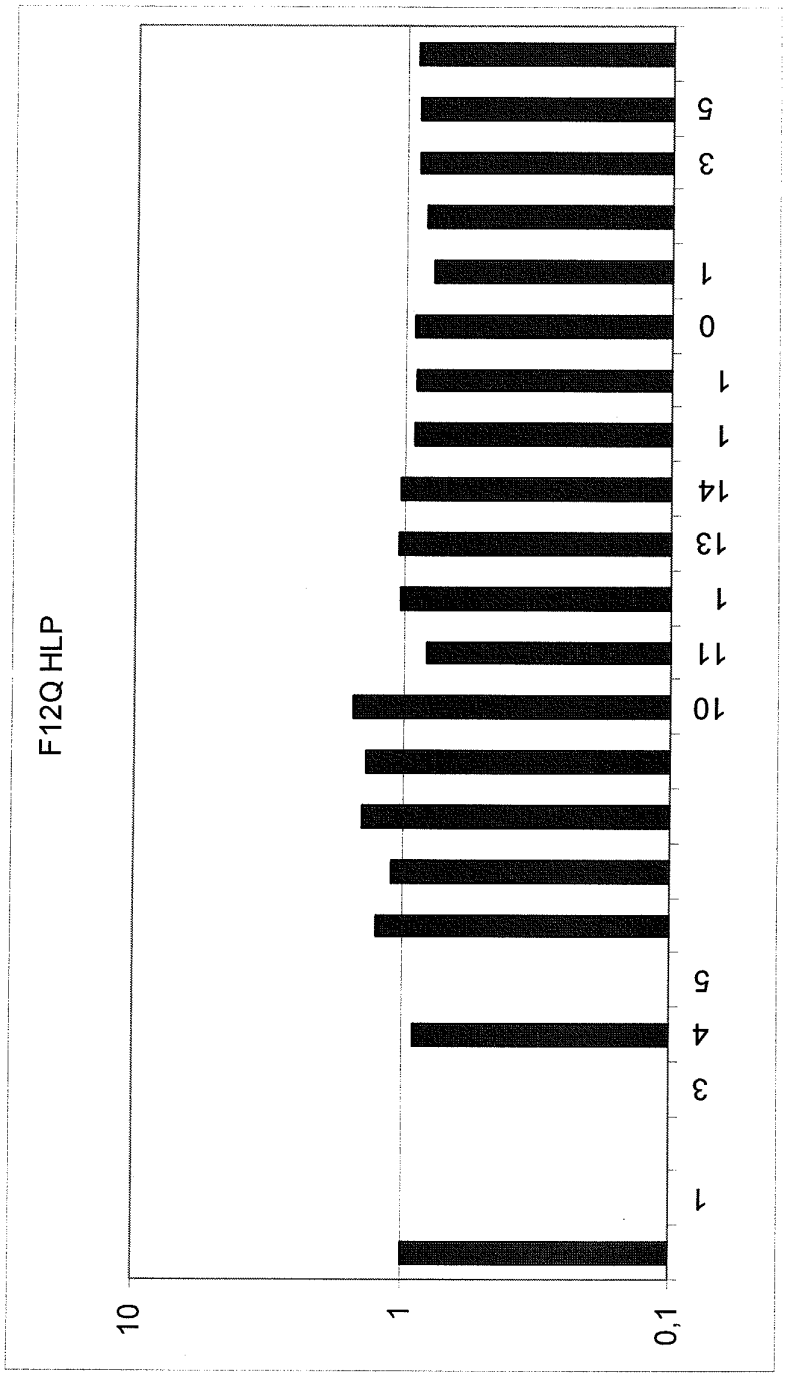
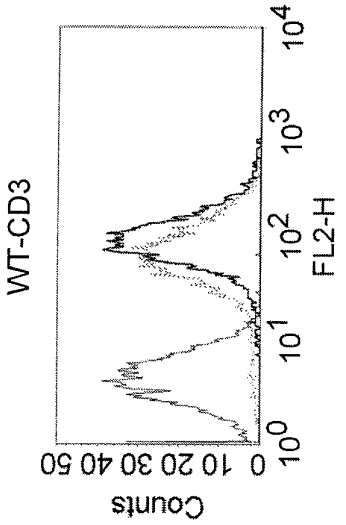
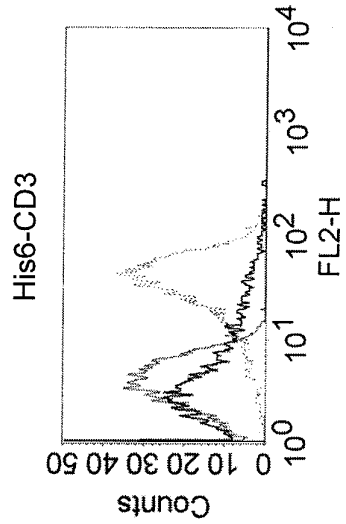



Figure 8D

Figure 9


WT-CD3
Counts
0 10 20 30 40 50
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H


His6-CD3
Counts
0 10 20 30 40 50
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

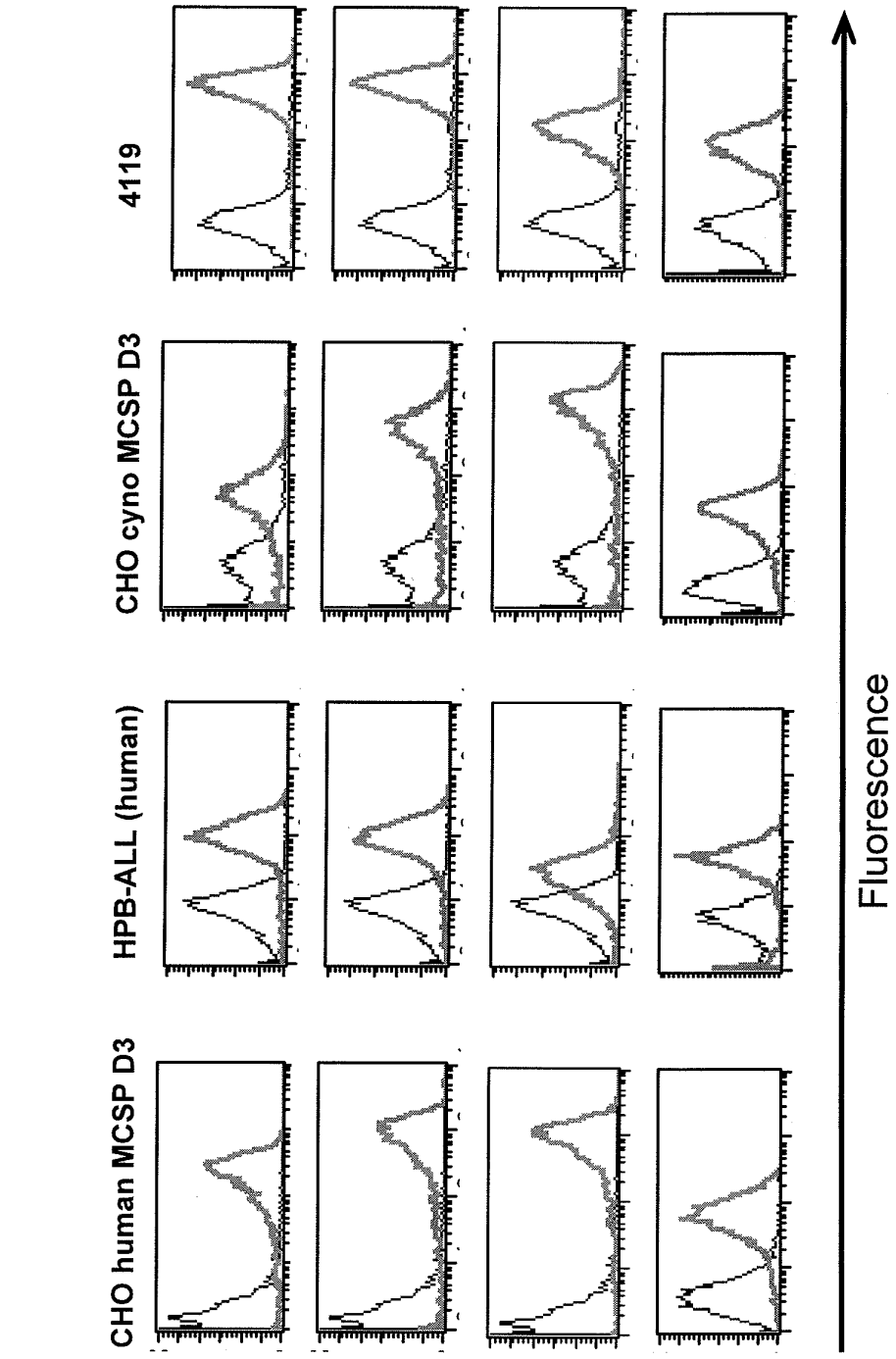

CHO human MCSP D3
HPB-ALL (human)
CHO cyno MCSP D3
4119
MCSP-D2 HLP x H2C HLP
MCSP-F9 HLP x H2C HLP
MCSP-F9 HLP x G4H HLP
MCSP-G4 HLP x I2C HL
Count
Fluorescence

Figure 10

Figure 11

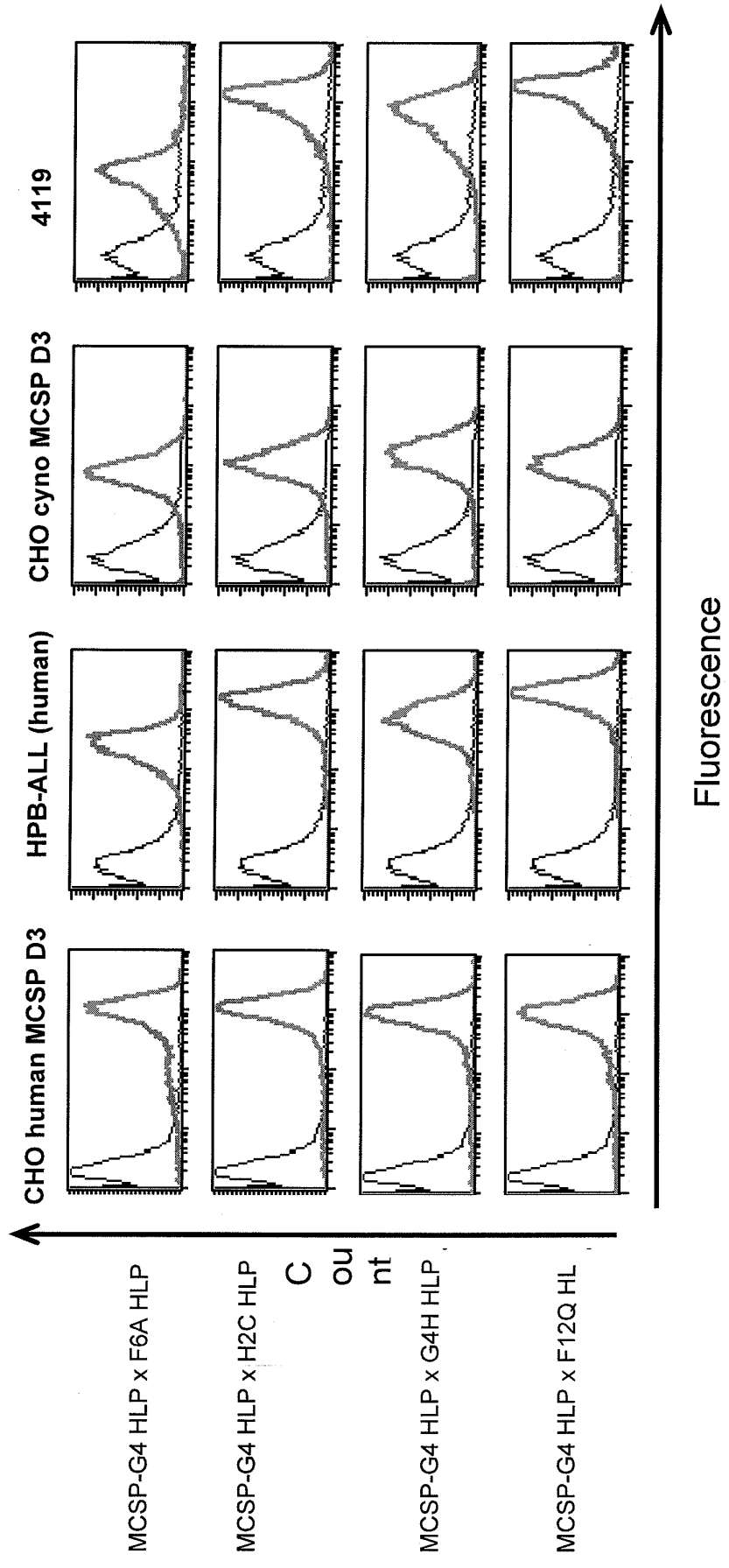

CHO human MCSP D3
HPB-ALL (human)
CHO cyno MCSP D3
4119
MCSP-G4 HLP x F6A HLP
MCSP-G4 HLP x H2C HLP
MCSP-G4 HLP x G4H HLP
MCSP-G4 HLP x F12Q HL
Count
Fluorescence

Figure 12

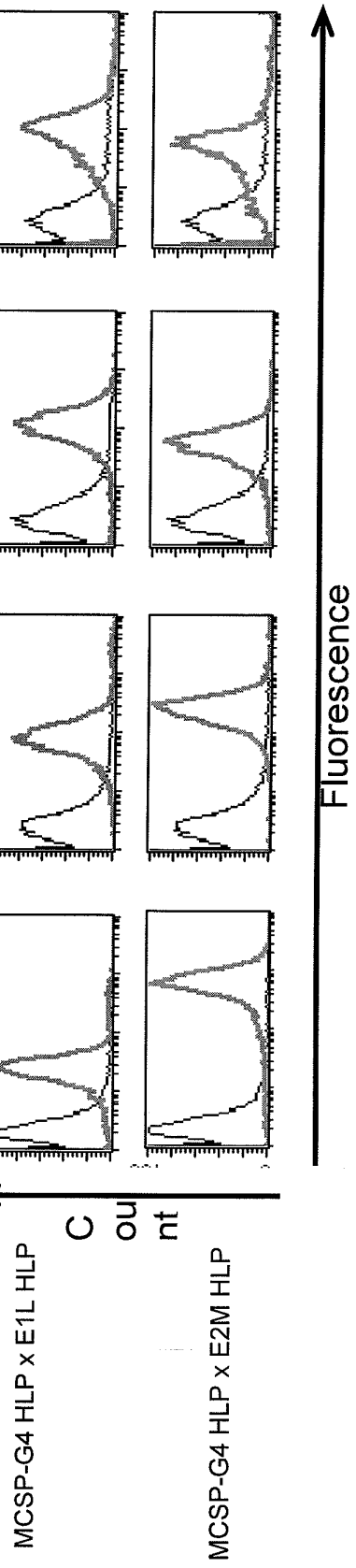
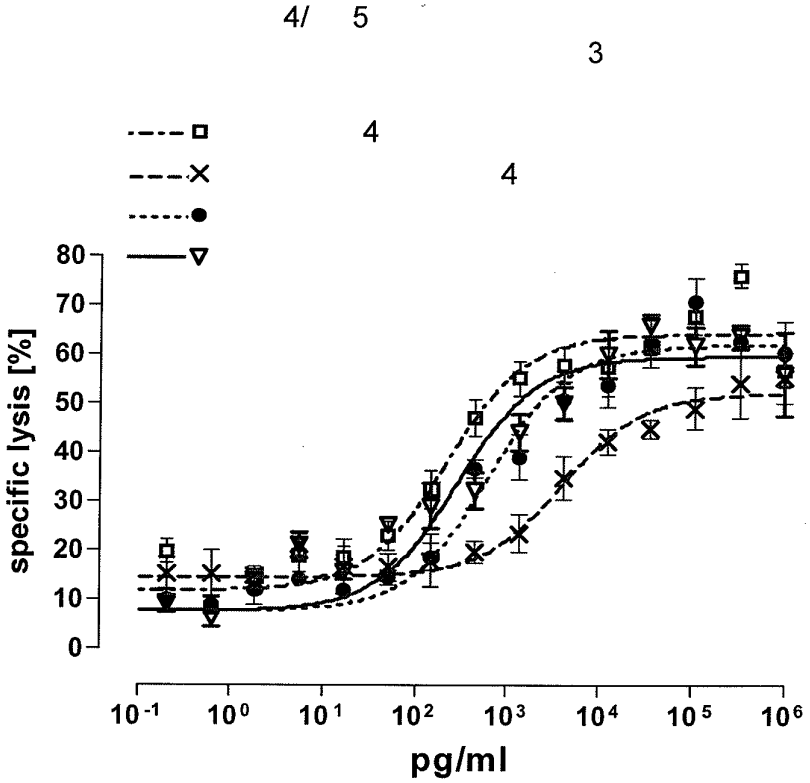

CHO human MCSP D3
HPB-ALL (human)
CHO cyno MCSP D3
4119
MCSP-G4 HLP x E1L HLP
MCSP-G4 HLP x E2M HLP
Count
Fluorescence

Figure 13

A)


4/ 5
3
4
4
specific lysis [%]
0
10
20
30
40
50
60
70
80
10-1
100
101
102
103
104
105
106
pg/ml

B)

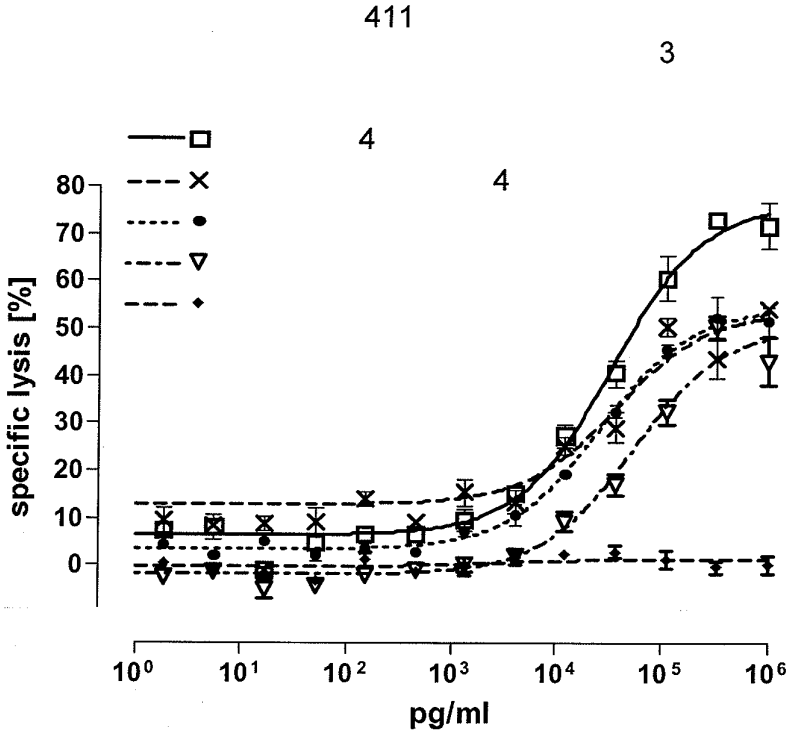
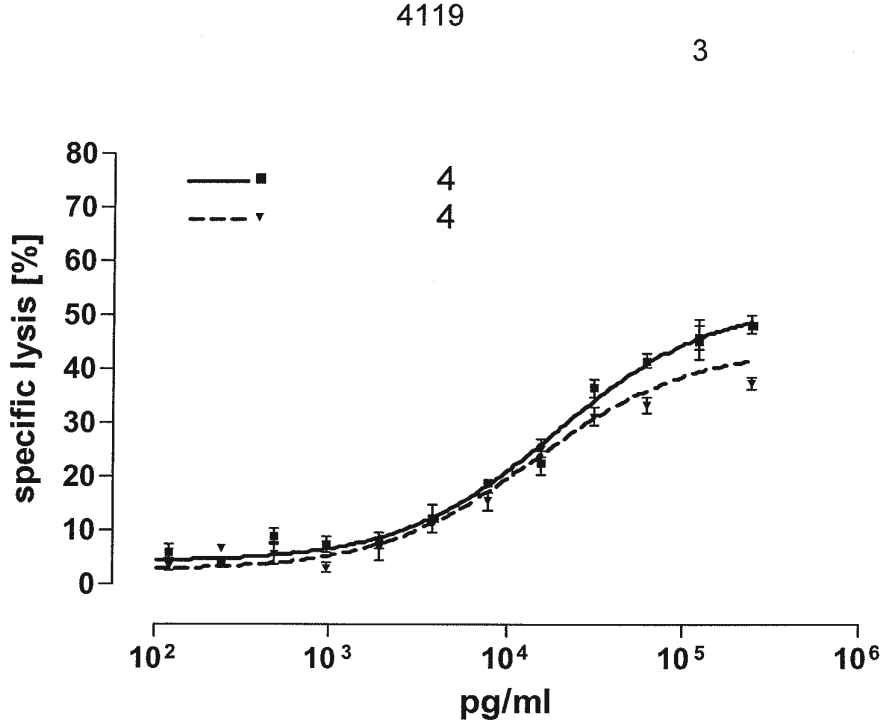

411
3
4
4
specific lysis [%]
0
10
20
30
40
50
60
70
80
100
101
102
103
104
105
106
pg/ml

Figure 14

A)


4119
3
4
4
specific lysis [%]
80
70
60
50
40
30
20
10
0
$10^2$
$10^3$
$10^4$
$10^5$
$10^6$
pg/ml

B)

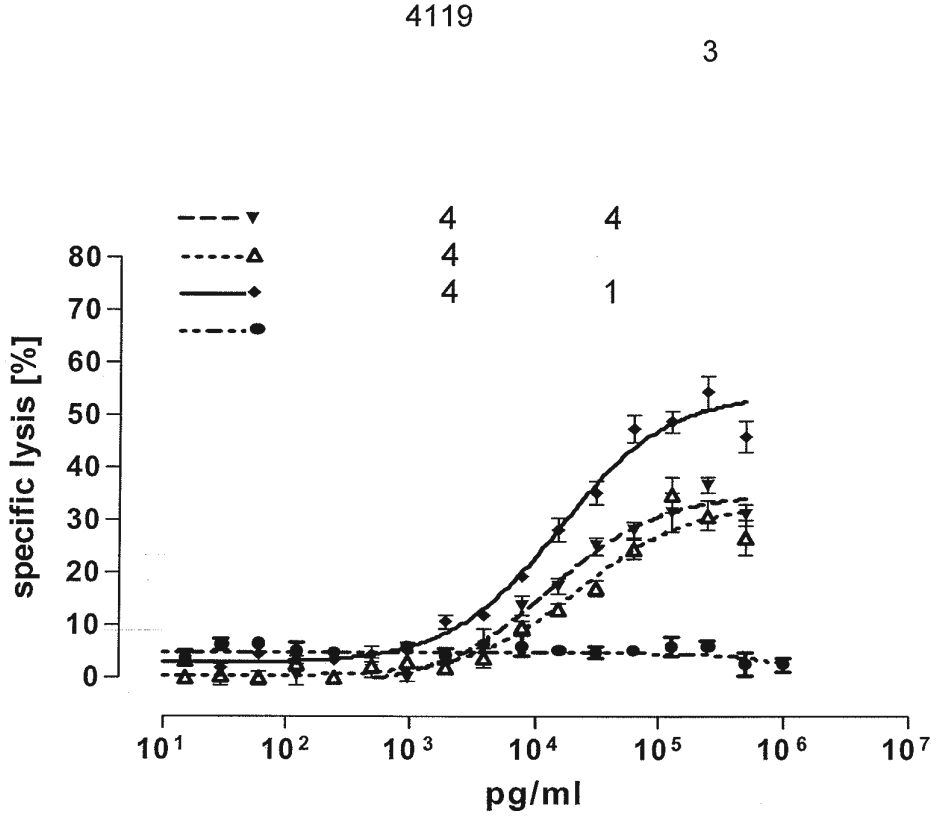
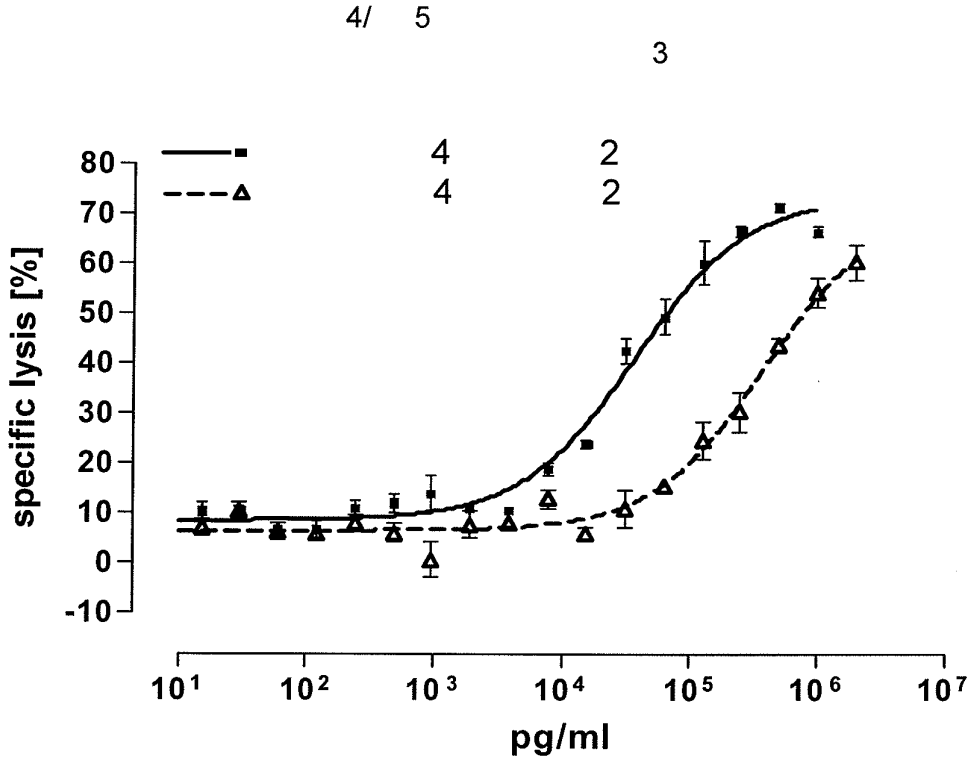

4119
3
4
4
4
4
4
1
specific lysis [%]
80
70
60
50
40
30
20
10
0
$10^1$
$10^2$
$10^3$
$10^4$
$10^5$
$10^6$
$10^7$
pg/ml

Figure 15

A)


4/ 5
3
4 2
4 2
specific lysis [%]
80
70
60
50
40
30
20
10
0
-10
10 1
10 2
10 3
10 4
10 5
10 6
10 7
pg/ml

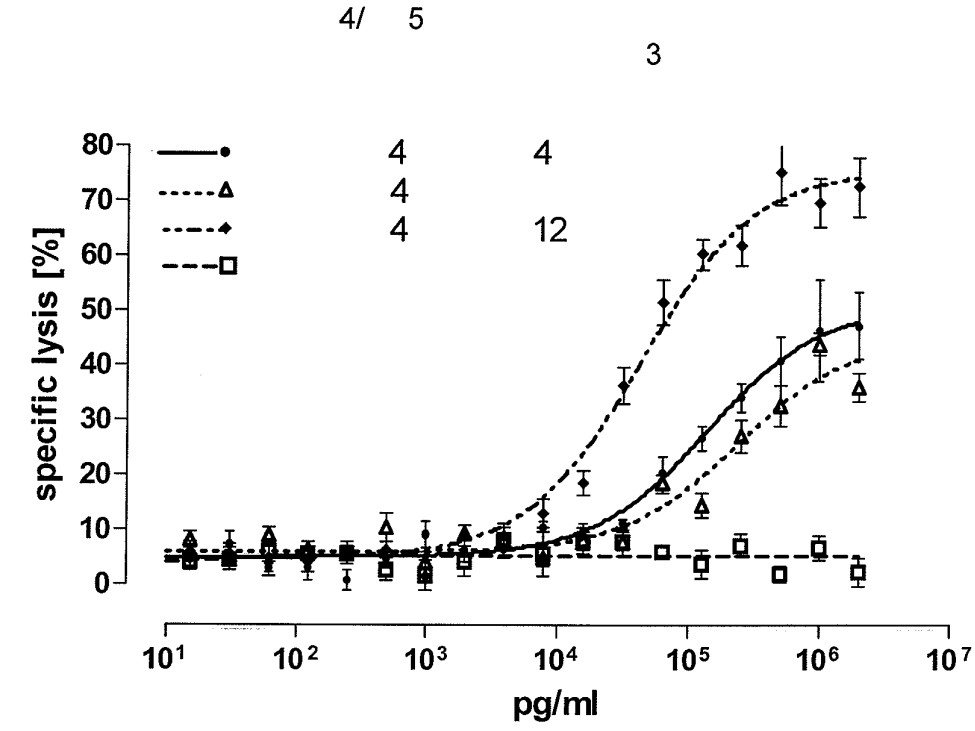
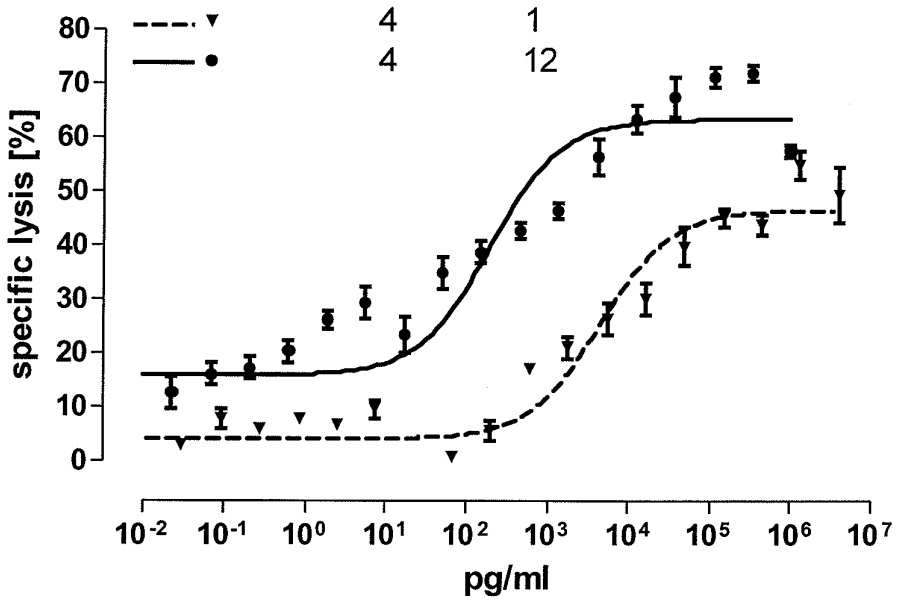

4/ 5
3
4 4
4
4 12
specific lysis [%]
80
70
60
50
40
30
20
10
0
10 1
10 2
10 3
10 4
10 5
10 6
10 7
pg/ml

Figure 16

A)

Effector cells: stimulated CD4/CD56 depleted human PBMC
Target cells: CHO transfected with human MCSP D3




B)

Effector cells: macaque T cell line 4119 LnPx
Target cells: CHO transfected with cynomolgus MCSP D

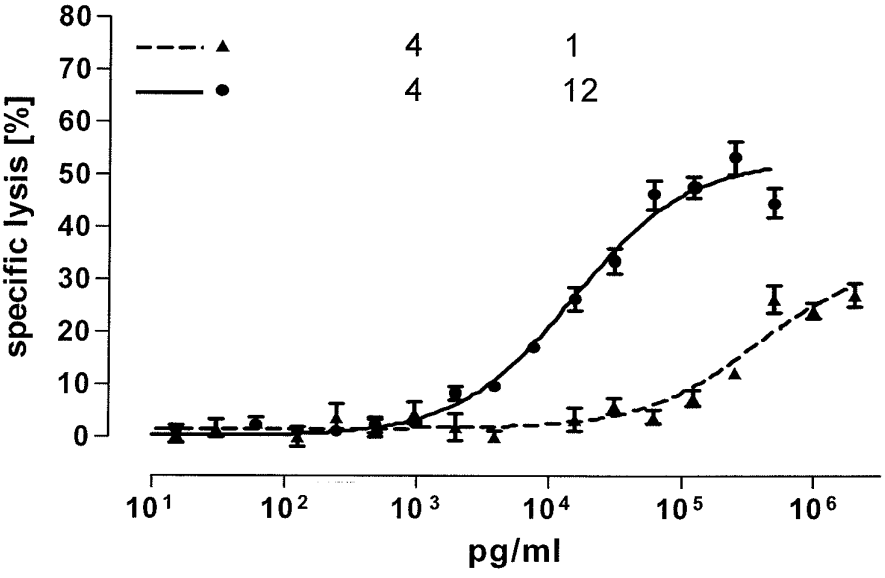
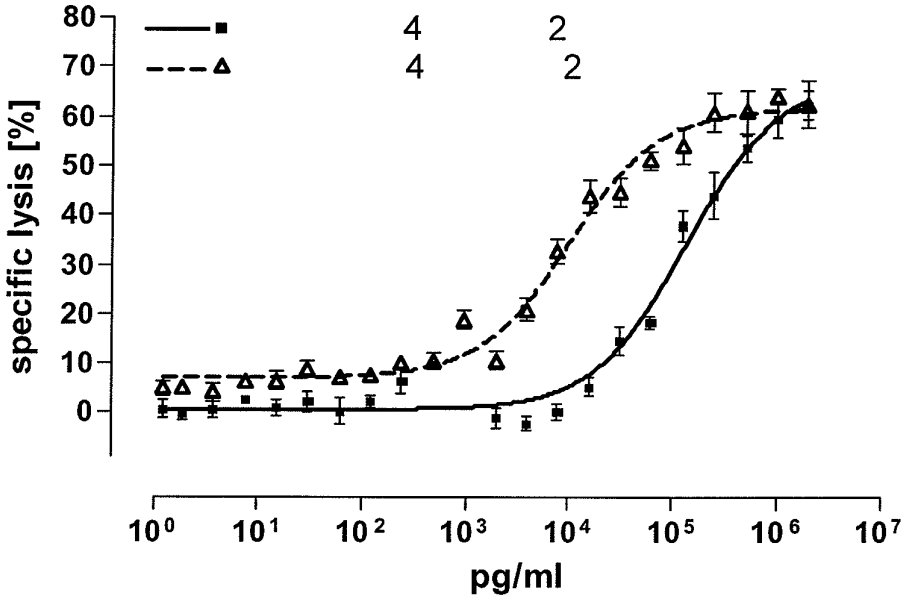


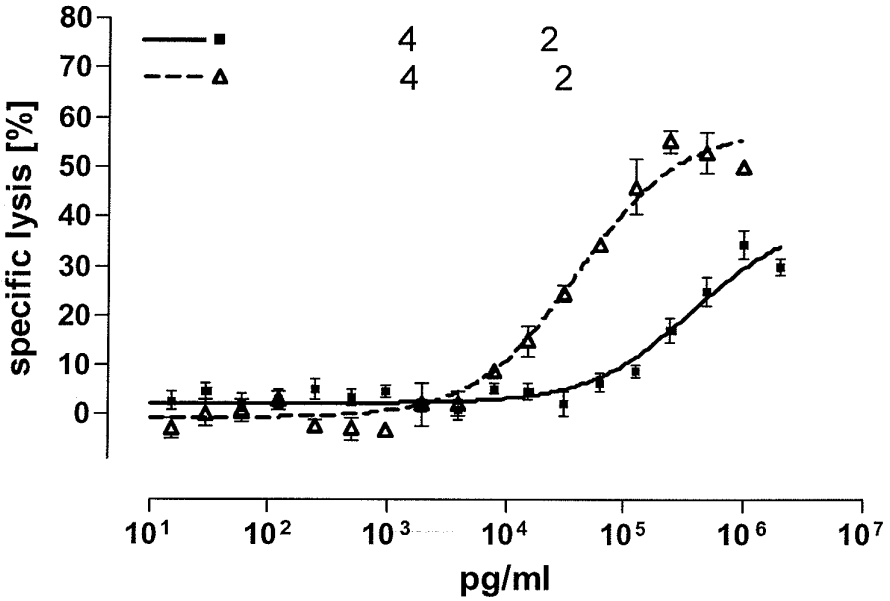
Figure 17

A)
Effector cells: stimulated CD4/CD56 depleted human PBMC
Target cells: CHO transfected with human MCSP D3

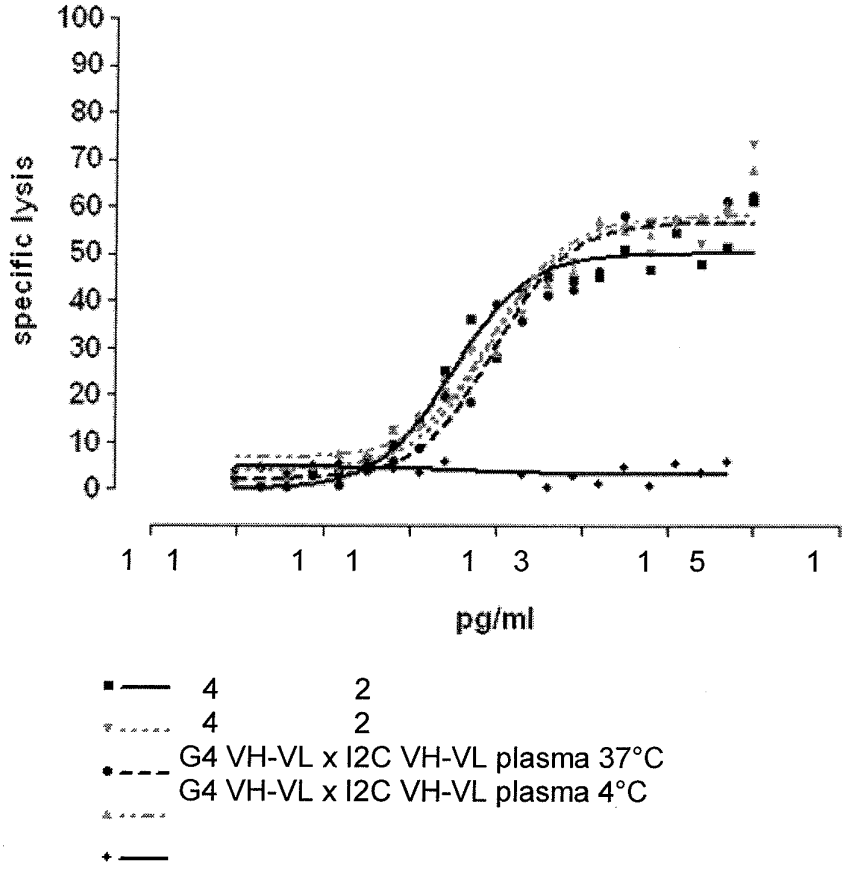



B)

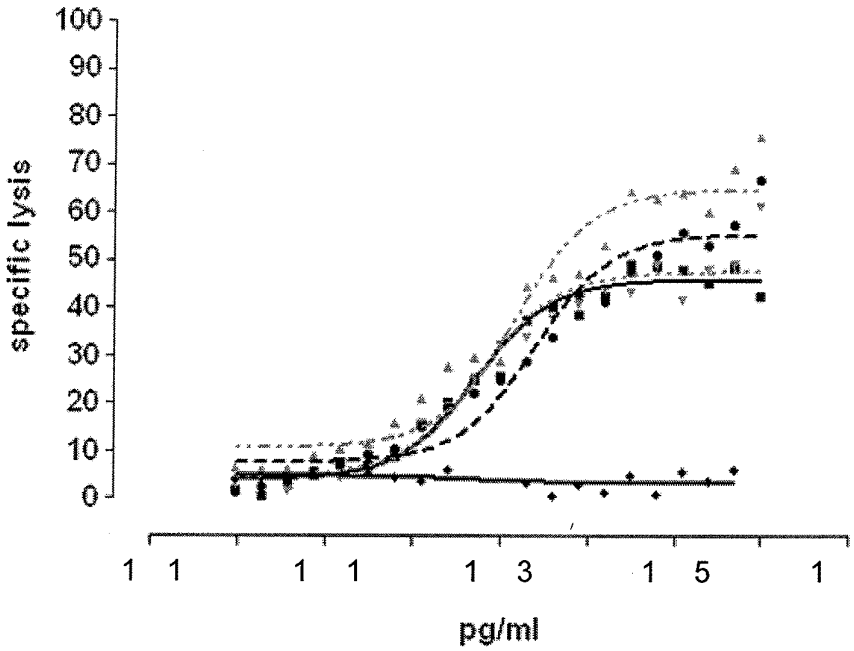
Effector cells: macaque T cell line 4119 LnPx
Target cells: CHO transfected with cynomolgus MCSP D3



# Figure 18 (1)


100
90
80
70
60
50
40
30
20
10
0
specific lysis
1 1 1 1 1 3 1 5 1
pg/ml
4 2
4 2
G4 VH-VL x I2C VH-VL plasma 37°C
G4 VH-VL x I2C VH-VL plasma 4°C

# Figure 18 (2)


100
90
80
70
60
50
40
30
20
10
0
specific lysis
1 1 1 1 1 3 1 5 1
pg/ml
4 2
4 2
G4 VH-VL x H2C VH-VL plasma 37°C
G4 VH-VL x H2C VH-VL plasma 4°C

# Figure 18 (3)

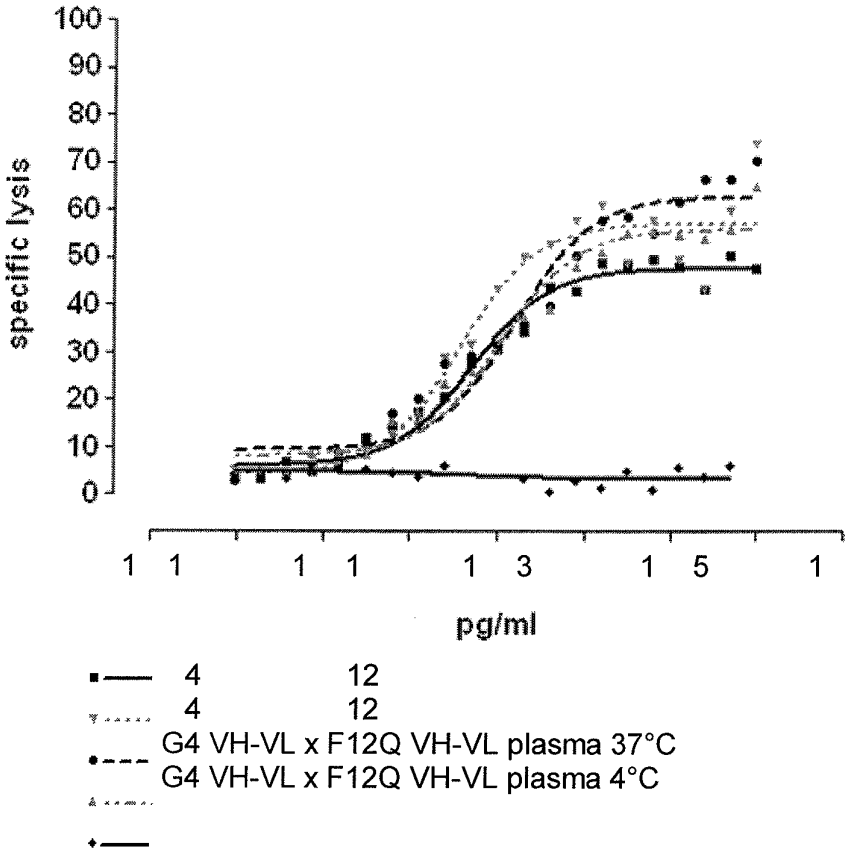

100
90
80
70
60
50
40
30
20
10
0
specific lysis
1 1 1 1 1 3 1 5 1
pg/ml
4 12
4 12
G4 VH-VL x F12Q VH-VL plasma 37°C
G4 VH-VL x F12Q VH-VL plasma 4°C

**Figure 19a**

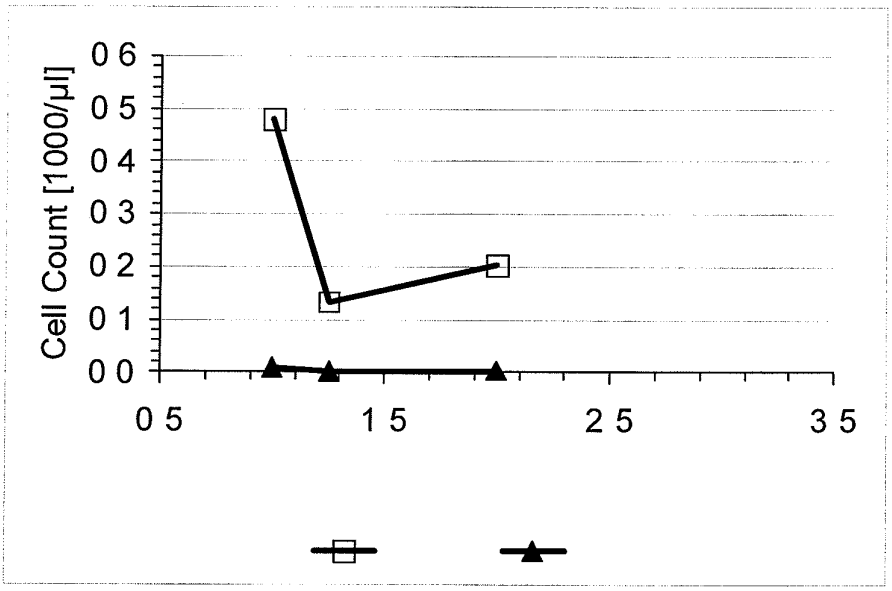



**Figure 19b**

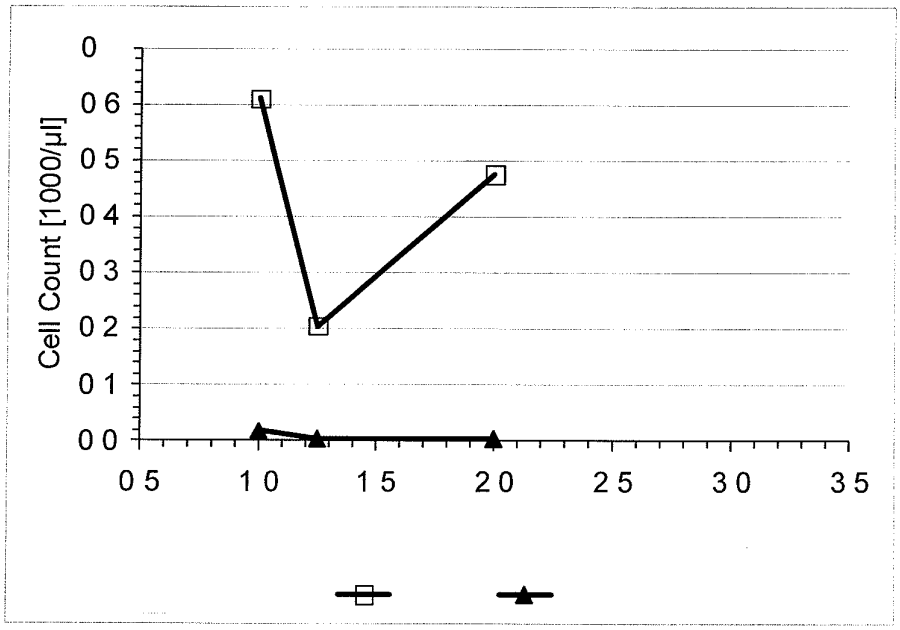


**Figure 19c**

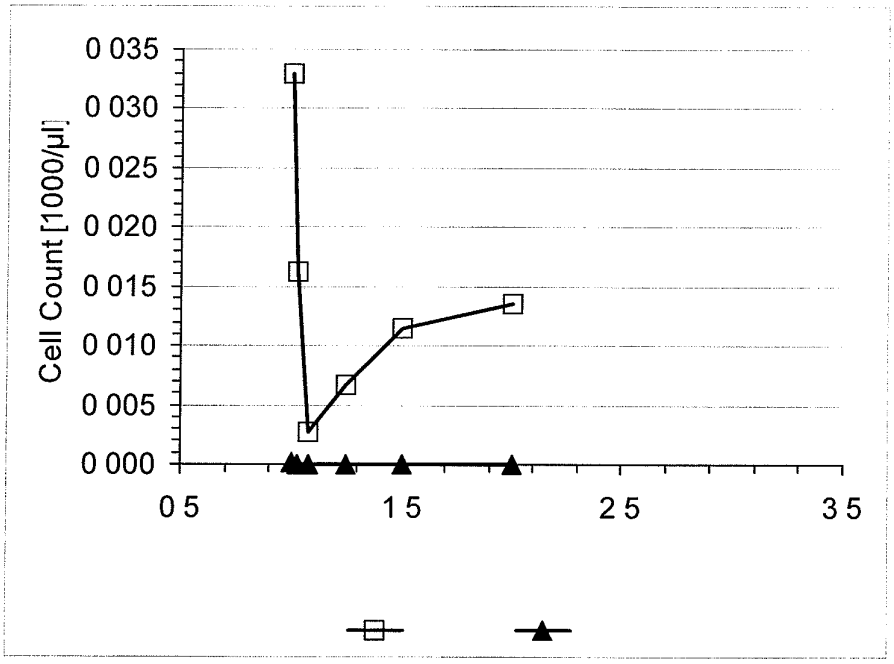



**Figure 19d**

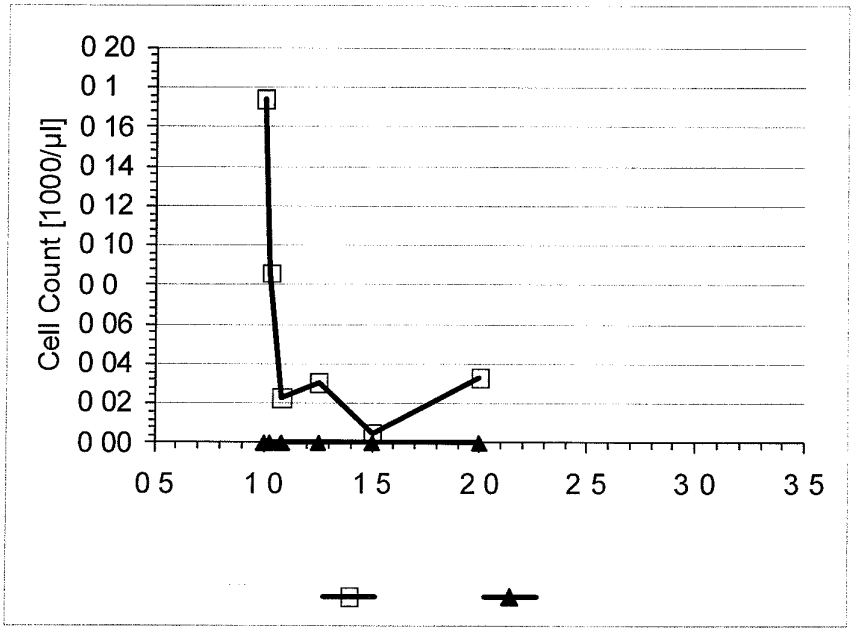


**Figure 19e**

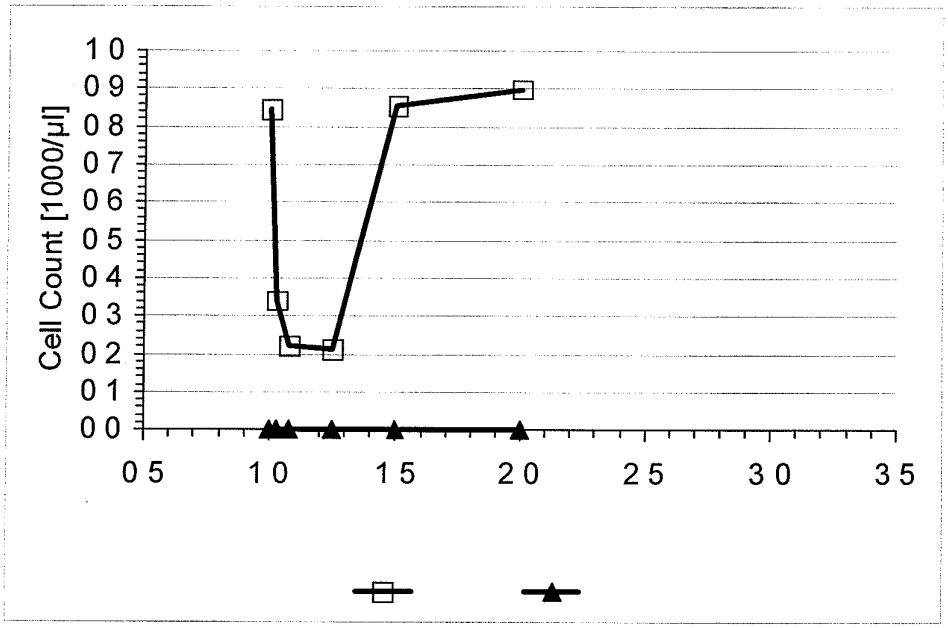



**Figure 19f**

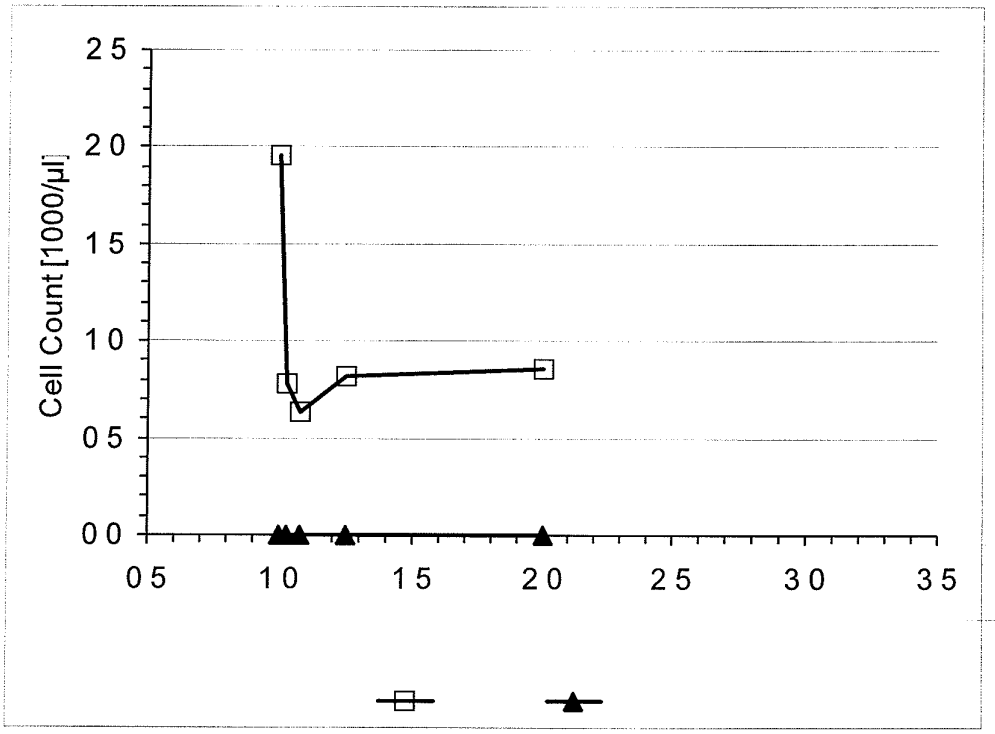
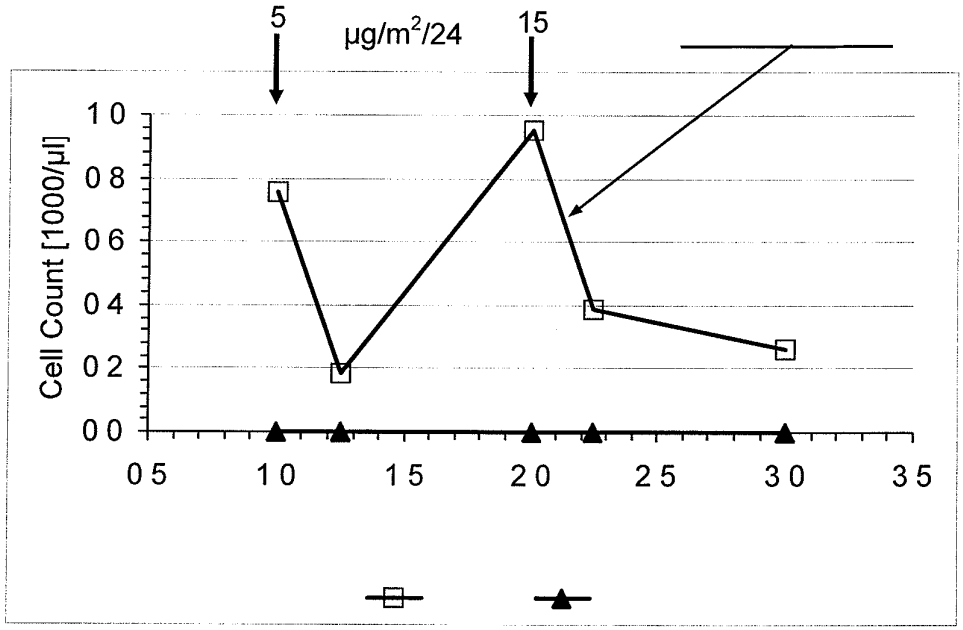
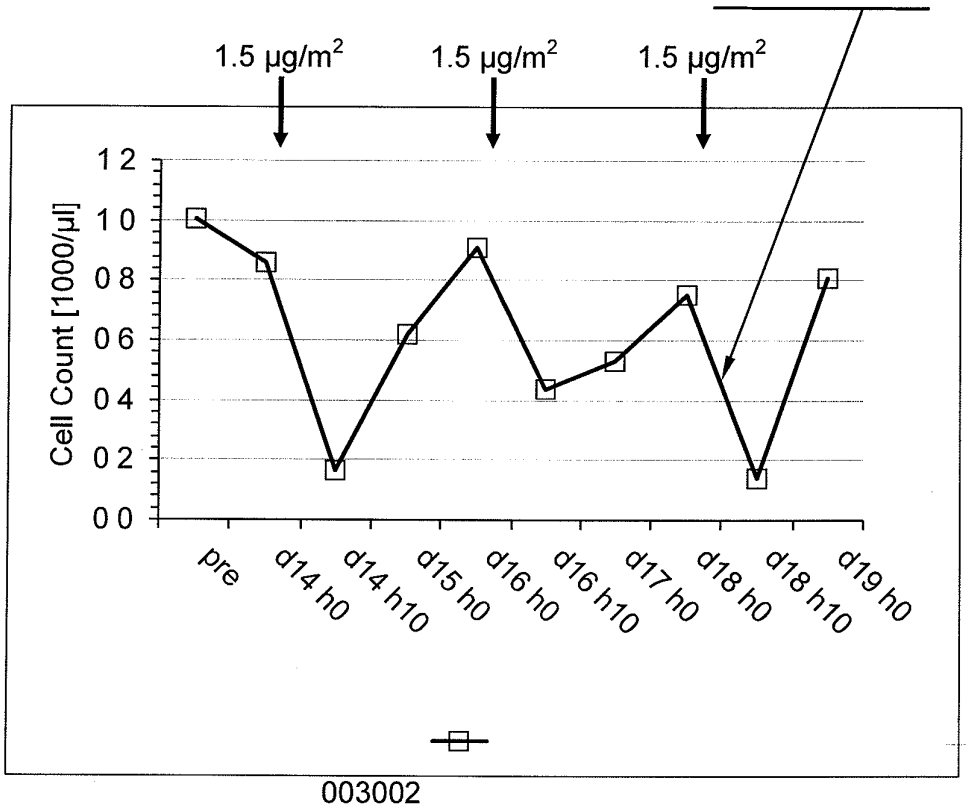


**Figure 20**




Pat. 19 (continuous infusion: 5 µg/m²/24 1 15
µg/m²/24 19 3




003002

**Figure 21**

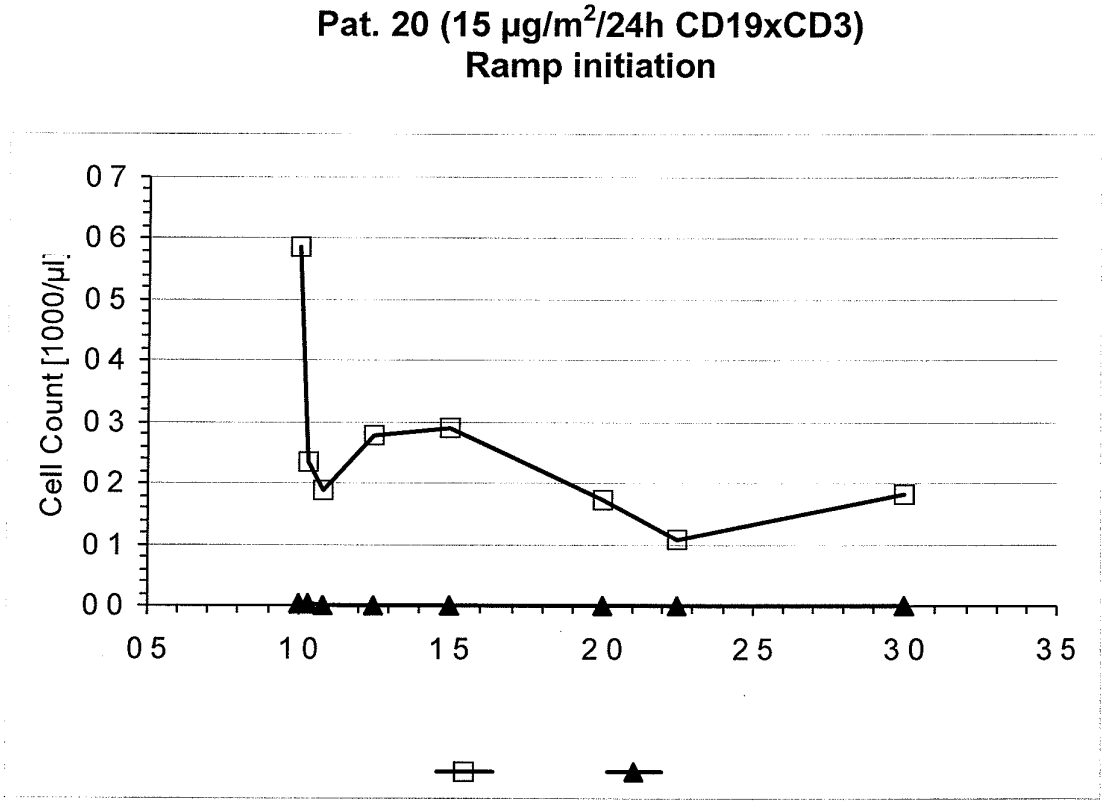

Pat. 20 (15 µg/m²/24h CD19xCD3)
Ramp initiation
Cell Count [1000/µl]
0 7
0 6
0 5
0 4
0 3
0 2
0 1
0 0
05
10
15
20
25
30
35

**Figure 22**

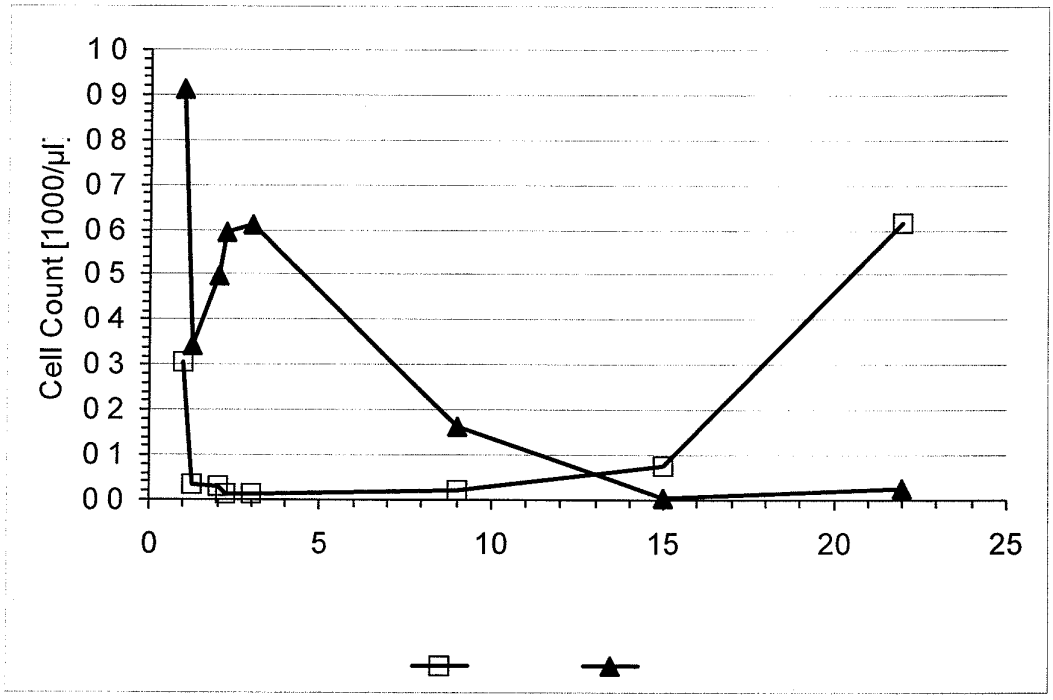
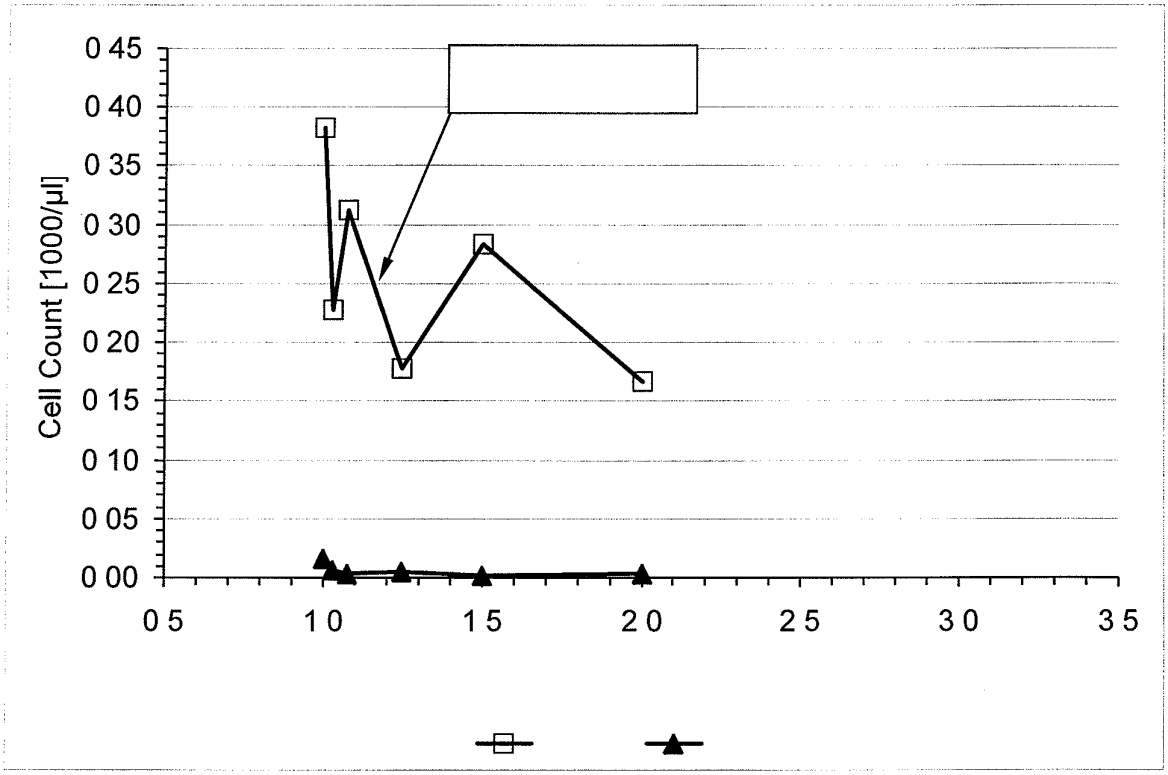
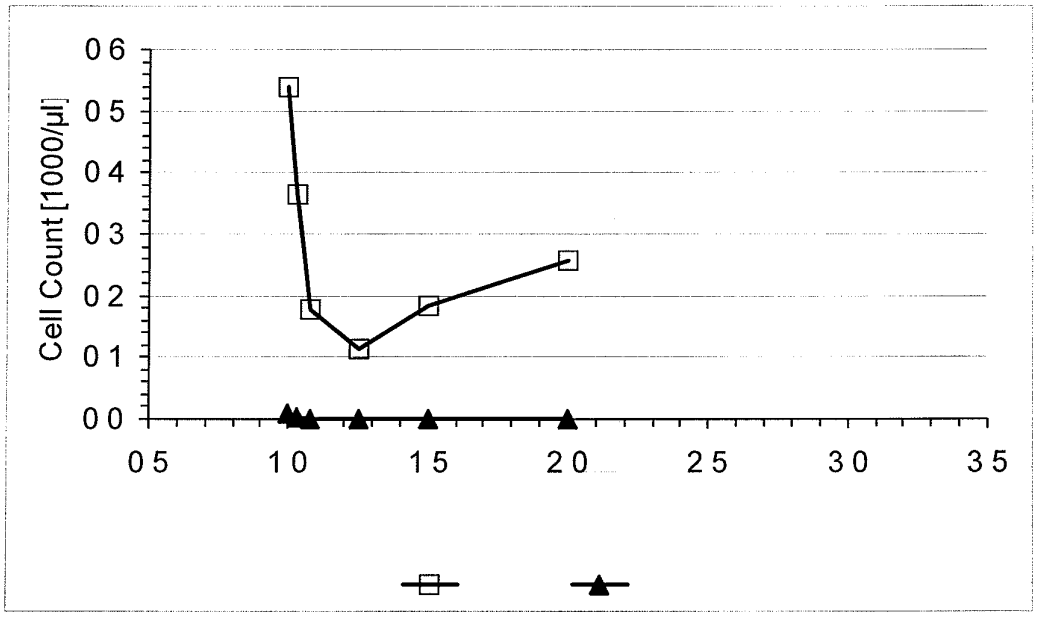

Pat. 13 (15 µg/m²/24h CD19xCD3)
Cell Count [1000/µl]
10
09
08
07
06
05
04
03
02
01
00
0
5
10
15
20
25

**Figure 23**

**Pat. 24 (15 µg/m$^2$/24h CD19xCD3 without HSA)**
**1$^{st}$ Treatment start**




**Pat. 24 (15 µg/m$^2$/24h CD19xCD3 with HSA)**
**2$^{nd}$ Treatment start**



**Model of T cell adhesion to endothelial cells induced by monovalent binding to context dependent CD3 epitopes**

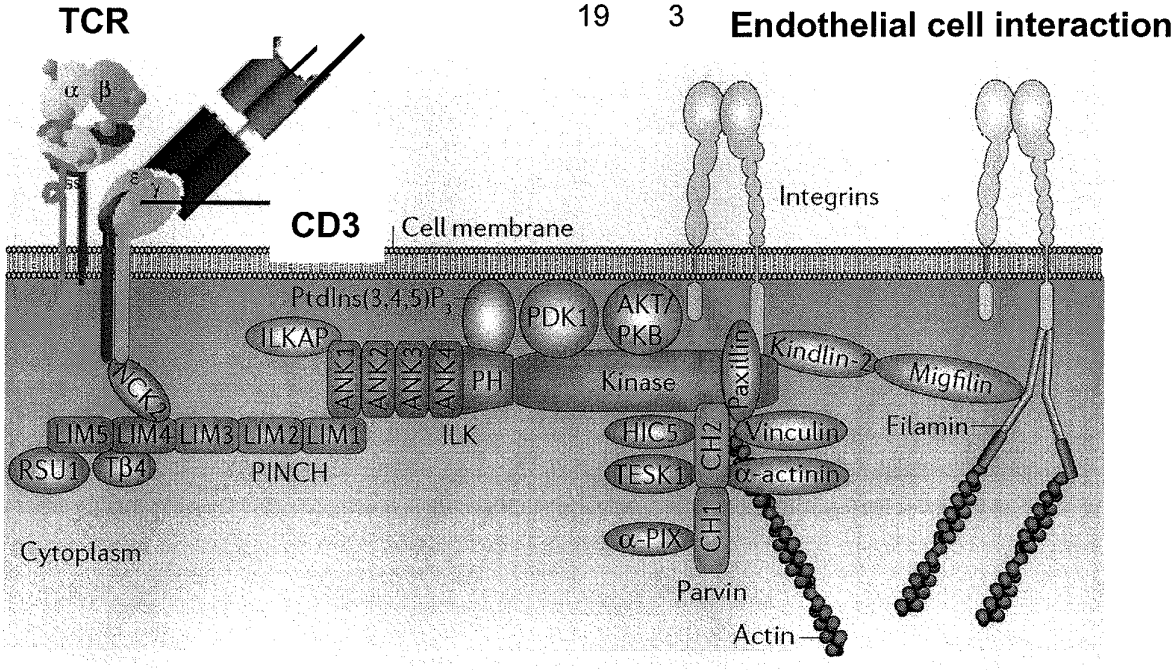



**Figure 24**

Figure 25

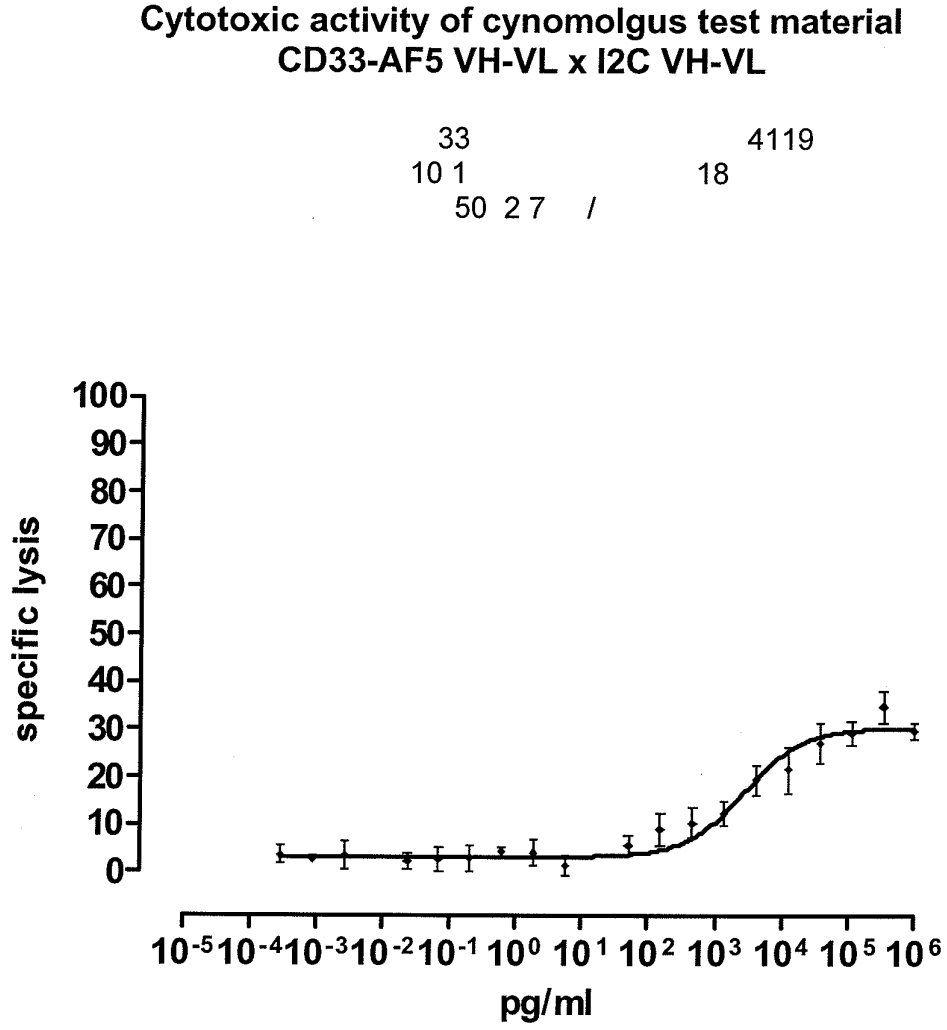

Cytotoxic activity of cynomolgus test material
CD33-AF5 VH-VL x I2C VH-VL
33
4119
10 1
18
50 2 7 /
specific lysis
100
90
80
70
60
50
40
30
20
10
0
10-5 10-4 10-3 10-2 10-1 100 101 102 103 104 105 106
pg/ml

Figure 26 A

**Dose- and time-dependent depletion of blood CD33-monocytes through CD33-AF5 VH-VL x I2C VH-VL**

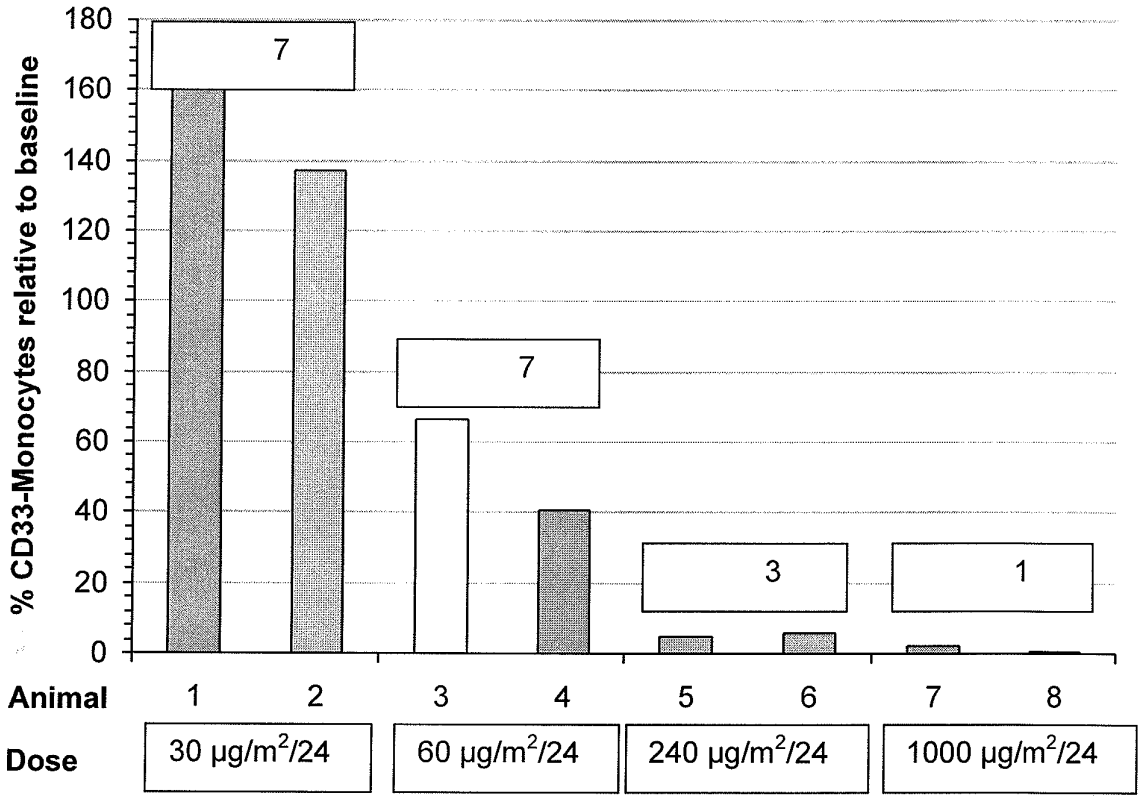


**Figure 26 B (1)**

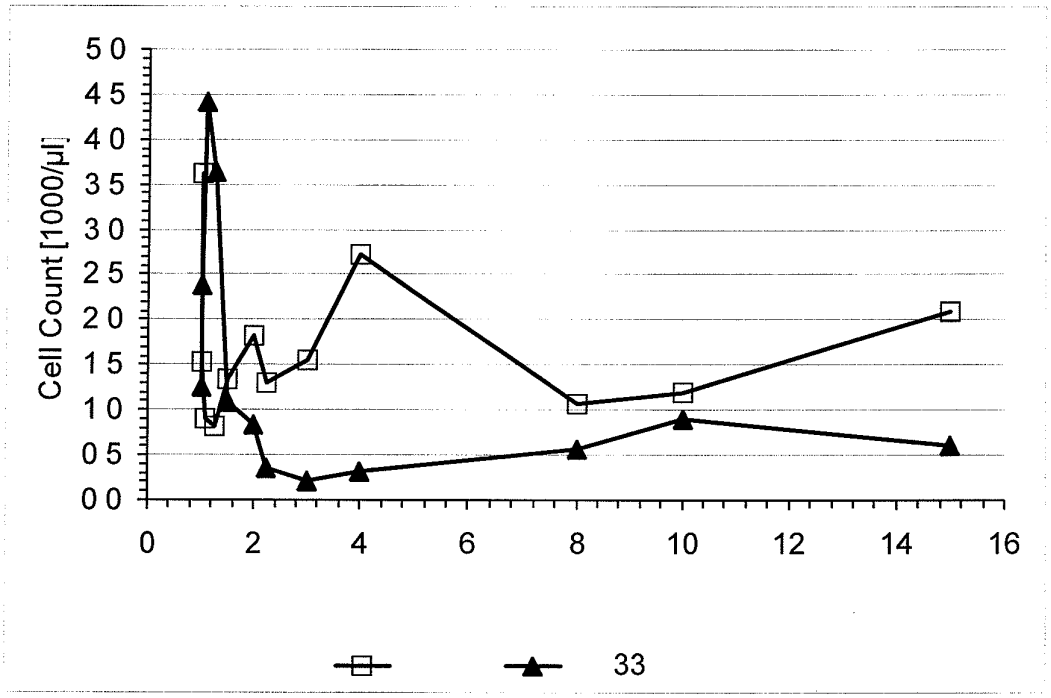



**Figure 26 B (2)**

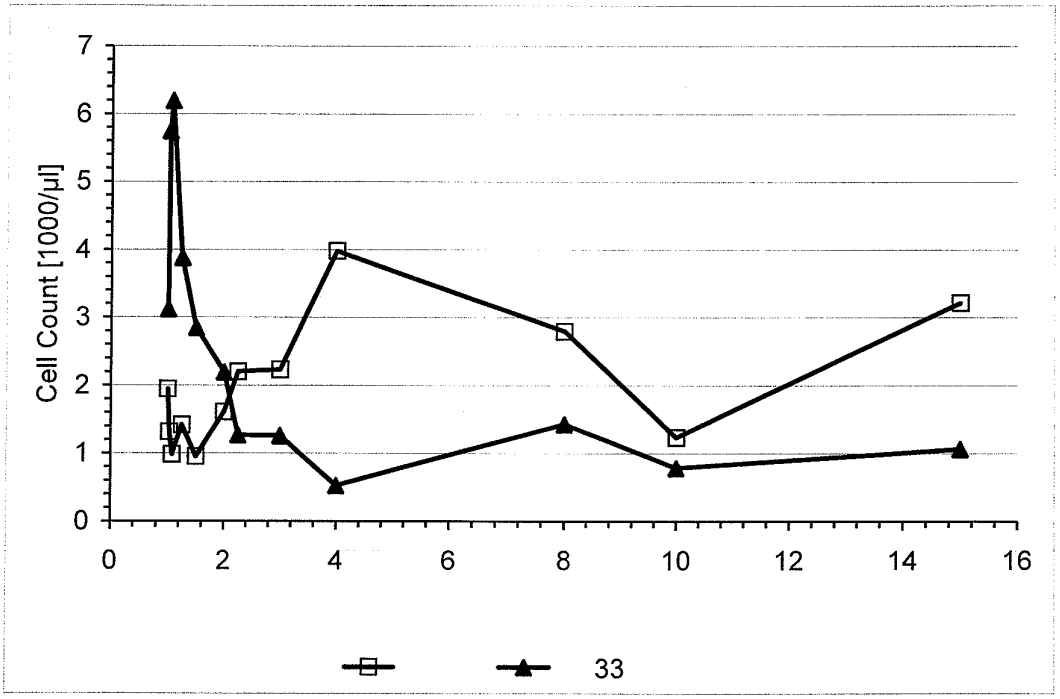


Figure 27

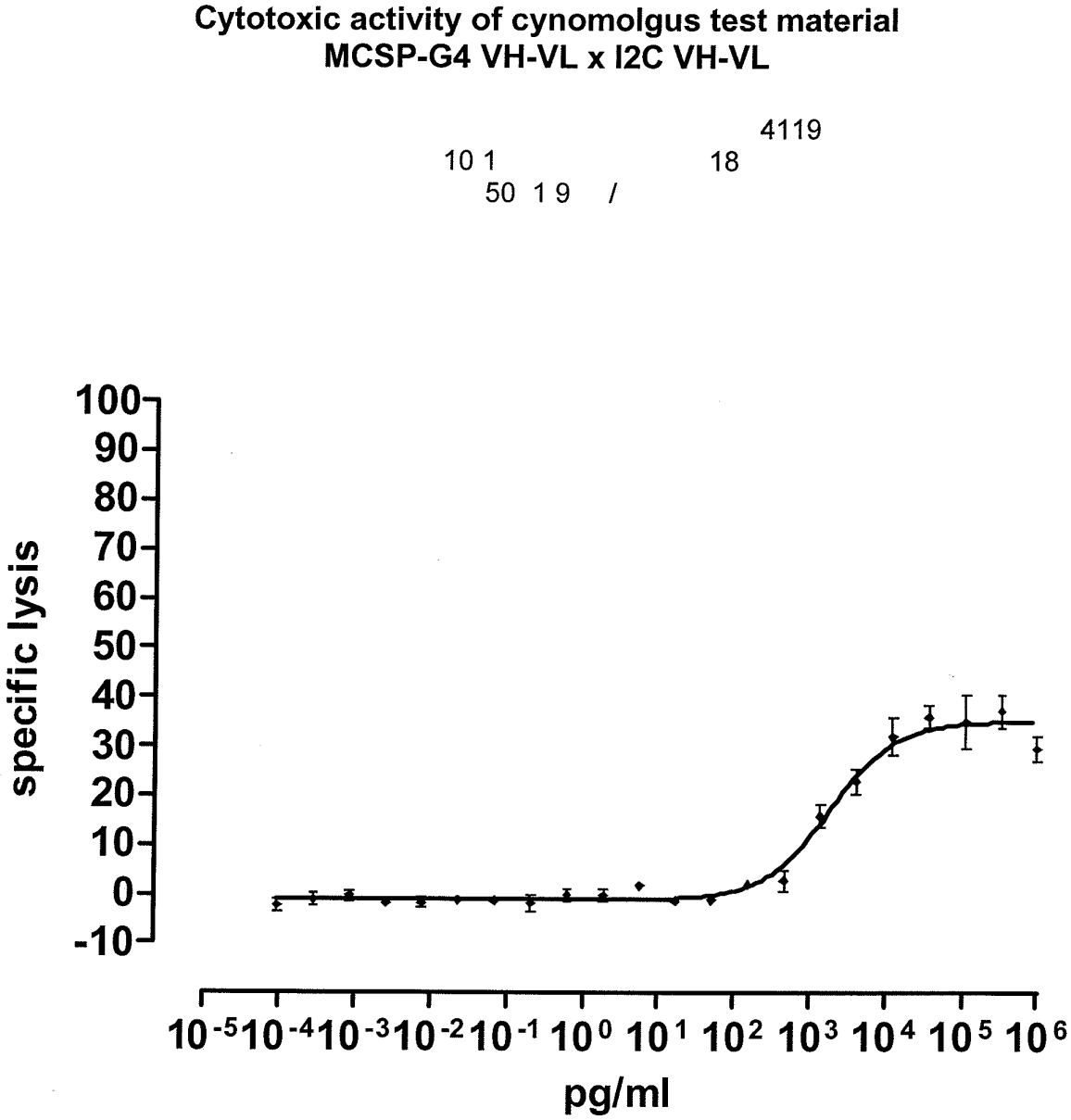
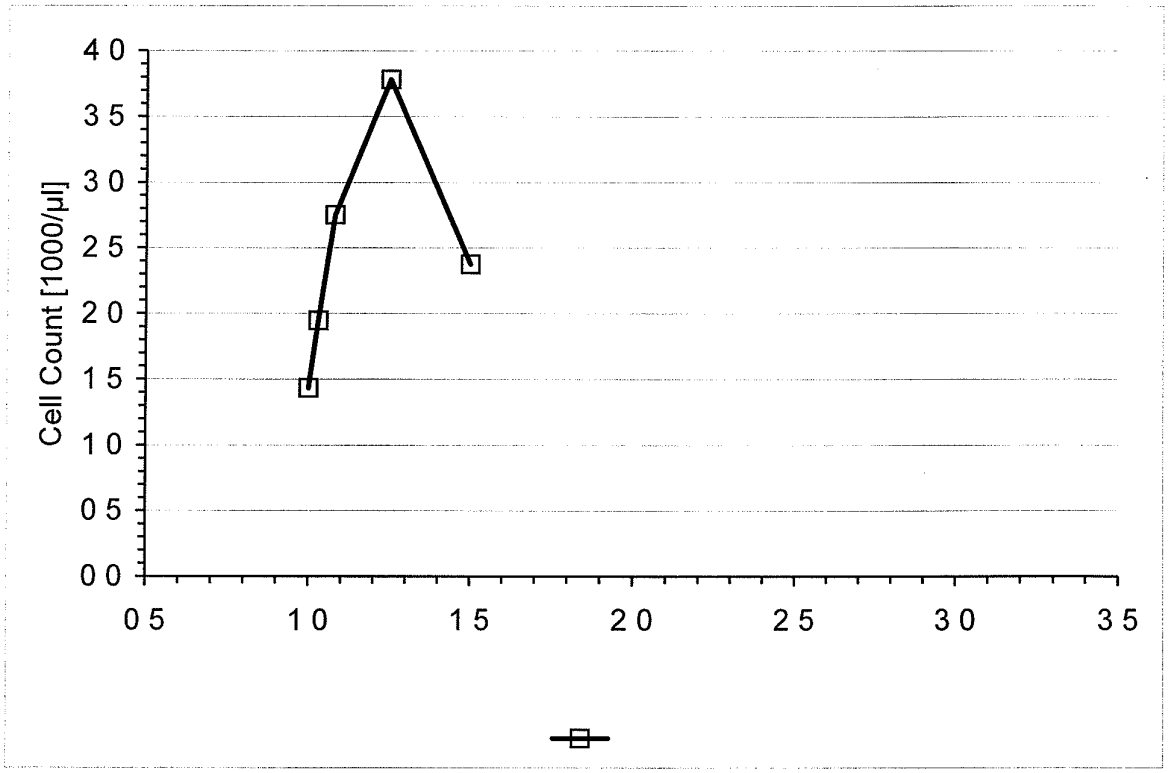

Cytotoxic activity of cynomolgus test material
MCSP-G4 VH-VL x I2C VH-VL
4119
10 1
18
50 1 9 /
specific lysis
100
90
80
70
60
50
40
30
20
10
0
-10
10-5 10-4 10-3 10-2 10-1 100 101 102 103 104 105 106
pg/ml

**Figure 28 (1)**

**Animal 1 (60 µg/m$^2$/24h MCSP-G4 VH-VL x I2C VH-VL )**




**Animal 2 (240 µg/m$^2$/24h MCSP-G4 VH-VL x I2C VH-VL)**

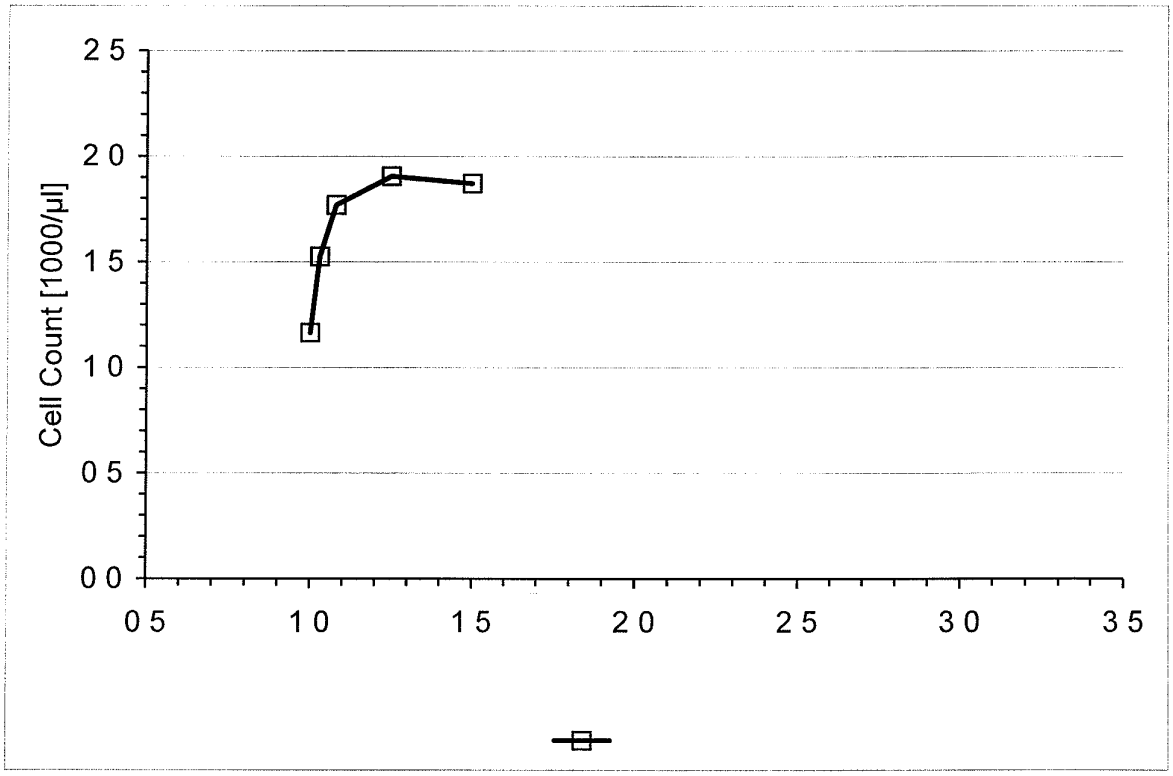
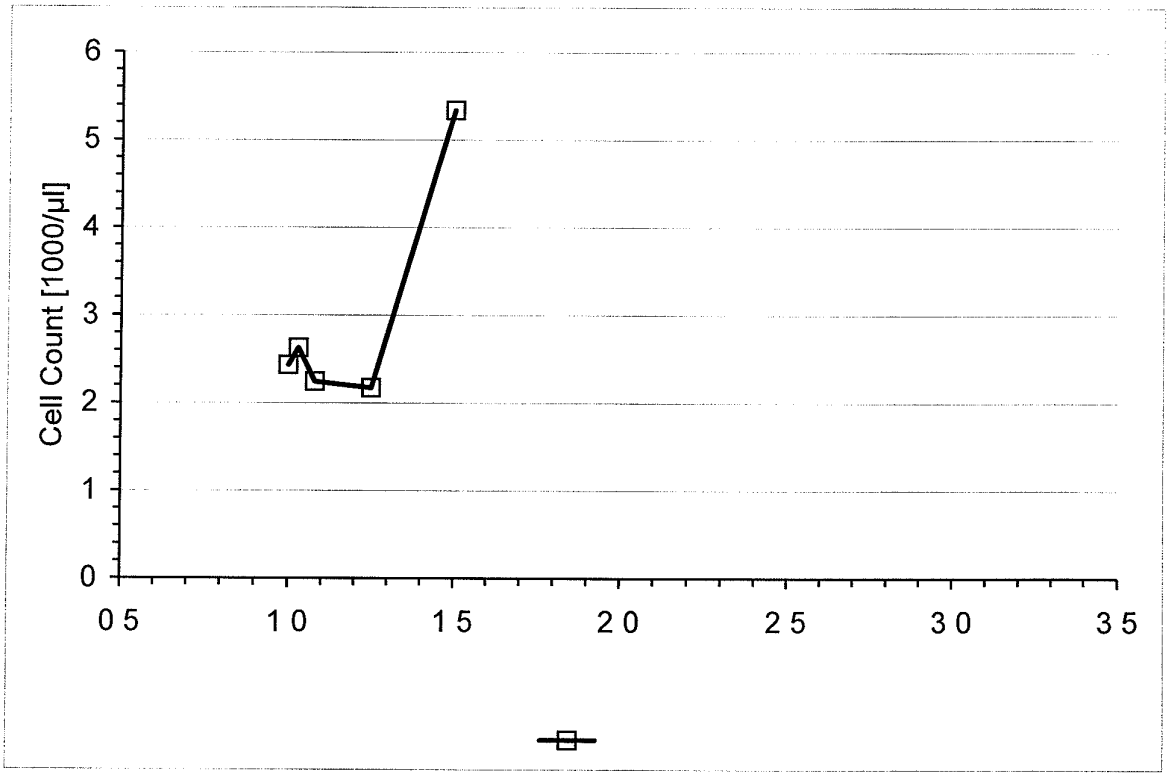
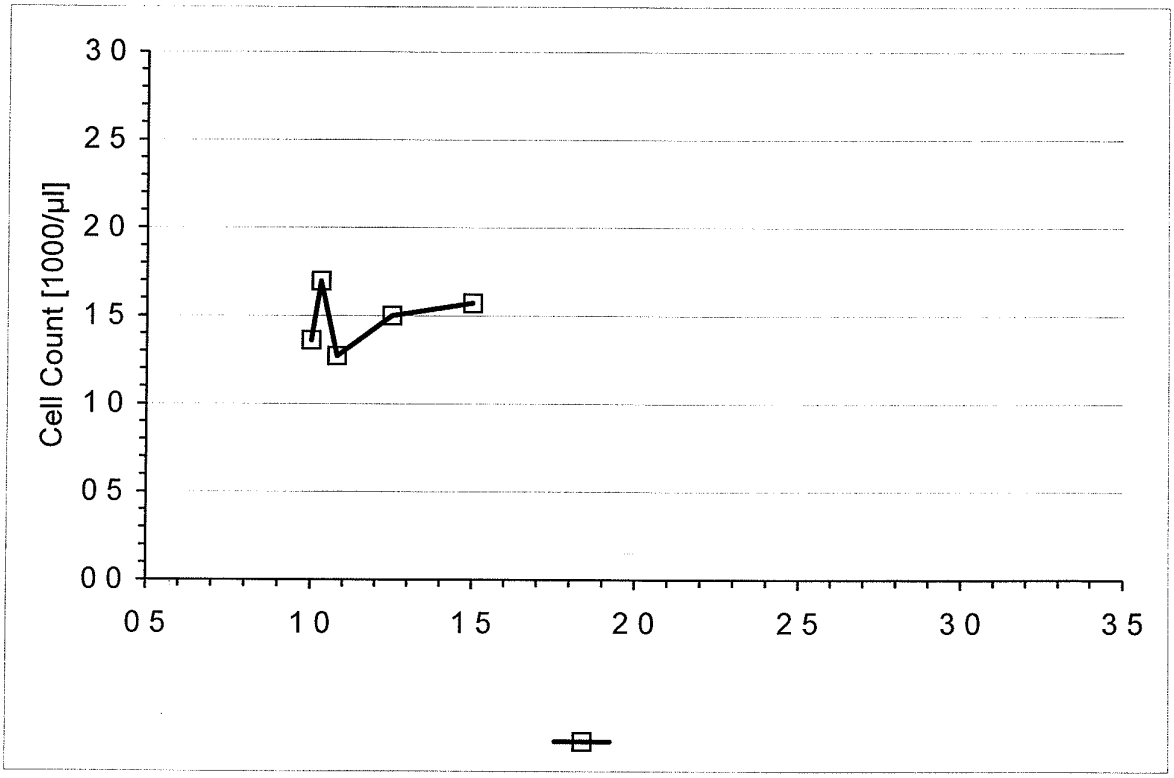


**Figure 28 (2)**

**Animal 3 (240 µg/m²/24h MCSP-G4 VH-VL x I2C VH-VL)**




**Animal 4 (1000 µg/m²/24h MCSP-G4 VH-VL x I2C VH-VL)**



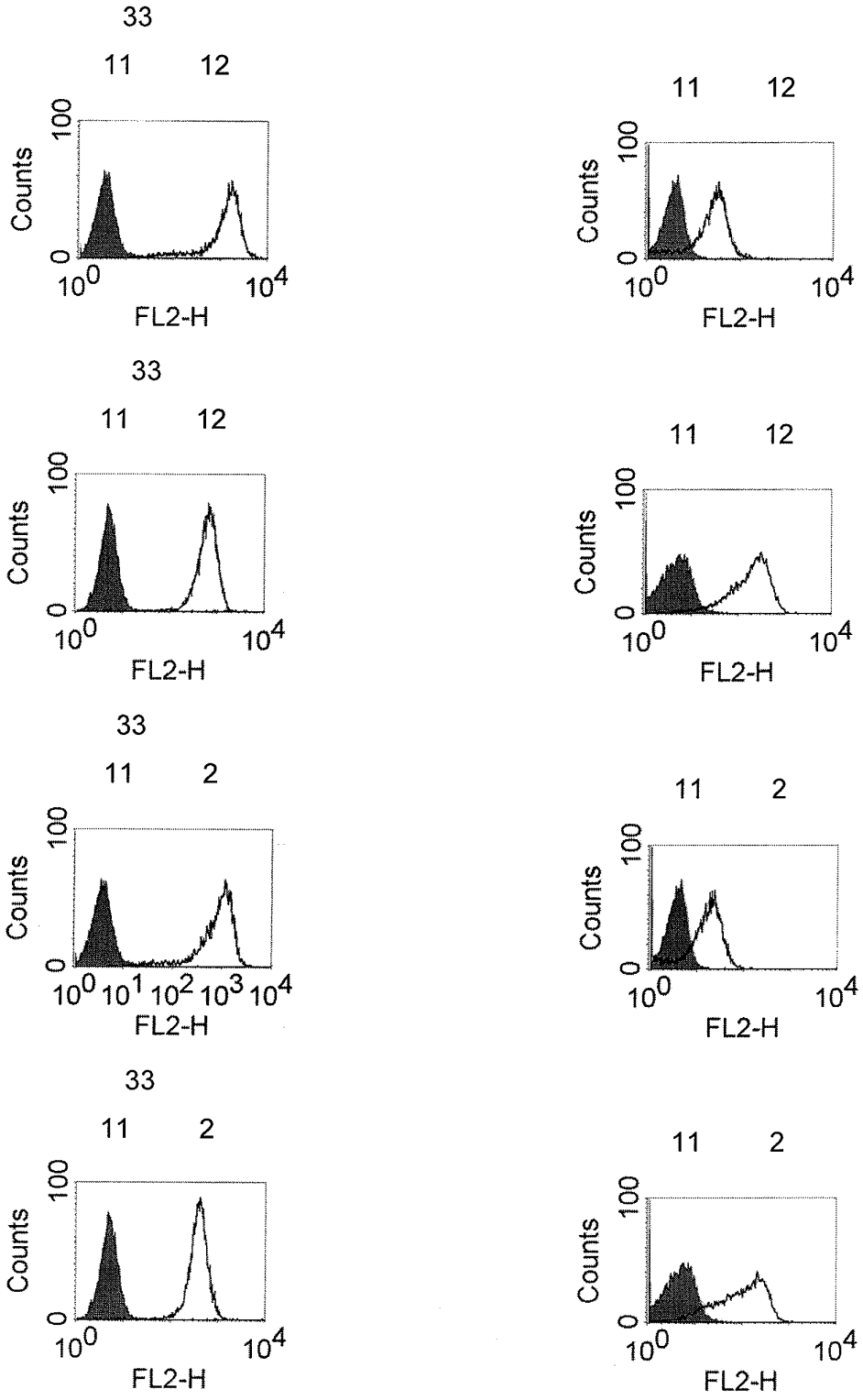

33
11
12
Counts
100
0
$10^0$
$10^4$
FL2-H
33
11
12
Counts
100
0
$10^0$
$10^4$
FL2-H
11
12
Counts
100
0
$10^0$
$10^4$
FL2-H
11
12
Counts
100
0
$10^0$
$10^4$
FL2-H
33
11
2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
33
11
2
Counts
100
0
$10^0$
$10^4$
FL2-H
11
2
Counts
100
0
$10^0$
$10^4$
FL2-H
11
2
Counts
100
0
$10^0$
$10^4$
FL2-H

**Figure 29(1)**

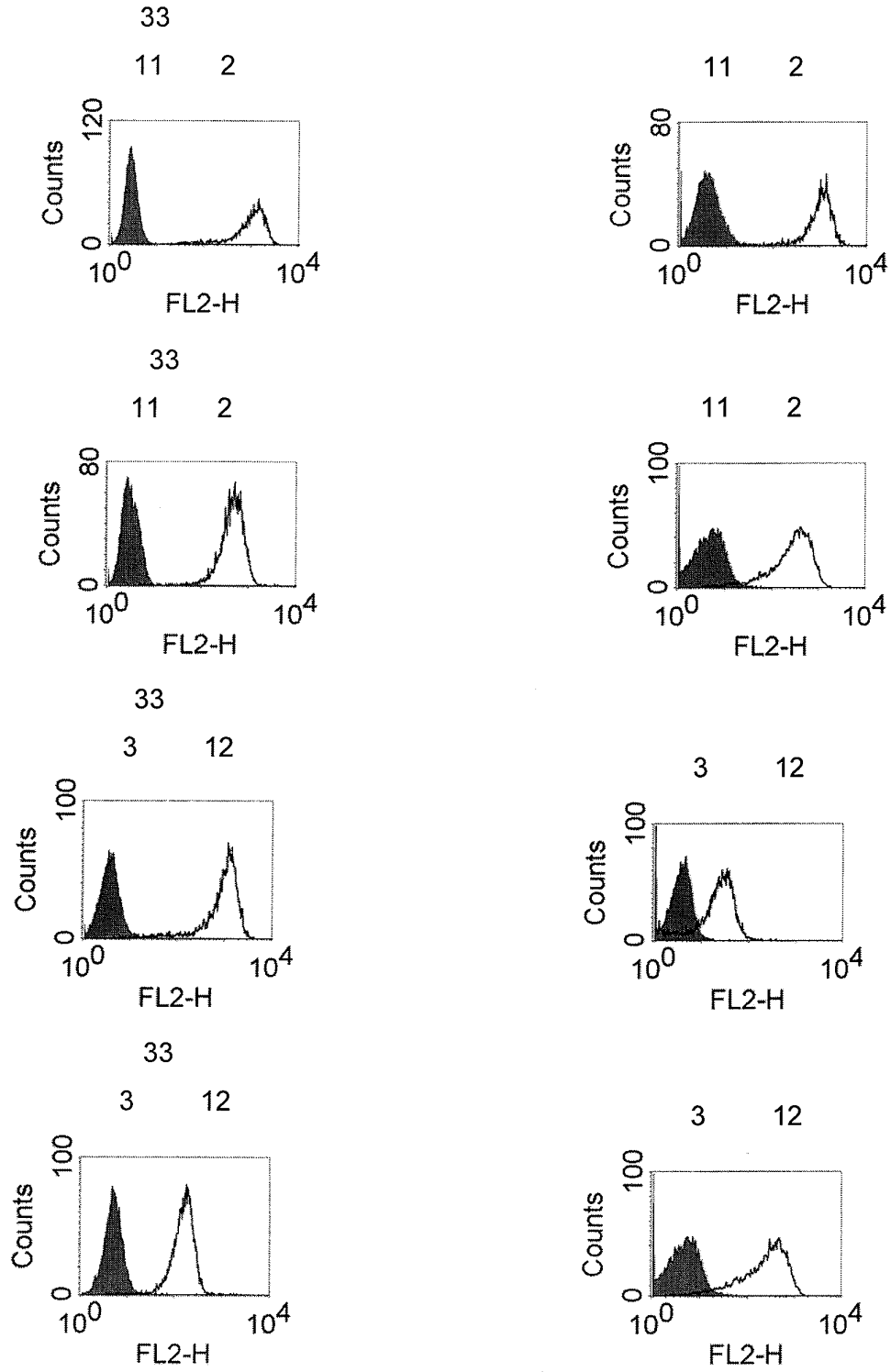

33
11 2
Counts
120
0
$10^0$
$10^4$
FL2-H
11 2
Counts
80
0
$10^0$
$10^4$
FL2-H
33
11 2
Counts
80
0
$10^0$
$10^4$
FL2-H
11 2
Counts
100
0
$10^0$
$10^4$
FL2-H
33
3 12
Counts
100
0
$10^0$
$10^4$
FL2-H
3 12
Counts
100
0
$10^0$
$10^4$
FL2-H
33
3 12
Counts
100
0
$10^0$
$10^4$
FL2-H
3 12
Counts
100
0
$10^0$
$10^4$
FL2-H

**Figure 29(2)**

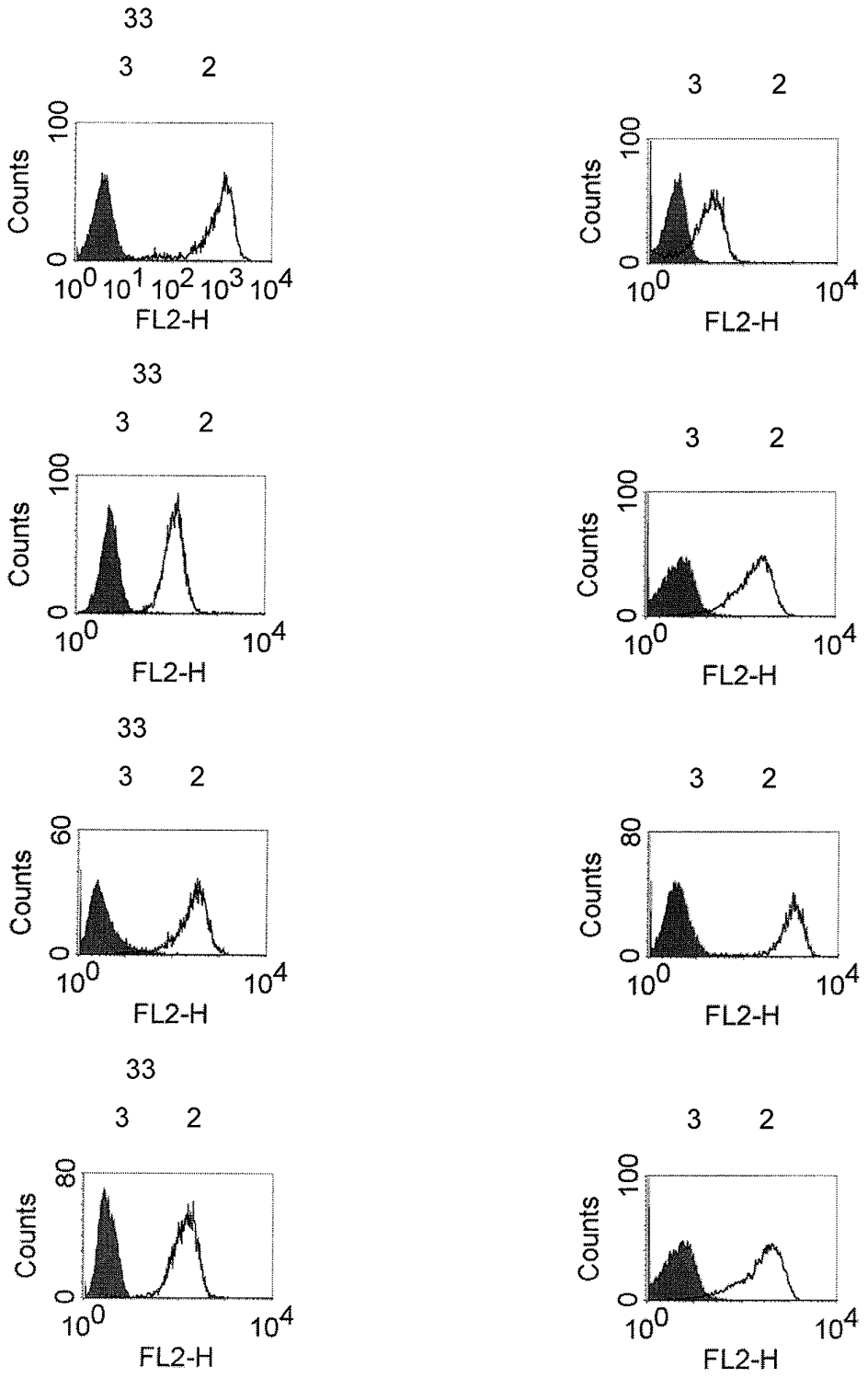

33
3 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3 2
Counts
100
0
$10^0$ $10^4$
FL2-H
33
3 2
Counts
100
0
$10^0$ $10^4$
FL2-H
3 2
Counts
100
0
$10^0$ $10^4$
FL2-H
33
3 2
Counts
60
0
$10^0$ $10^4$
FL2-H
3 2
Counts
80
0
$10^0$ $10^4$
FL2-H
33
3 2
Counts
80
0
$10^0$ $10^4$
FL2-H
3 2
Counts
100
0
$10^0$ $10^4$
FL2-H

**Figure 29(3)**

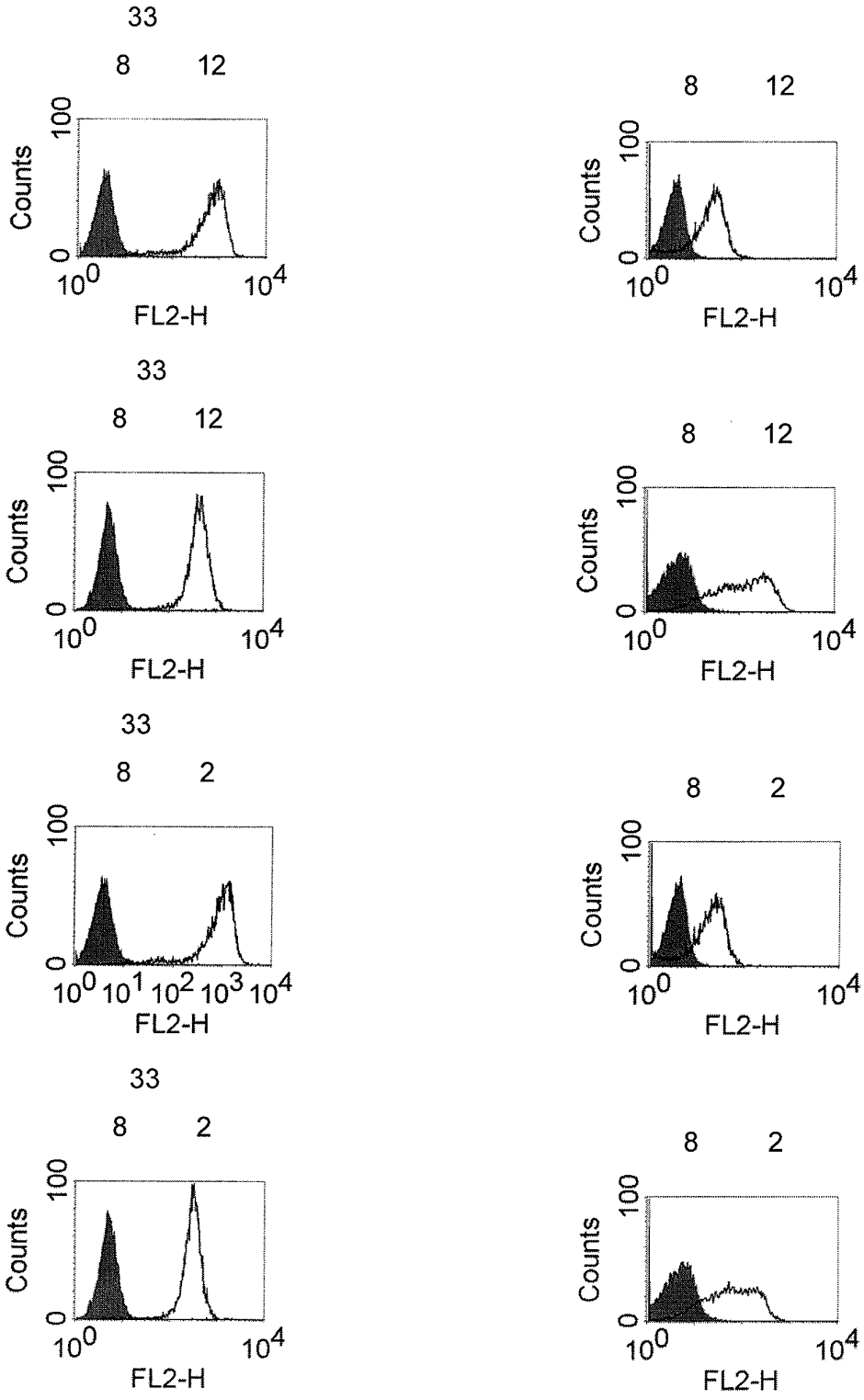

33
8 12
Counts
100
0
$10^0$
$10^4$
FL2-H
33
8 12
Counts
100
0
$10^0$
$10^4$
FL2-H
33
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
33
8 2
Counts
100
0
$10^0$
$10^4$
FL2-H

**Figure 29(4)**

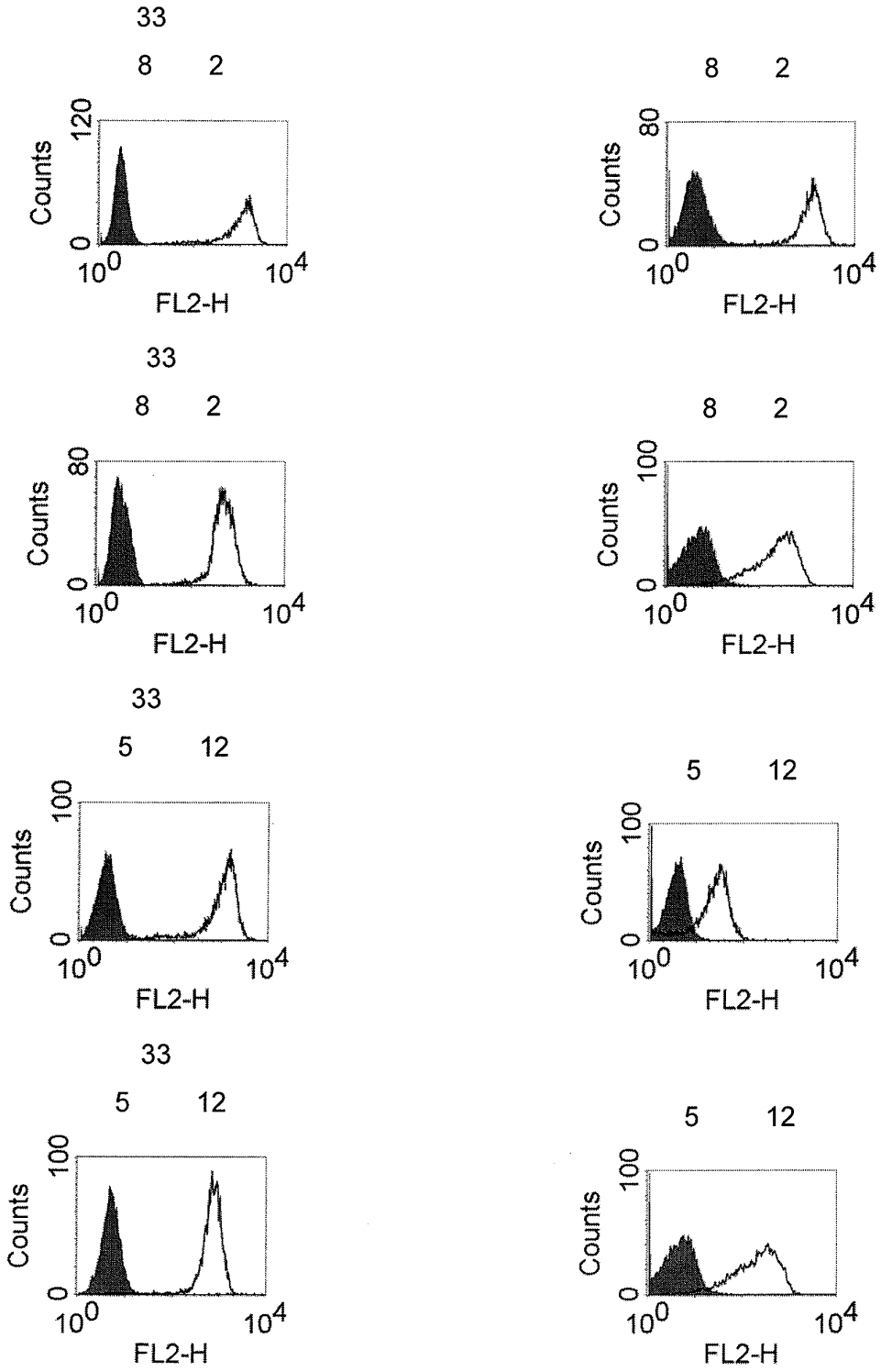

33
8 2
Counts
120
0
$10^0$
$10^4$
FL2-H
8 2
Counts
80
0
$10^0$
$10^4$
FL2-H
33
8 2
Counts
80
0
$10^0$
$10^4$
FL2-H
8 2
Counts
100
0
$10^0$
$10^4$
FL2-H
33
5 12
Counts
100
0
$10^0$
$10^4$
FL2-H
5 12
Counts
100
0
$10^0$
$10^4$
FL2-H
33
5 12
Counts
100
0
$10^0$
$10^4$
FL2-H
5 12
Counts
100
0
$10^0$
$10^4$
FL2-H

**Figure 29(5)**

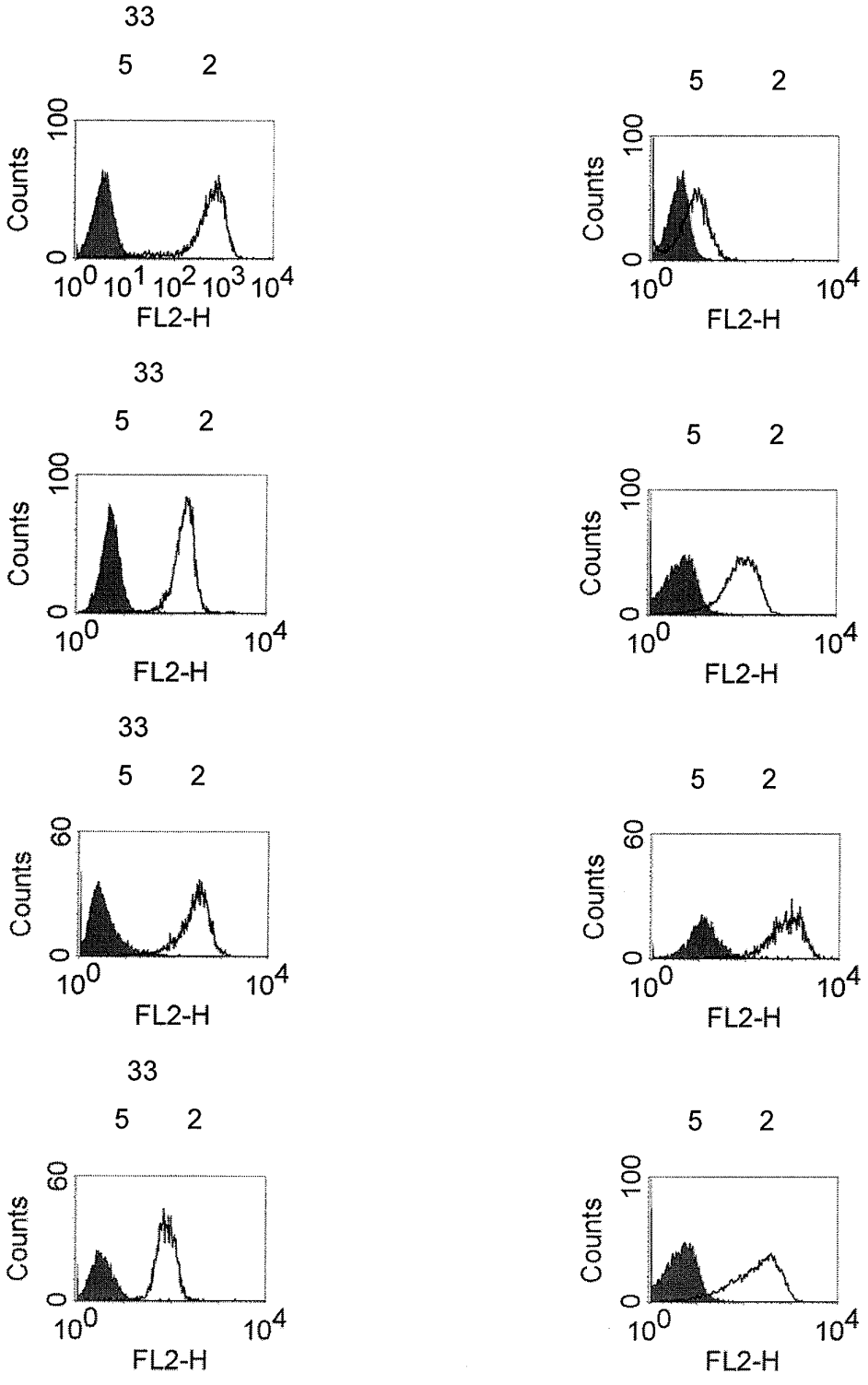

33
5 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
5 2
Counts
100
0
$10^0$ $10^4$
FL2-H
33
5 2
Counts
100
0
$10^0$ $10^4$
FL2-H
5 2
Counts
100
0
$10^0$ $10^4$
FL2-H
33
5 2
Counts
60
0
$10^0$ $10^4$
FL2-H
5 2
Counts
60
0
$10^0$ $10^4$
FL2-H
33
5 2
Counts
60
0
$10^0$ $10^4$
FL2-H
5 2
Counts
100
0
$10^0$ $10^4$
FL2-H

**Figure 29(6)**

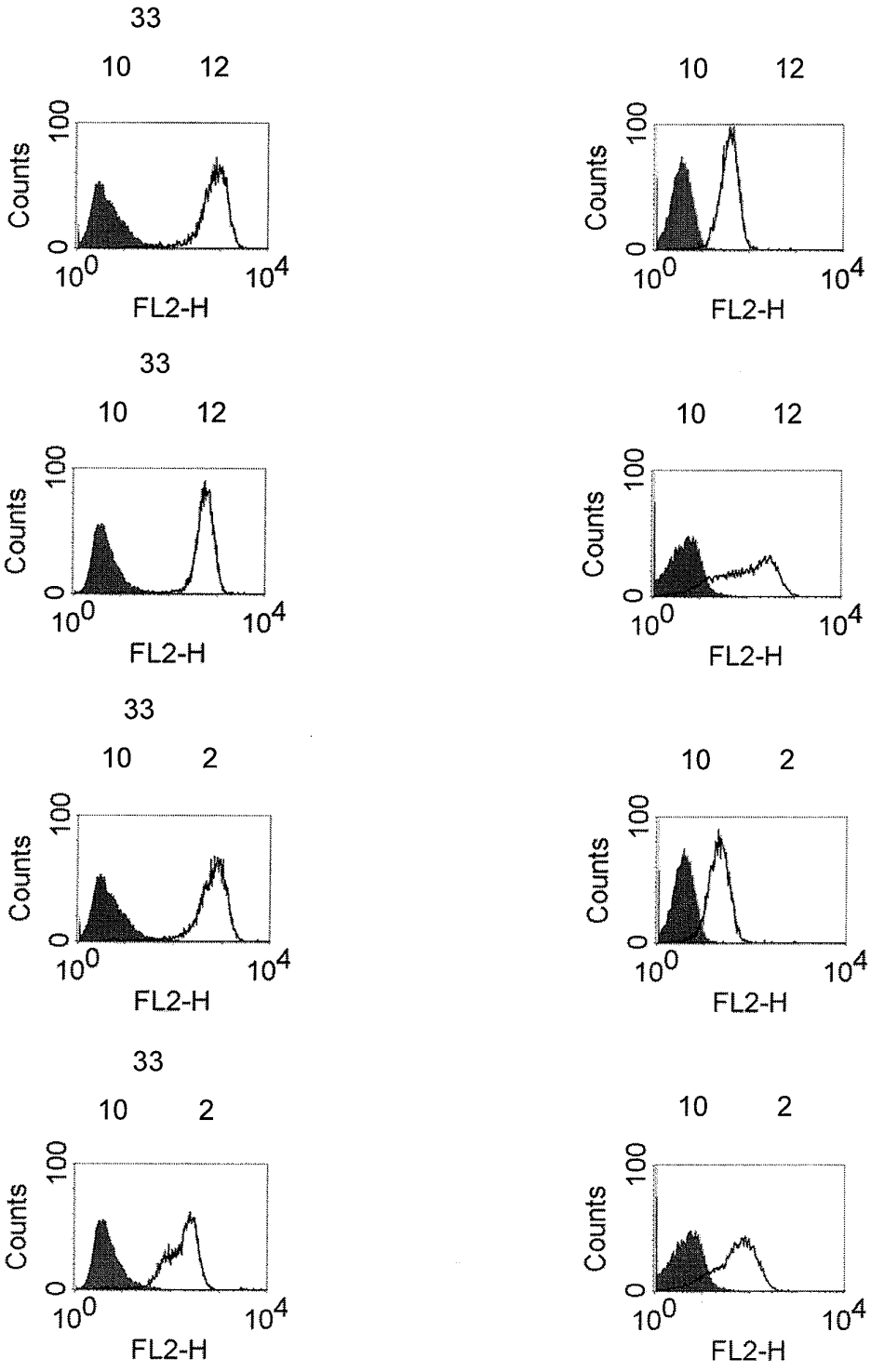

33
10 12
Counts
100
0
$10^0$
$10^4$
FL2-H
33
10 12
Counts
100
0
$10^0$
$10^4$
FL2-H
33
10 2
Counts
100
0
$10^0$
$10^4$
FL2-H
33
10 2
Counts
100
0
$10^0$
$10^4$
FL2-H
10 12
Counts
100
0
$10^0$
$10^4$
FL2-H
10 12
Counts
100
0
$10^0$
$10^4$
FL2-H
10 2
Counts
100
0
$10^0$
$10^4$
FL2-H
10 2
Counts
100
0
$10^0$
$10^4$
FL2-H

**Figure 29(7)**

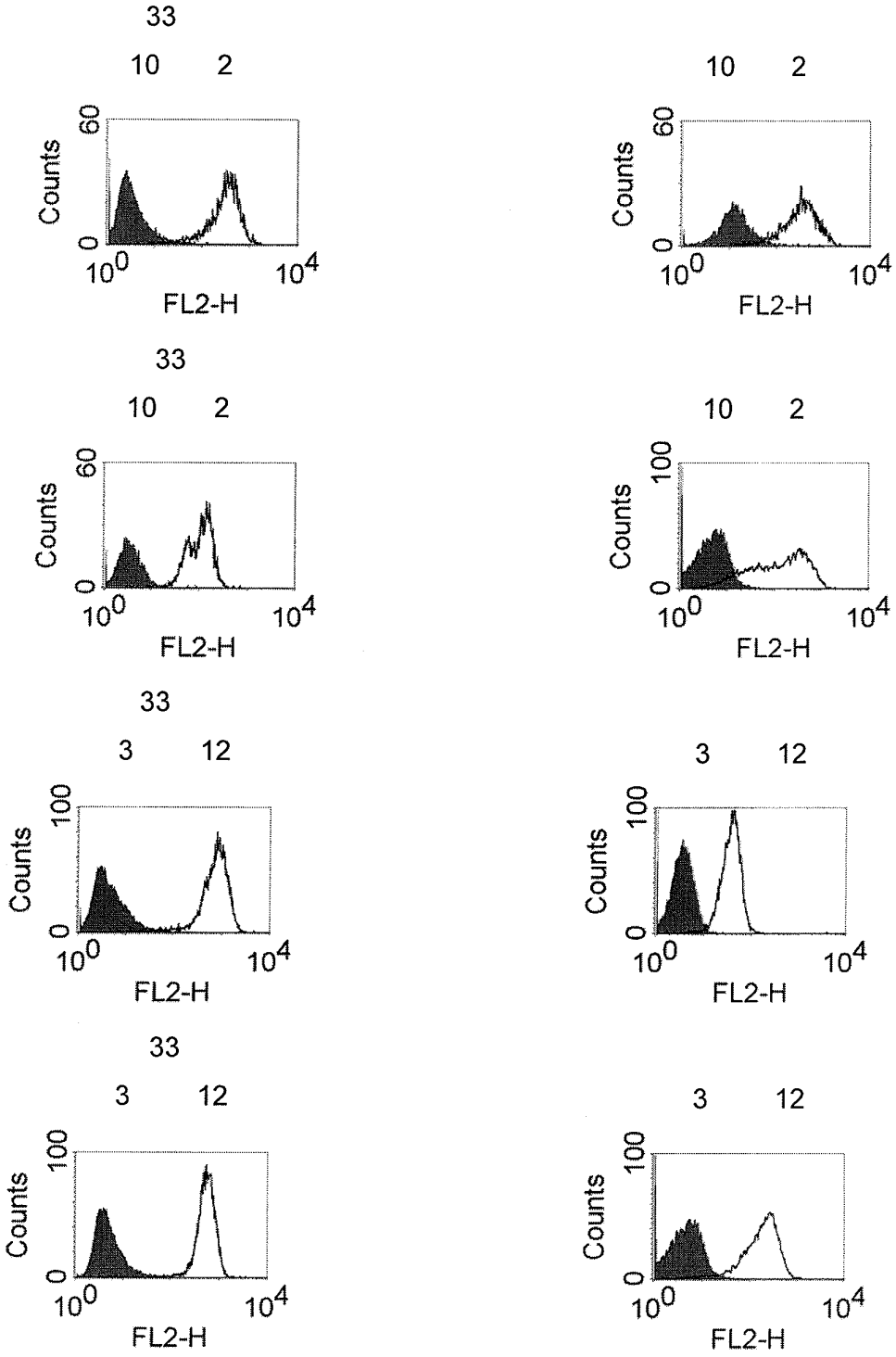

33
10 2
Counts
60
0
$10^0$
$10^4$
FL2-H
10 2
Counts
60
0
$10^0$
$10^4$
FL2-H
33
10 2
Counts
60
0
$10^0$
$10^4$
FL2-H
10 2
Counts
100
0
$10^0$
$10^4$
FL2-H
33
3 12
Counts
100
0
$10^0$
$10^4$
FL2-H
3 12
Counts
100
0
$10^0$
$10^4$
FL2-H
33
3 12
Counts
100
0
$10^0$
$10^4$
FL2-H
3 12
Counts
100
0
$10^0$
$10^4$
FL2-H

**Figure 29(8)**

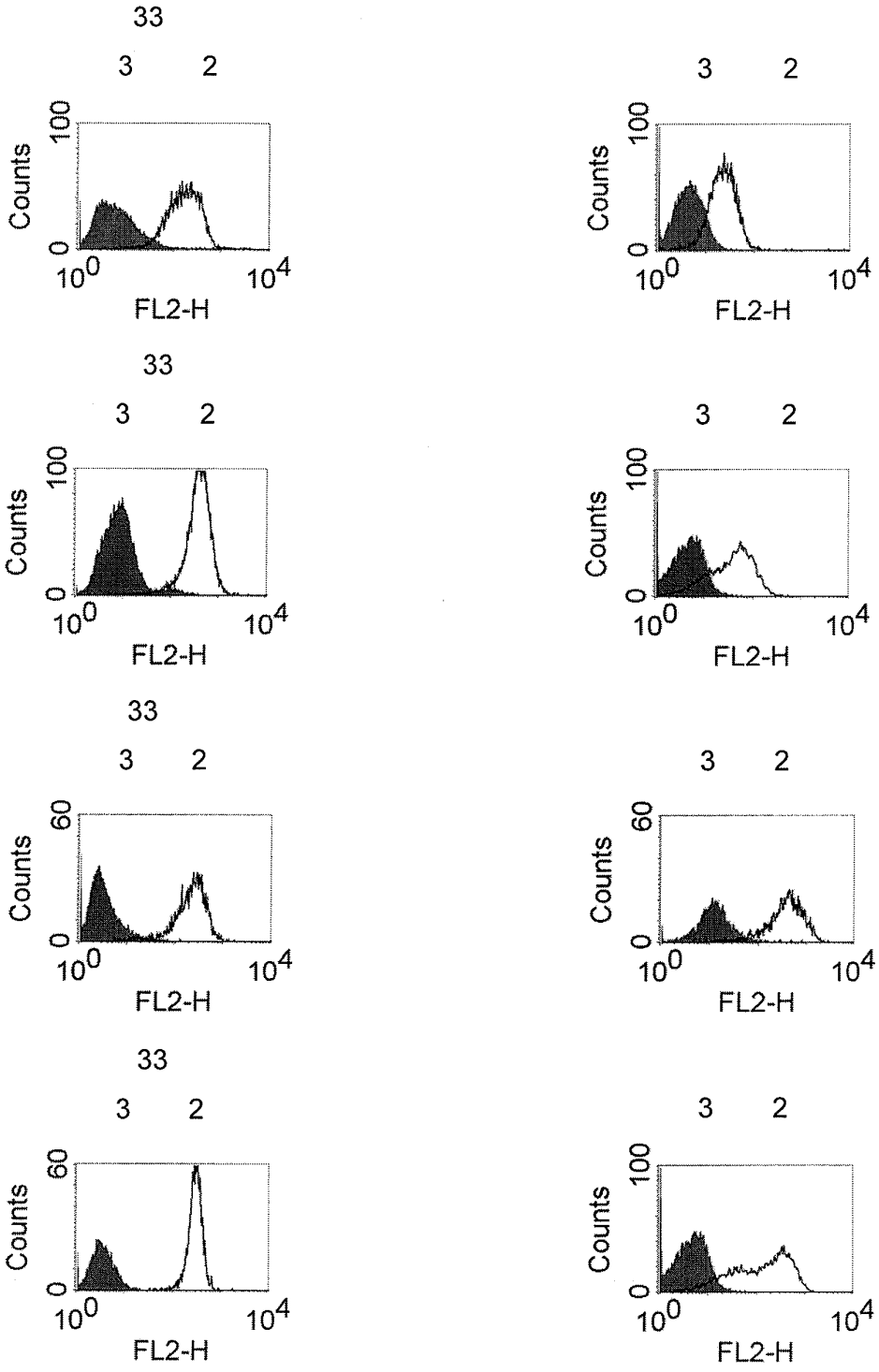

33
3 2
Counts
100
0
$10^0$
$10^4$
FL2-H
33
3 2
Counts
100
0
$10^0$
$10^4$
FL2-H
33
3 2
Counts
60
0
$10^0$
$10^4$
FL2-H
33
3 2
Counts
60
0
$10^0$
$10^4$
FL2-H
3 2
Counts
100
0
$10^0$
$10^4$
FL2-H
3 2
Counts
100
0
$10^0$
$10^4$
FL2-H
3 2
Counts
60
0
$10^0$
$10^4$
FL2-H
3 2
Counts
100
0
$10^0$
$10^4$
FL2-H

**Figure 29(9)**

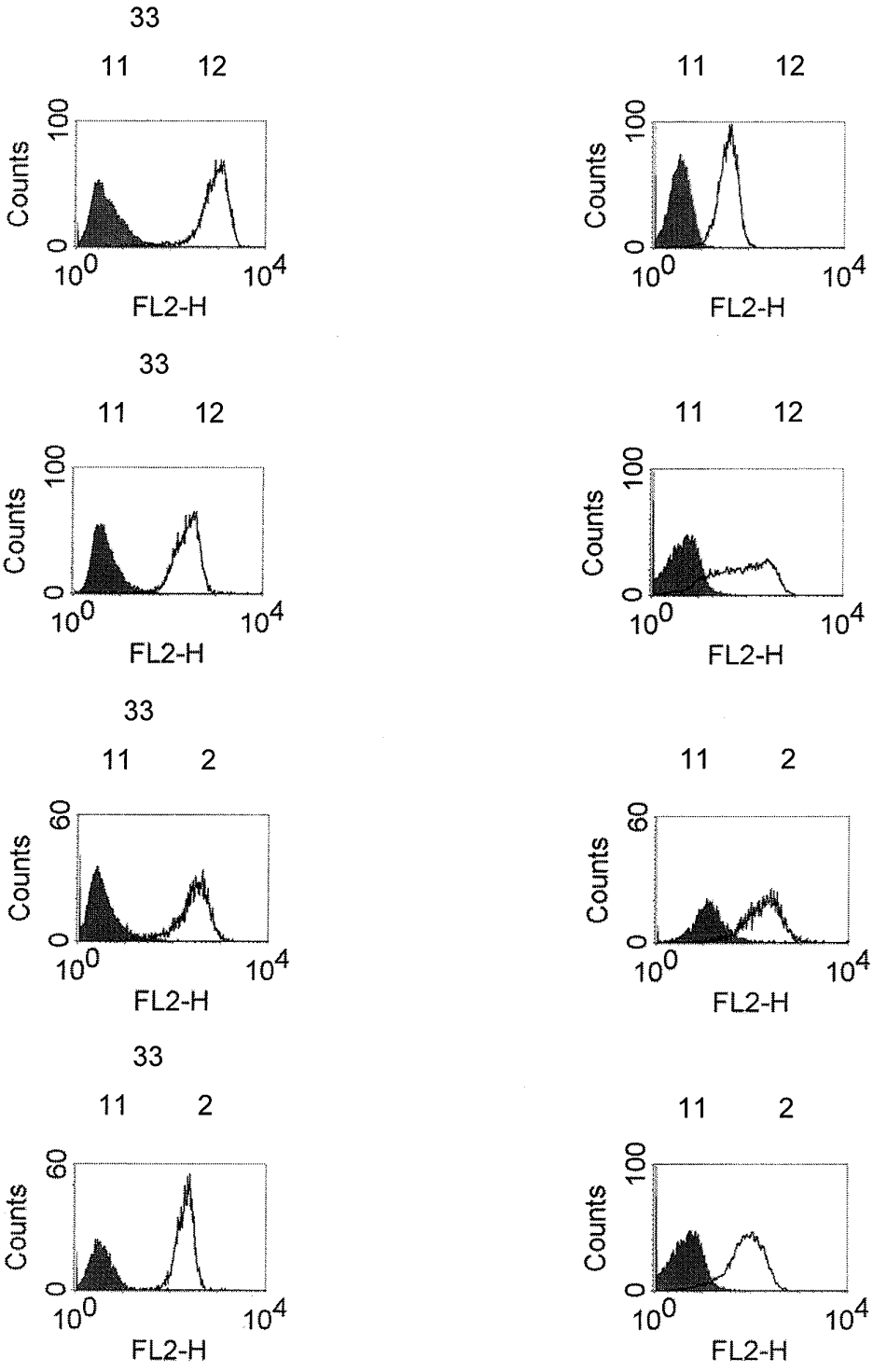

33
11
12
Counts
100
0
$10^0$
$10^4$
FL2-H
33
11
12
Counts
100
0
$10^0$
$10^4$
FL2-H
33
11
2
Counts
60
0
$10^0$
$10^4$
FL2-H
33
11
2
Counts
60
0
$10^0$
$10^4$
FL2-H
11
12
Counts
100
0
$10^0$
$10^4$
FL2-H
11
12
Counts
100
0
$10^0$
$10^4$
FL2-H
11
2
Counts
60
0
$10^0$
$10^4$
FL2-H
11
2
Counts
100
0
$10^0$
$10^4$
FL2-H

**Figure 29(10)**

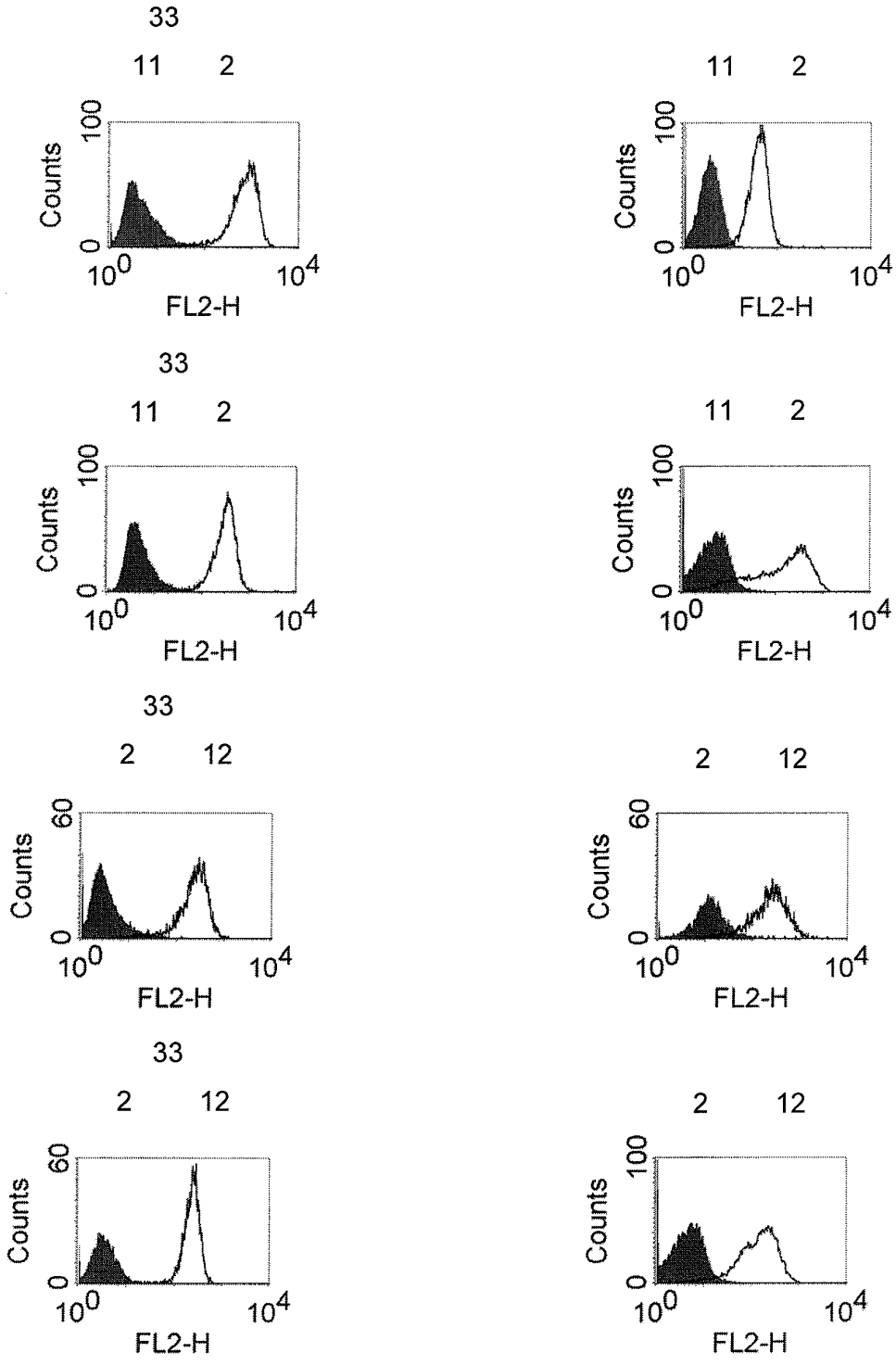

33
11
2
Counts
100
0
$10^0$
$10^4$
FL2-H
33
11
2
Counts
100
0
$10^0$
$10^4$
FL2-H
11
2
Counts
100
0
$10^0$
$10^4$
FL2-H
11
2
Counts
100
0
$10^0$
$10^4$
FL2-H
33
2
12
Counts
60
0
$10^0$
$10^4$
FL2-H
33
2
12
Counts
60
0
$10^0$
$10^4$
FL2-H
2
12
Counts
60
0
$10^0$
$10^4$
FL2-H
2
12
Counts
100
0
$10^0$
$10^4$
FL2-H

**Figure 29(11)**

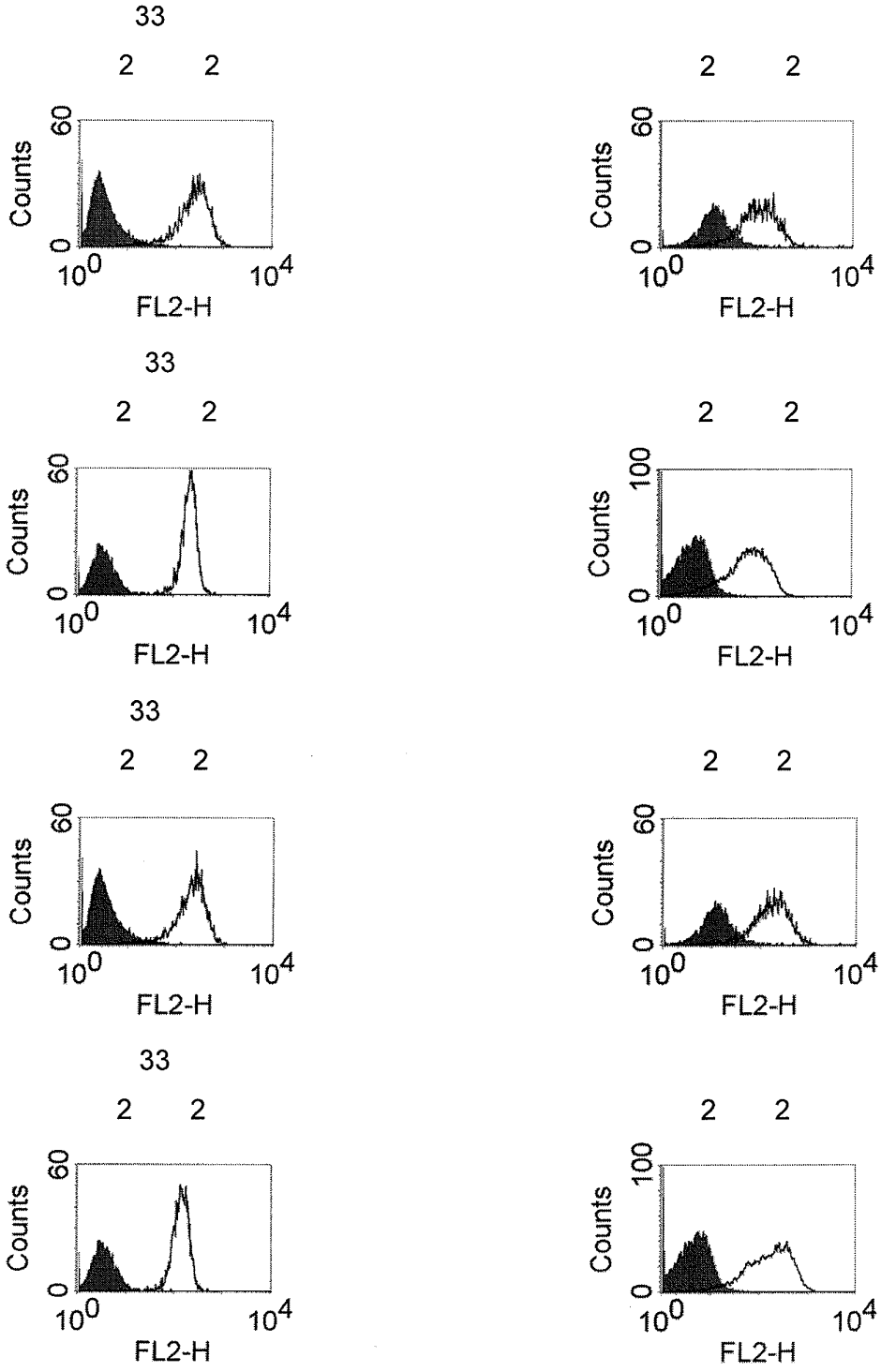
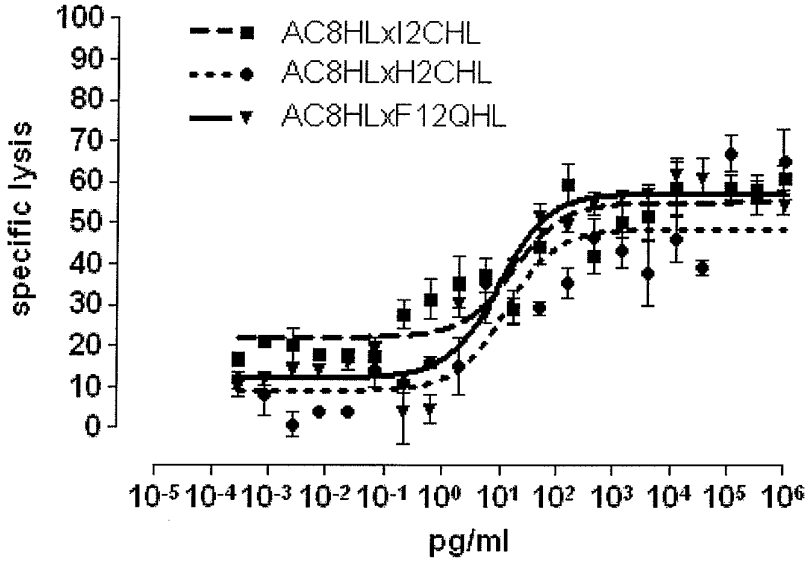

33
2 2
Counts
60
0
$10^0$
$10^4$
FL2-H
33
2 2
Counts
60
0
$10^0$
$10^4$
FL2-H
2 2
Counts
60
0
$10^0$
$10^4$
FL2-H
2 2
Counts
100
0
$10^0$
$10^4$
FL2-H
33
2 2
Counts
60
0
$10^0$
$10^4$
FL2-H
33
2 2
Counts
60
0
$10^0$
$10^4$
FL2-H
2 2
Counts
60
0
$10^0$
$10^4$
FL2-H
2 2
Counts
100
0
$10^0$
$10^4$
FL2-H

**Figure 29(12)**

33




4119

33

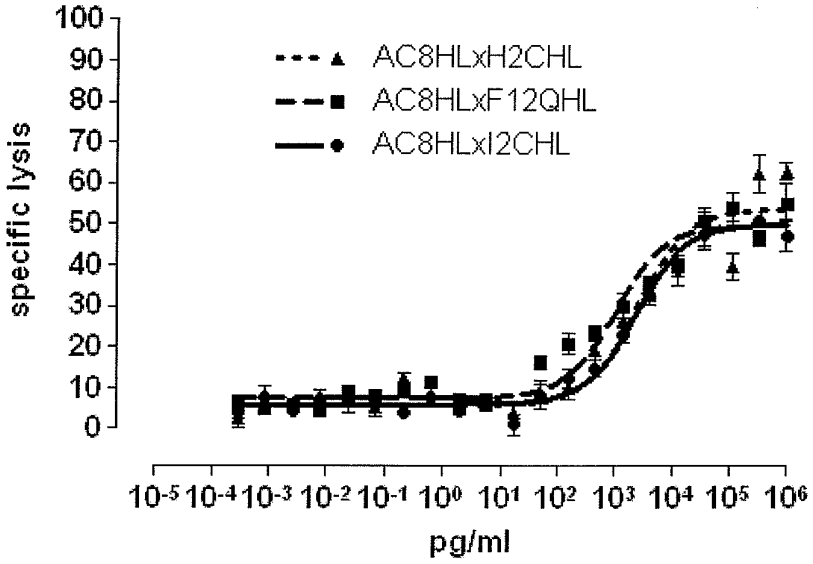
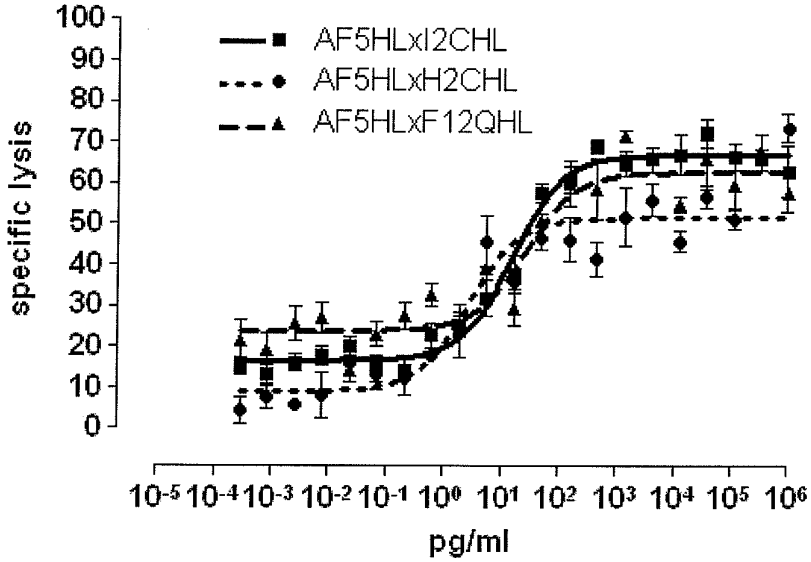



**Figure 30(1)**

33




4119

33

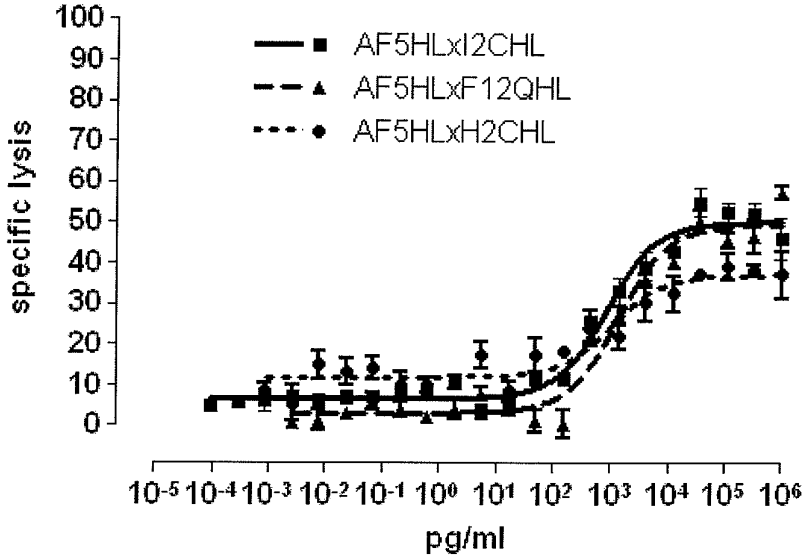
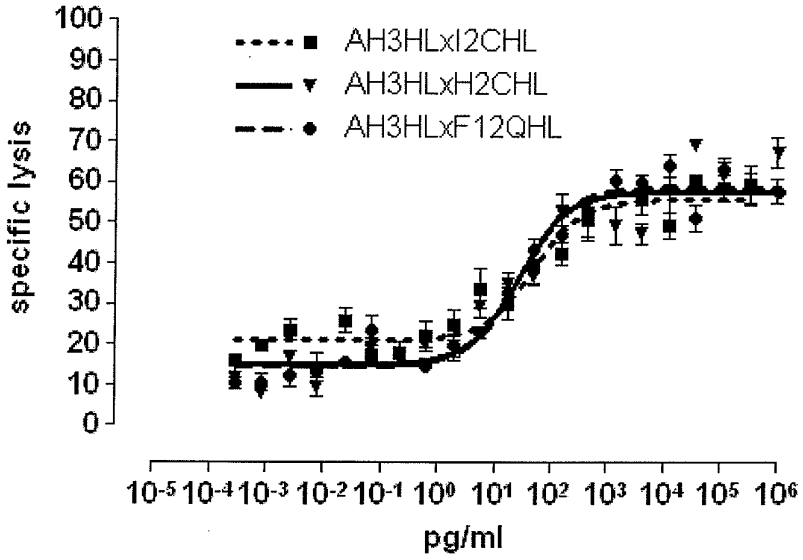



**Figure 30(2)**

33




4119

33

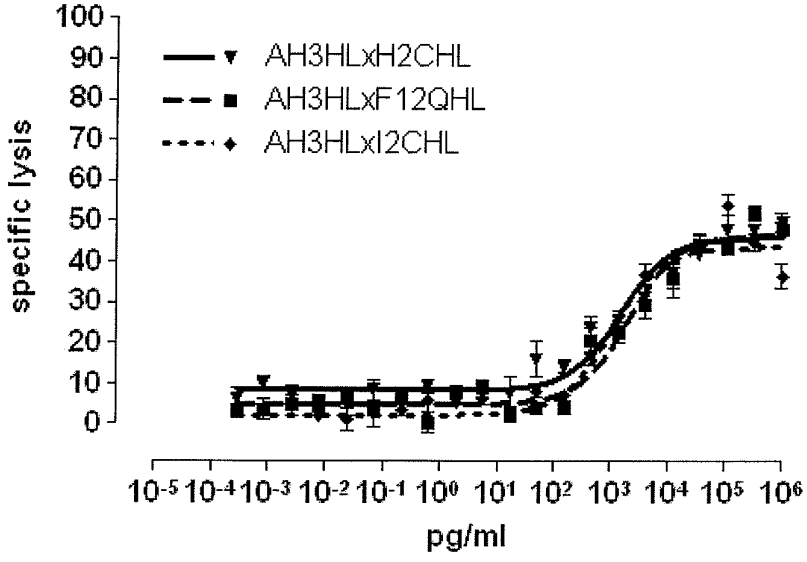
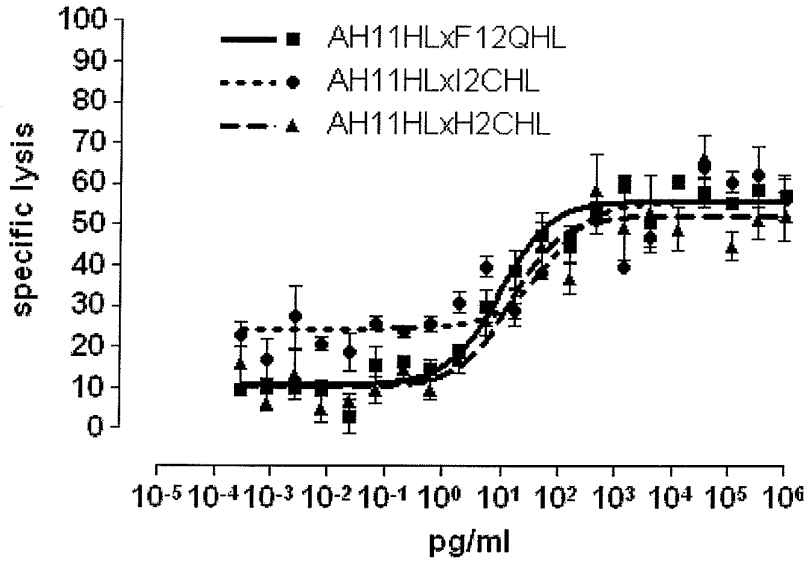



**Figure 30(3)**

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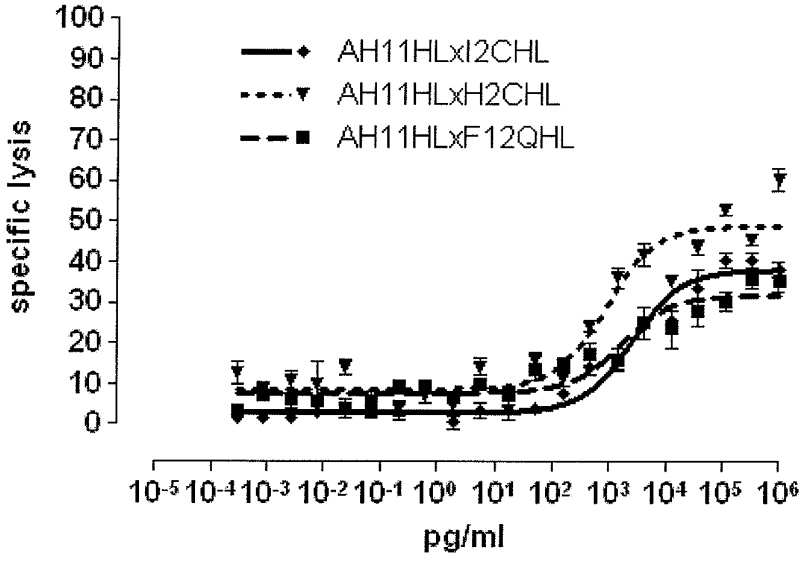
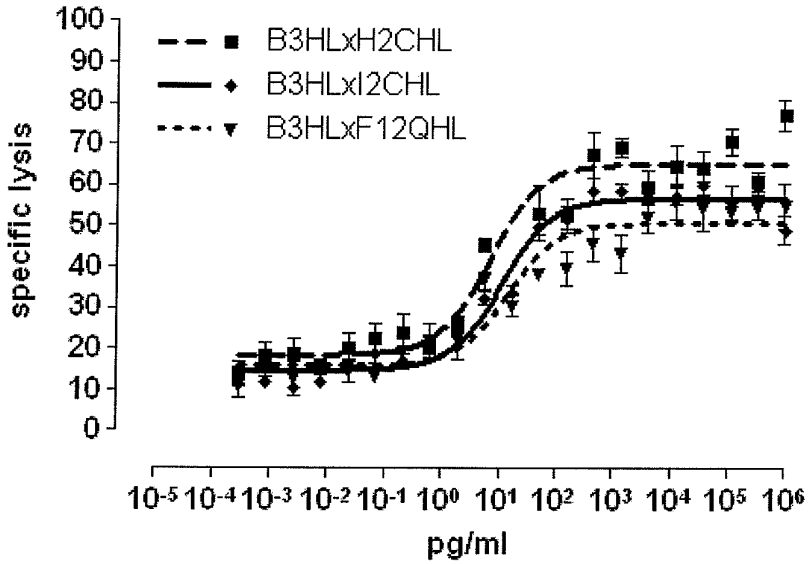



**Figure 30(4)**

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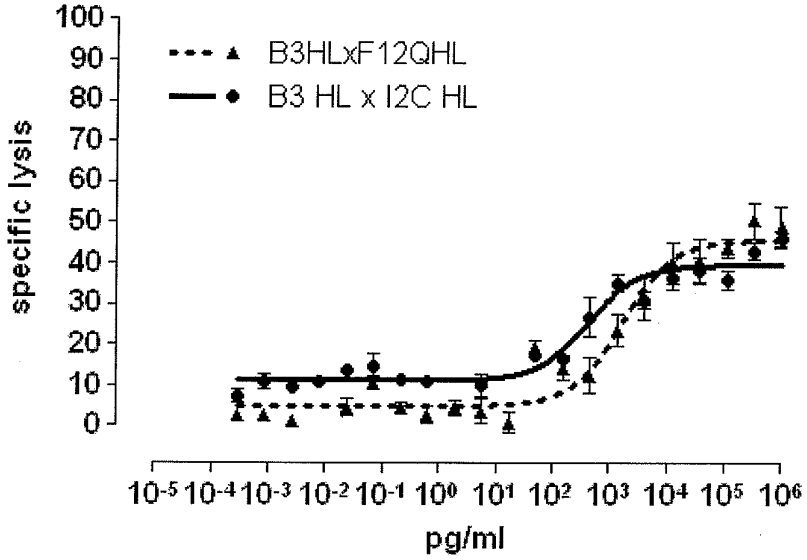
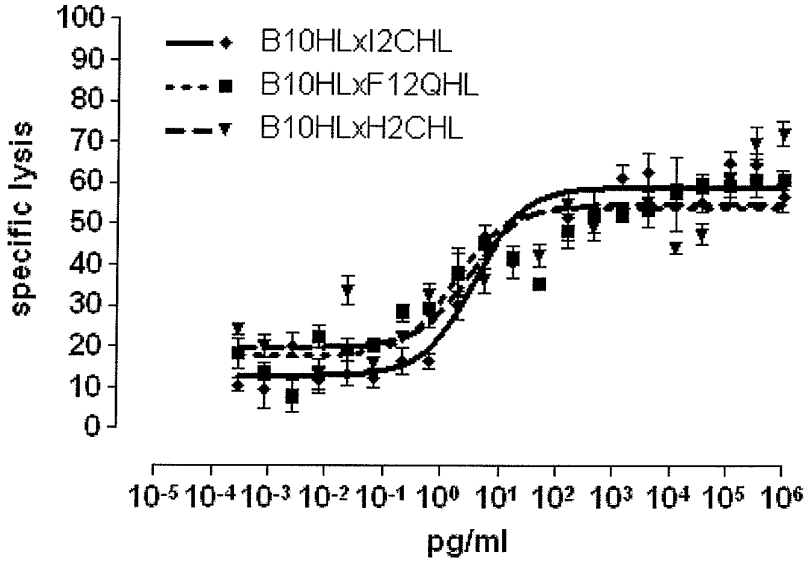



**Figure 30(5)**

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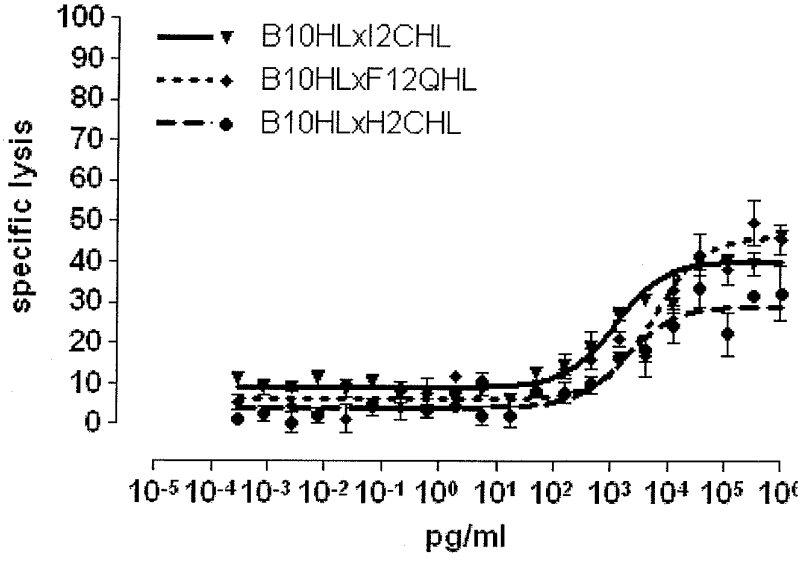
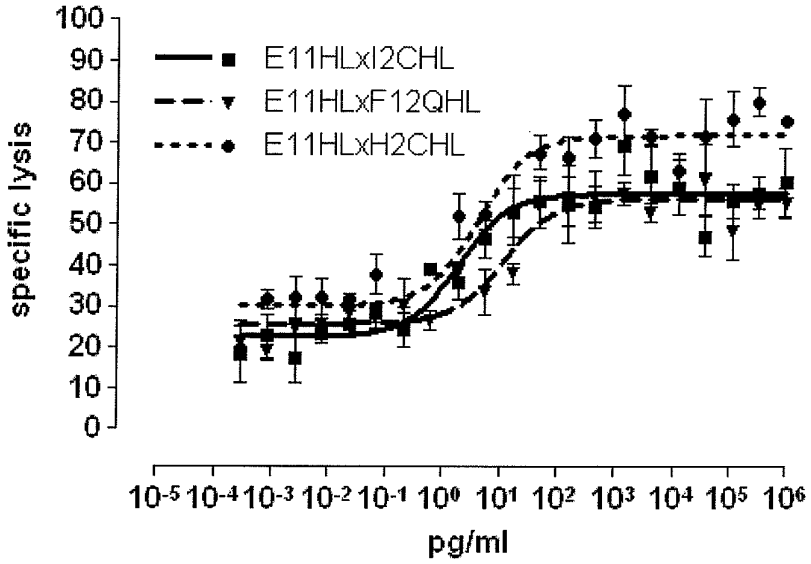



**Figure 30(6)**

33




4119

33

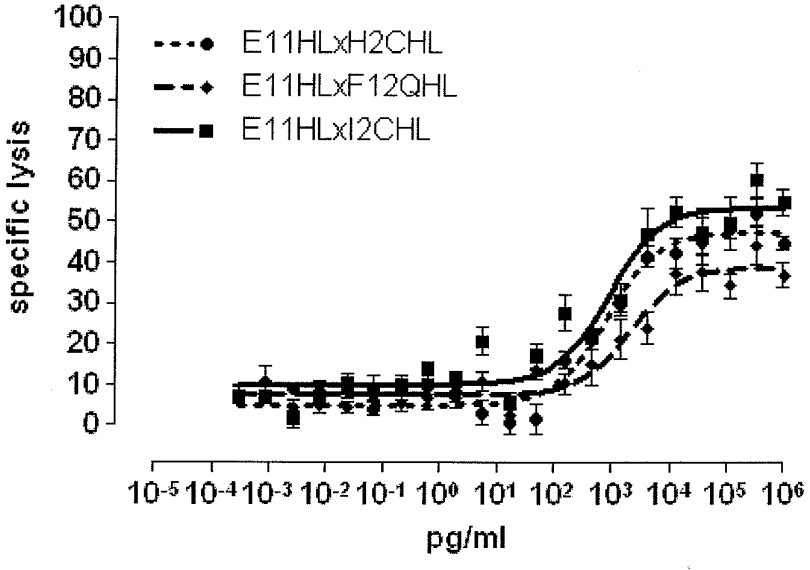
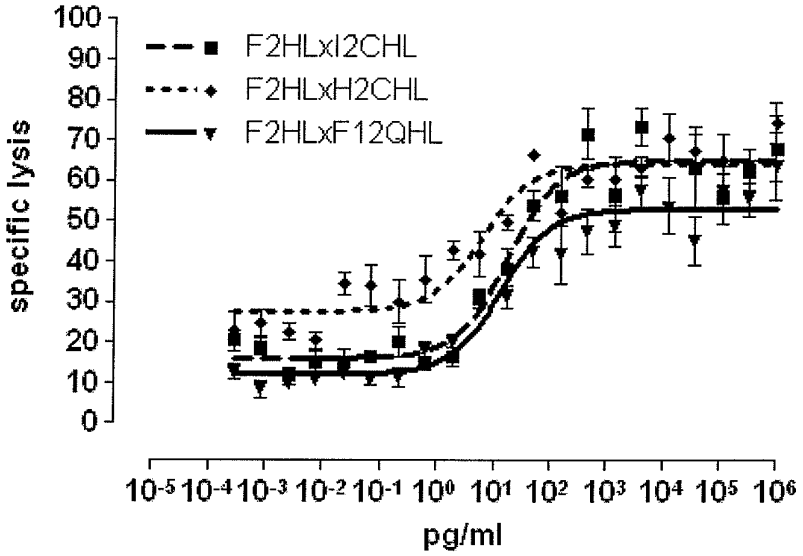



Figure 30(7)

33




4119

33

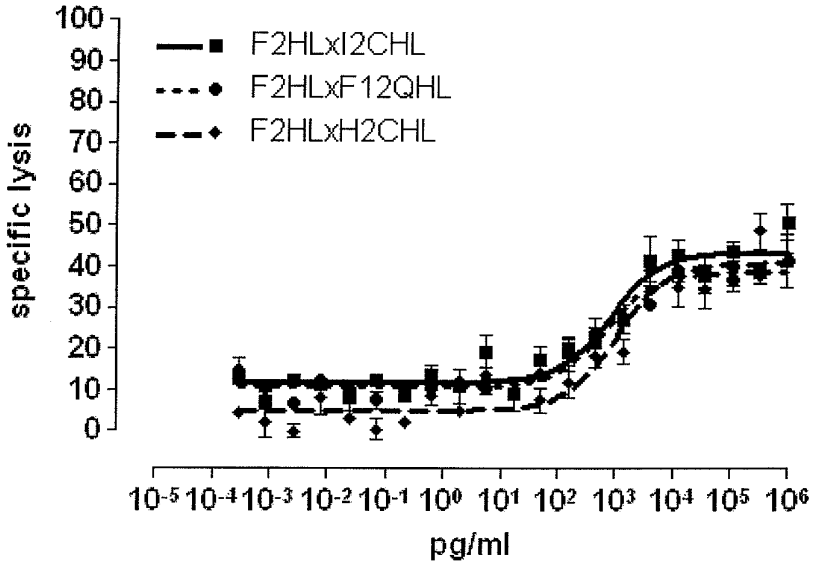



**Figure 30(8)**

**Figure 31**

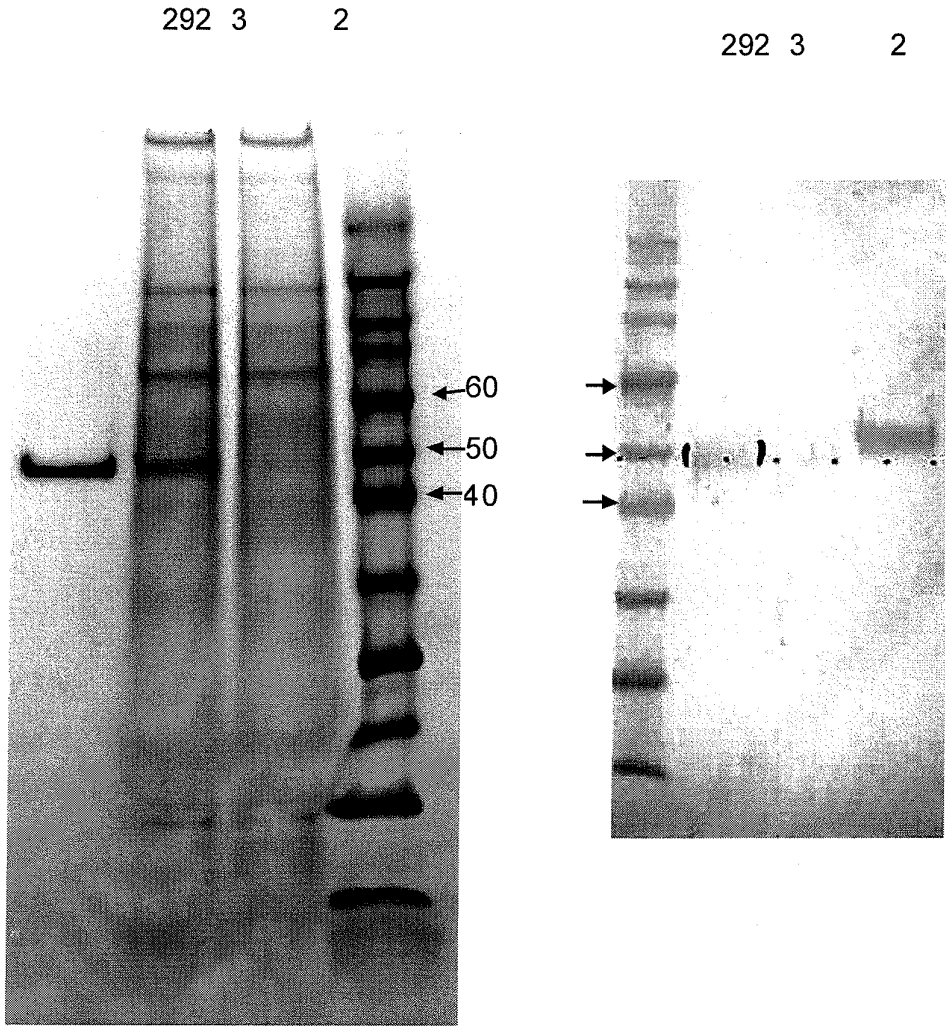


**Figure 32**

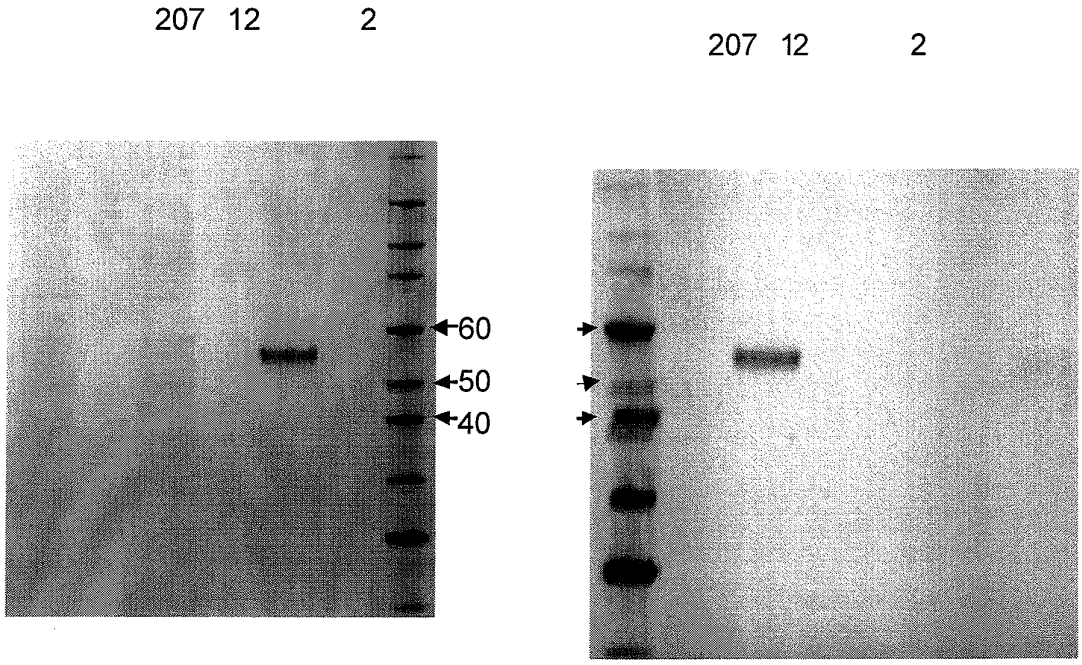



**Figure 33**

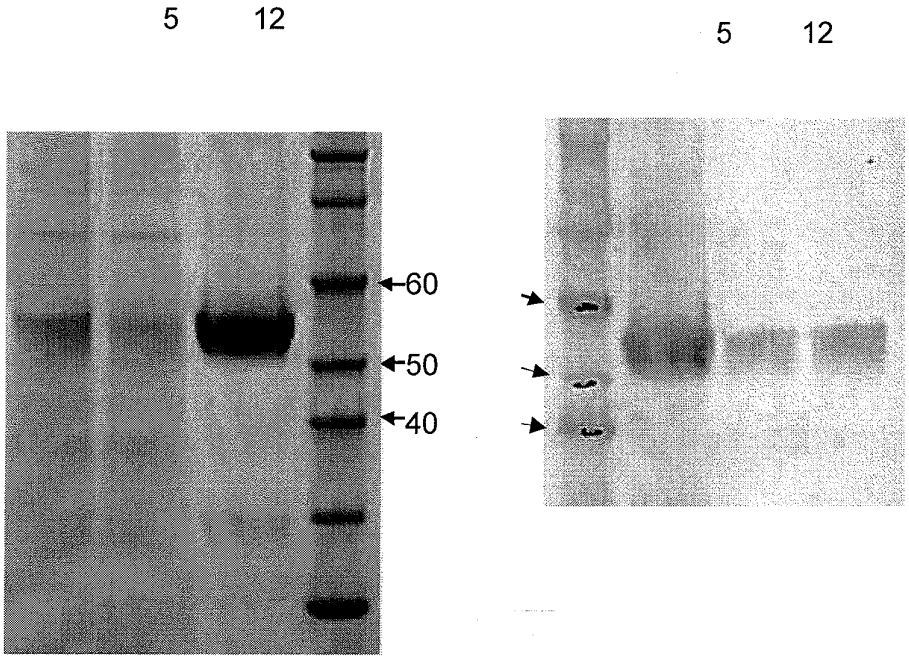
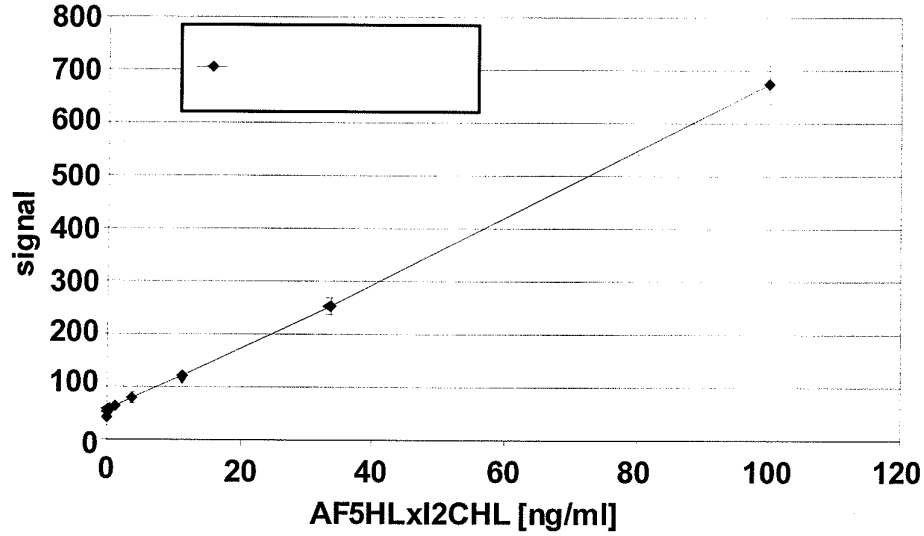


Figure 34


800
700
600
500
400
300
200
100
0
signal
0
20
40
60
80
100
120
AF5HLxI2CHL [ng/ml]

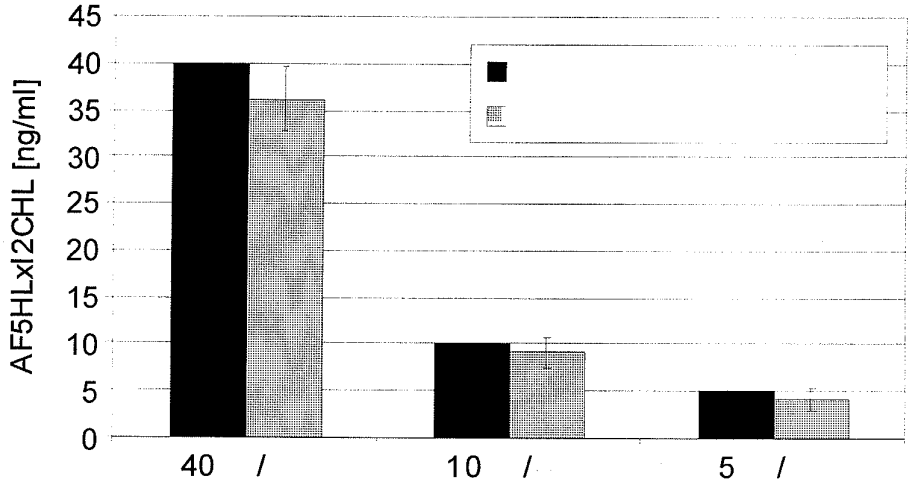
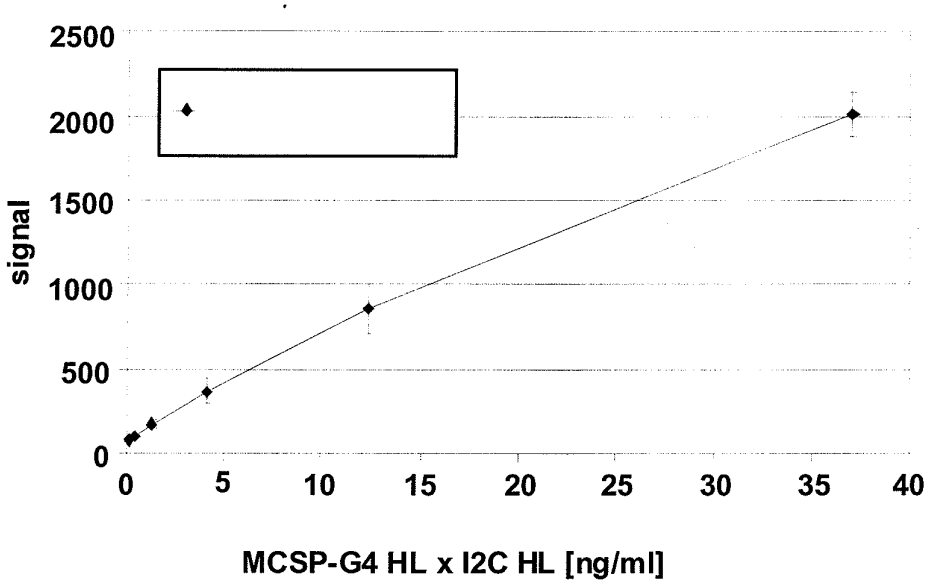

45
40
35
30
25
20
15
10
5
0
AF5HLxI2CHL [ng/ml]
40 /
10 /
5 /

Figure 35


2500
2000
1500
1000
500
0
signal
0
5
10
15
20
25
30
35
40
MCSP-G4 HL x I2C HL [ng/ml]

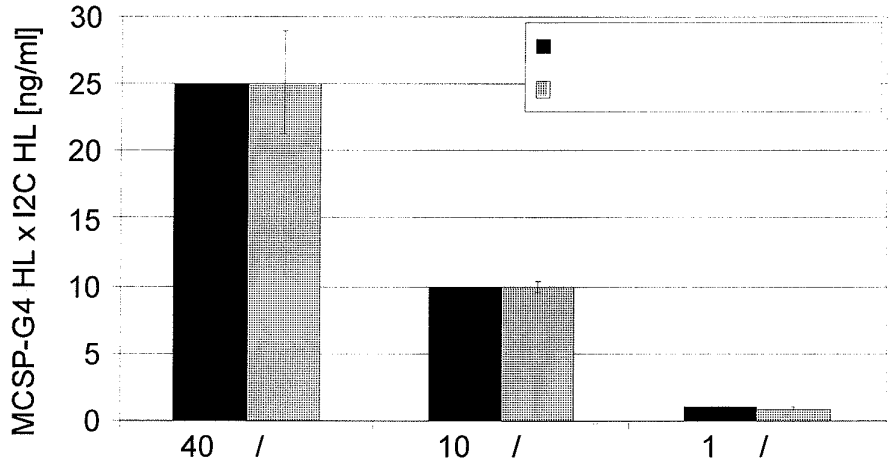
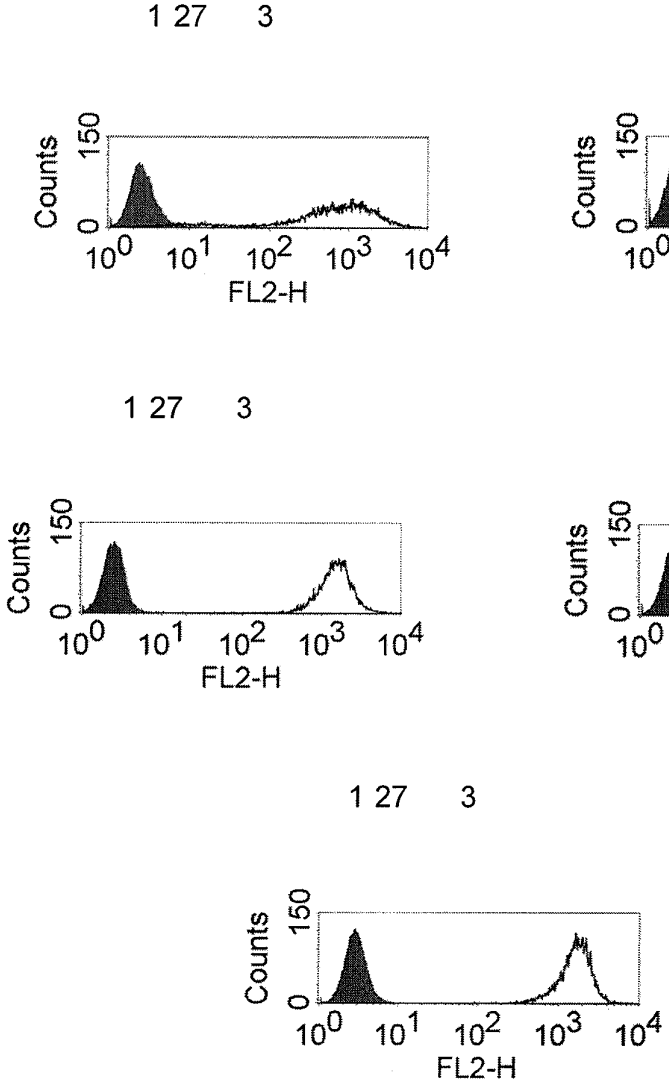
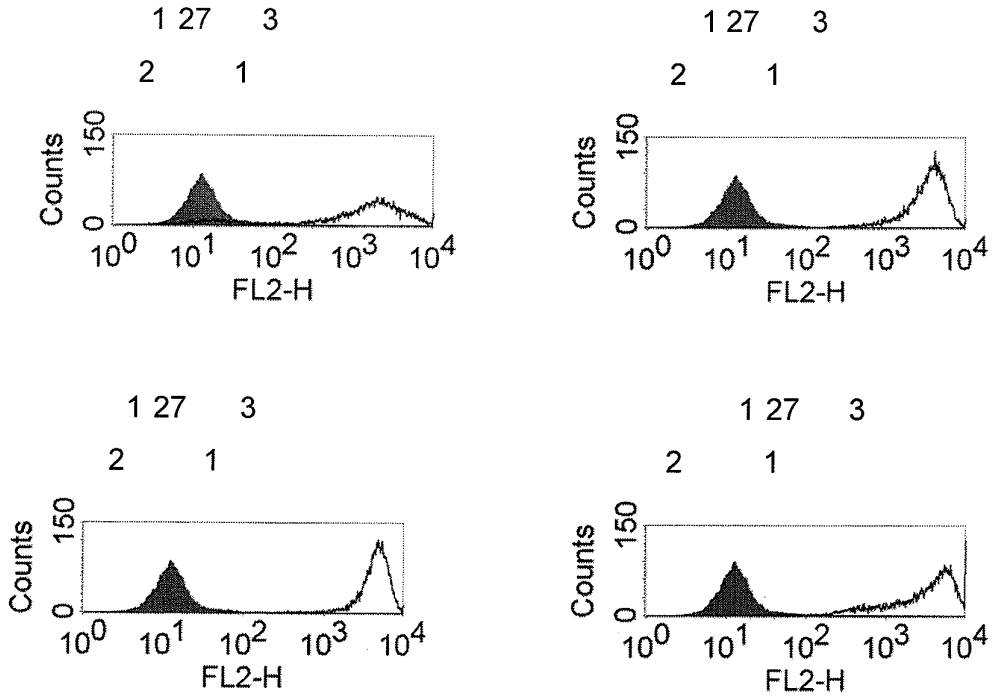

30
25
20
15
10
5
0
MCSP-G4 HL x I2C HL [ng/ml]
40 /
10 /
1 /

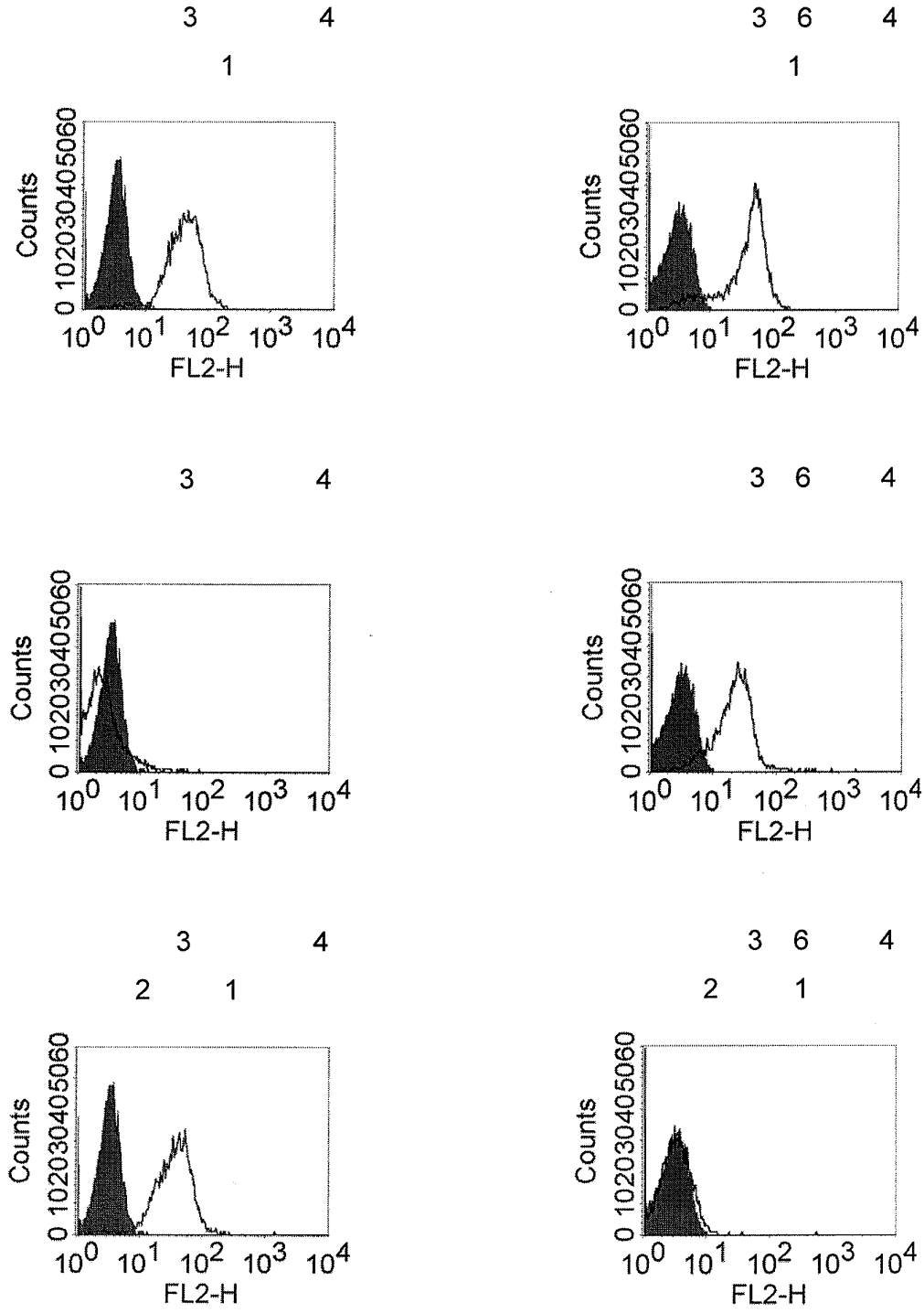
**Figure 36**


1 27 3
Counts
150
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
1 27 3
Counts
150
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
1 27 3
Counts
150
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
1 27 3
Counts
150
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
1 27 3
Counts
150
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

## Figure 37


1 27 3
2 1
Counts
150
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
1 27 3
2 1
Counts
150
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
1 27 3
2 1
Counts
150
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
1 27 3
2 1
Counts
150
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

## Figure 38


3
4
1
Counts
0 10 20 30 40 50 60
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
6
4
1
Counts
0 10 20 30 40 50 60
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
4
Counts
0 10 20 30 40 50 60
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
6
4
Counts
0 10 20 30 40 50 60
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
4
2
1
Counts
0 10 20 30 40 50 60
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
6
4
2
1
Counts
0 10 20 30 40 50 60
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

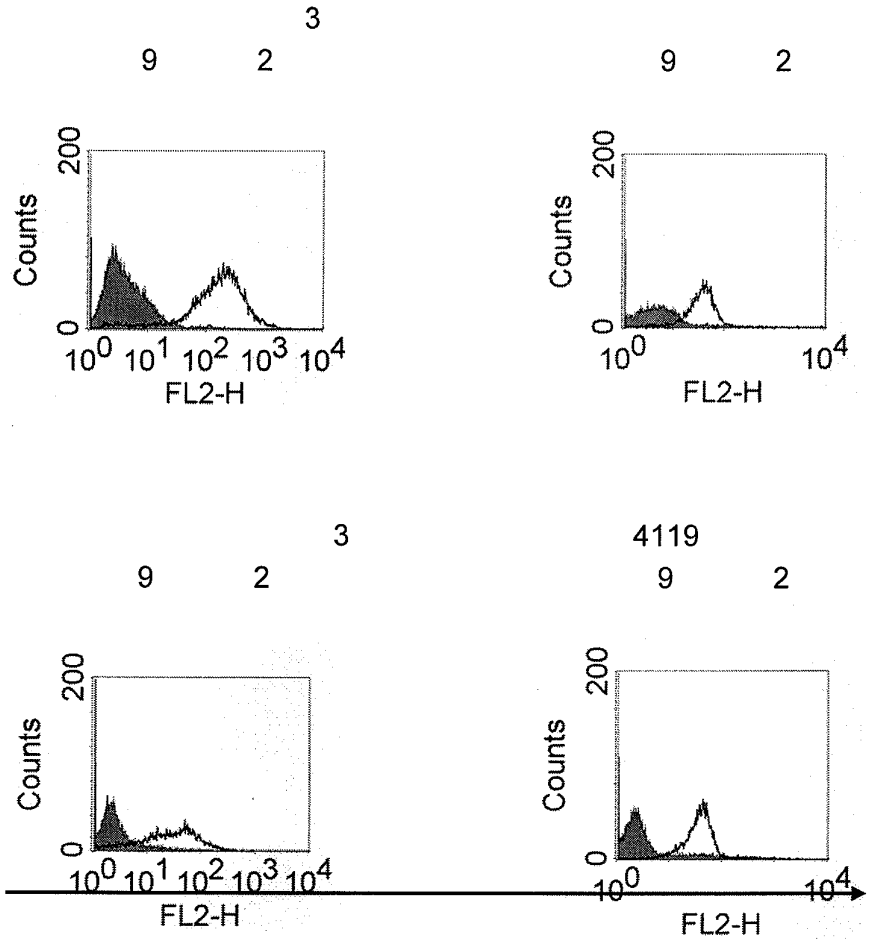

3
9 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
9 2
Counts
200
0
$10^0$ $10^4$
FL2-H
3
9 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
9 2
Counts
200
0
$10^0$ $10^4$
FL2-H

**Figure 39a**

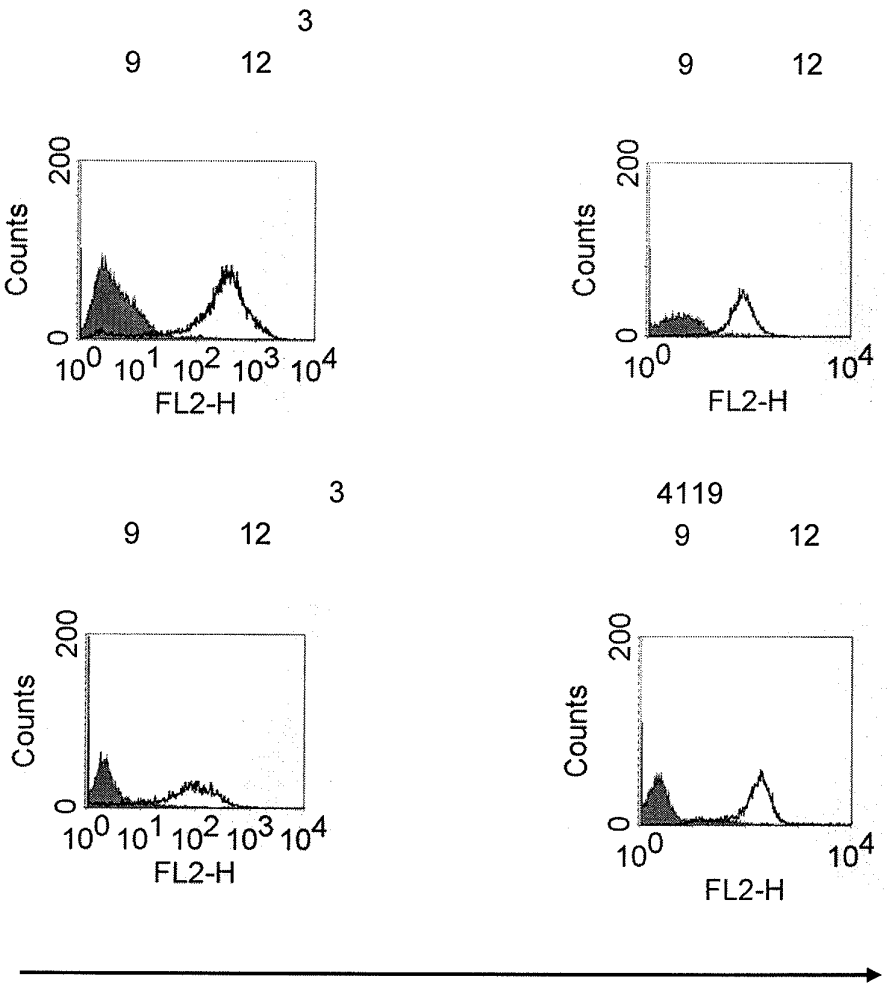

3
9
12
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
9
12
Counts
200
0
$10^0$
$10^4$
FL2-H
3
9
12
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
9
12
Counts
200
0
$10^0$
$10^4$
FL2-H

**Figure 39b**

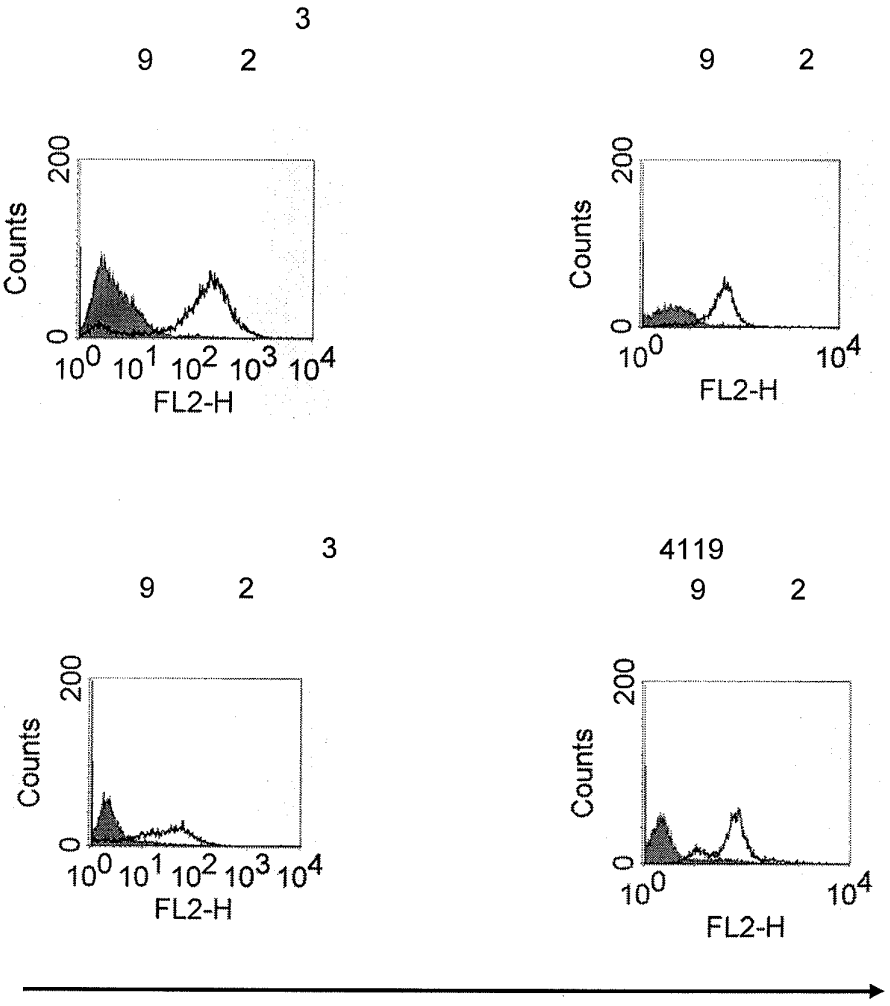

3
9 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
9 2
Counts
200
0
$10^0$
$10^4$
FL2-H
3
9 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
9 2
Counts
200
0
$10^0$
$10^4$
FL2-H

**Figure 39c**

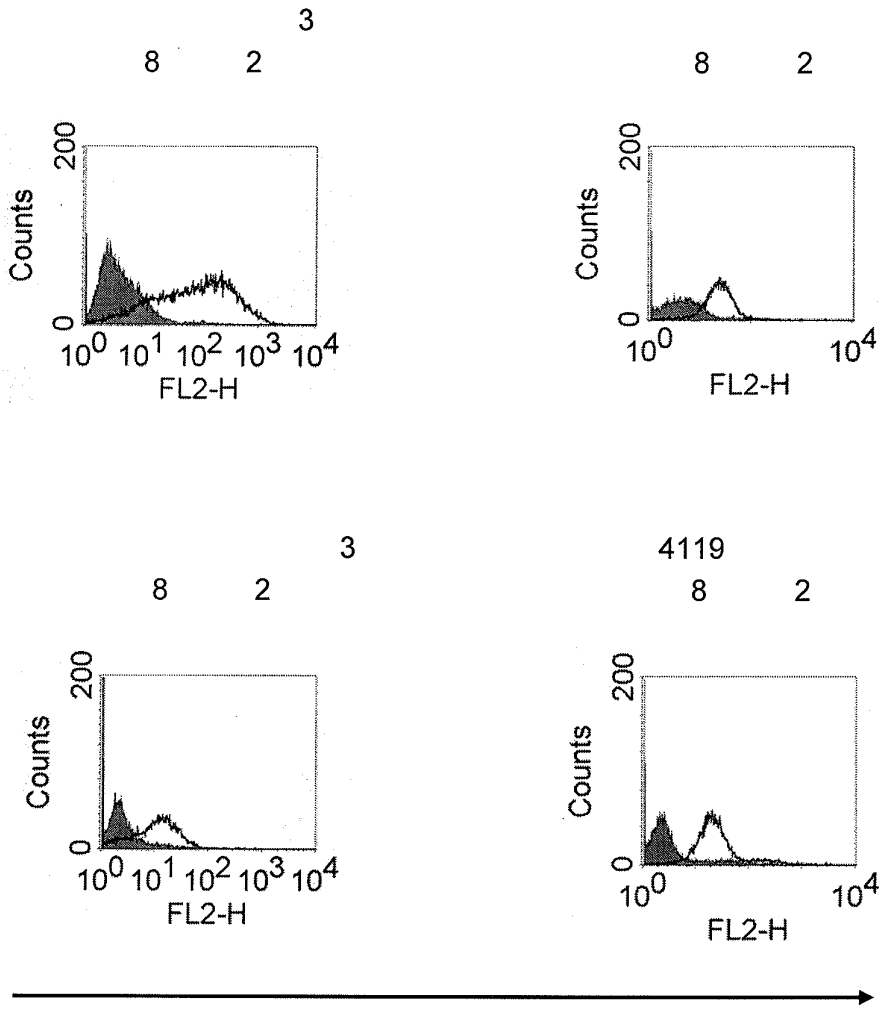

3
8 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
8 2
Counts
200
0
$10^0$ $10^4$
FL2-H
3
8 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
8 2
Counts
200
0
$10^0$ $10^4$
FL2-H

**Figure 39d**

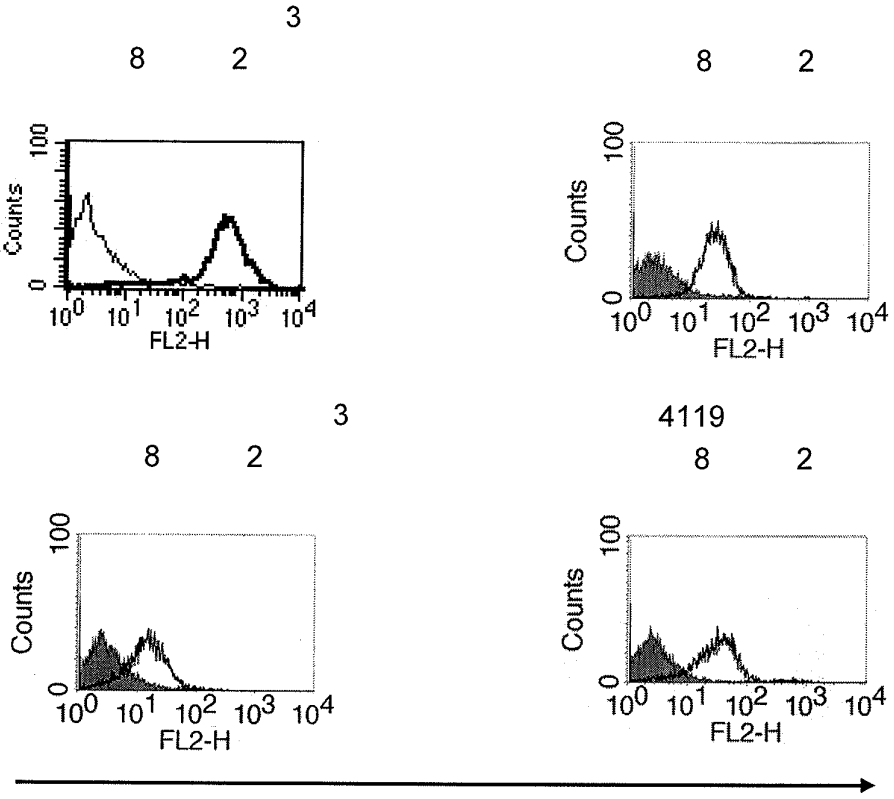

3
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

**Figure 39e**

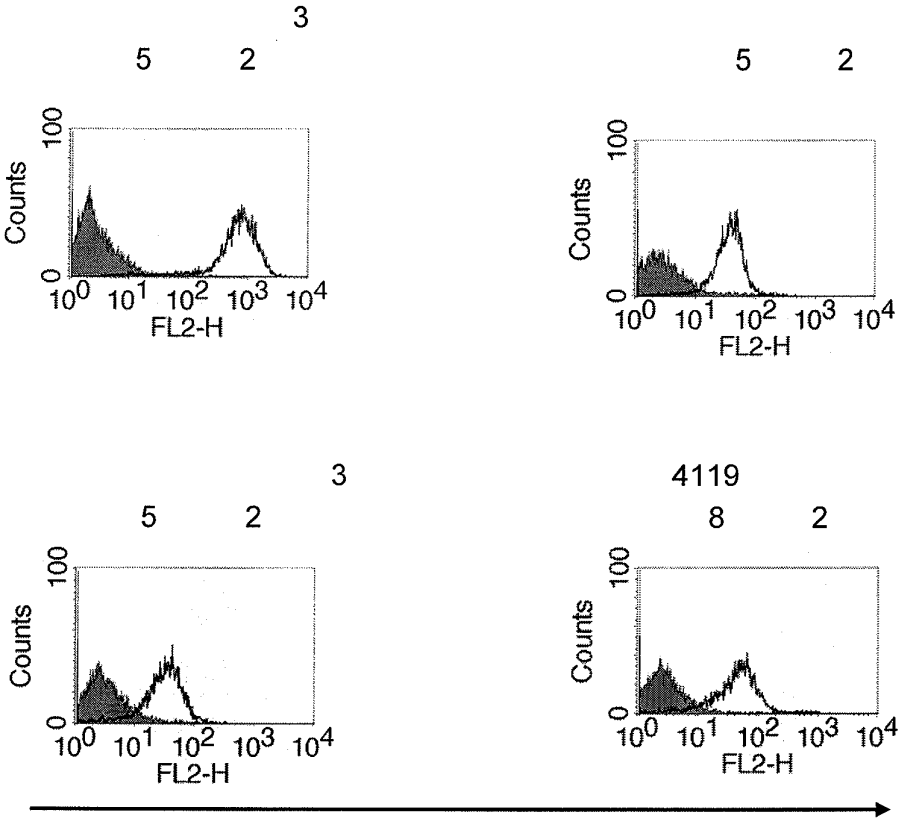

3
5 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
5 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
5 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

**Figure 39f**

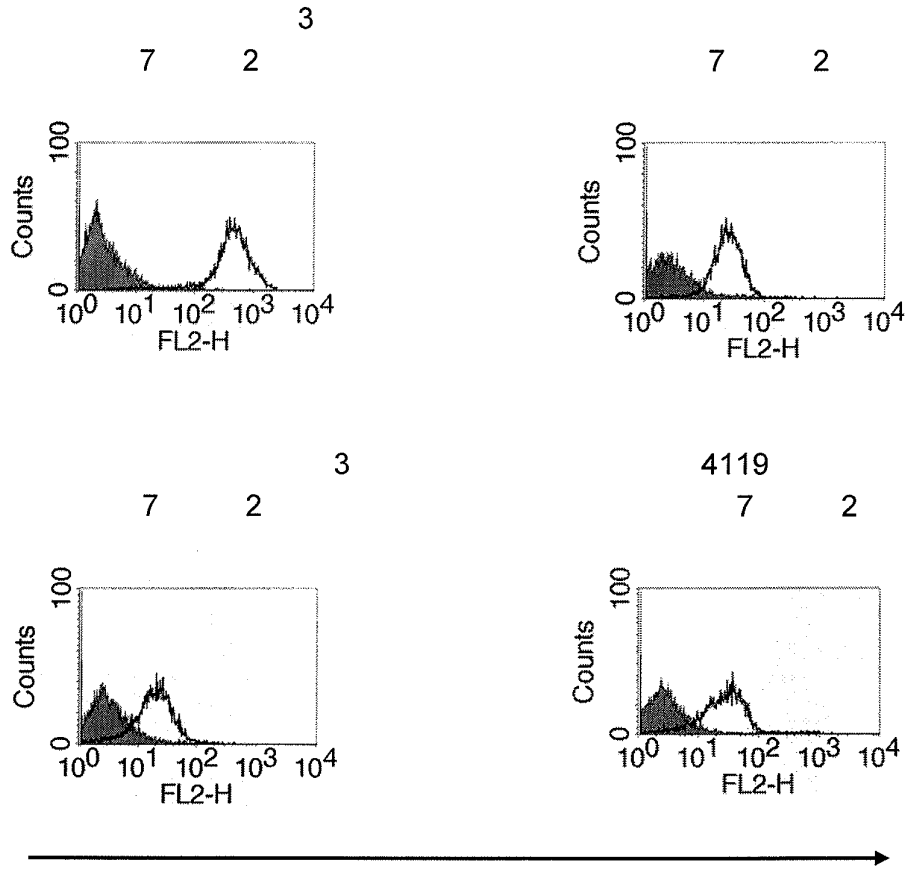

3
7 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
7 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
7 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
7 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

**Figure 39g**

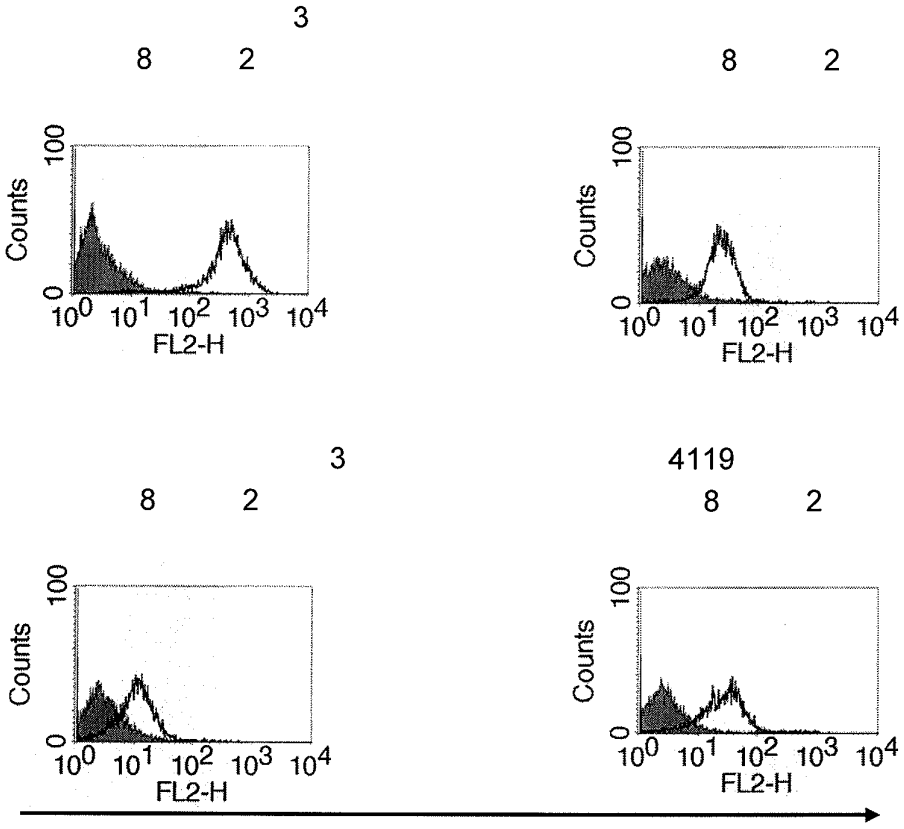

3
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

**Figure 39h**

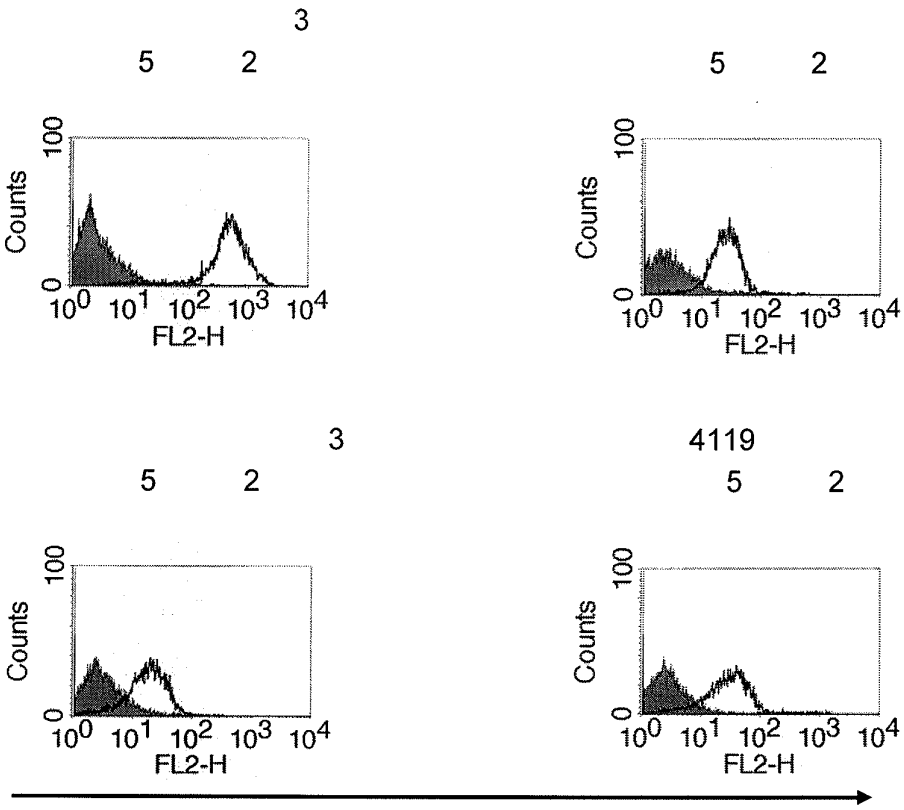

3
5 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
5 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
5 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
5 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

**Figure 39i**

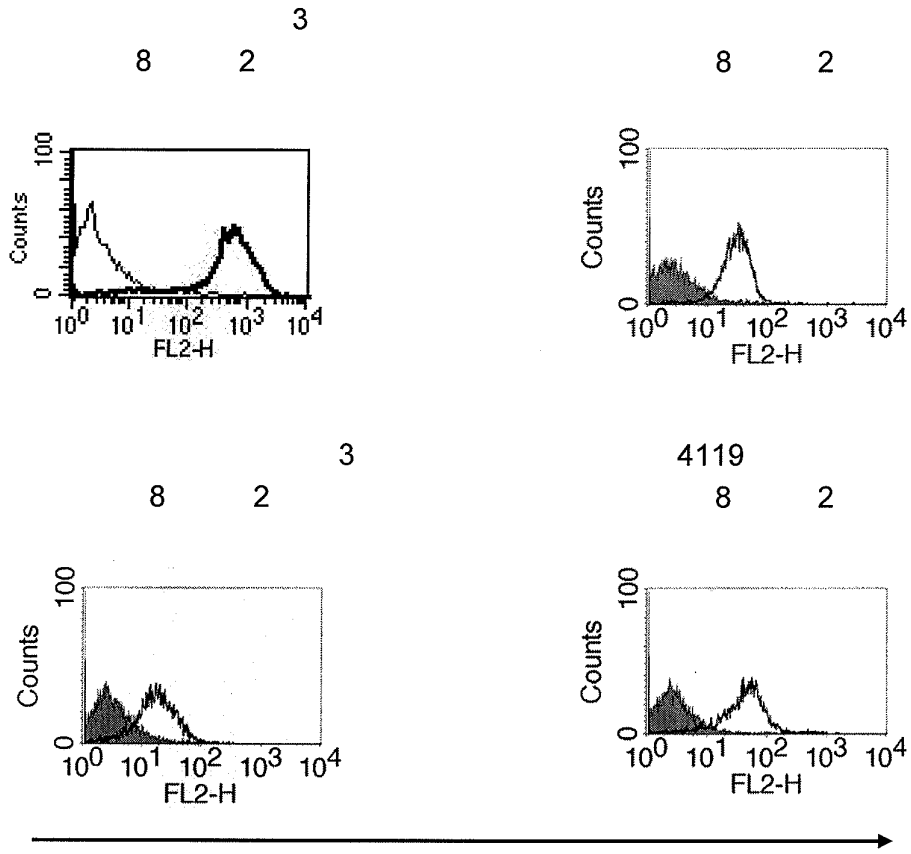

3
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
8 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

**Figure 39j**

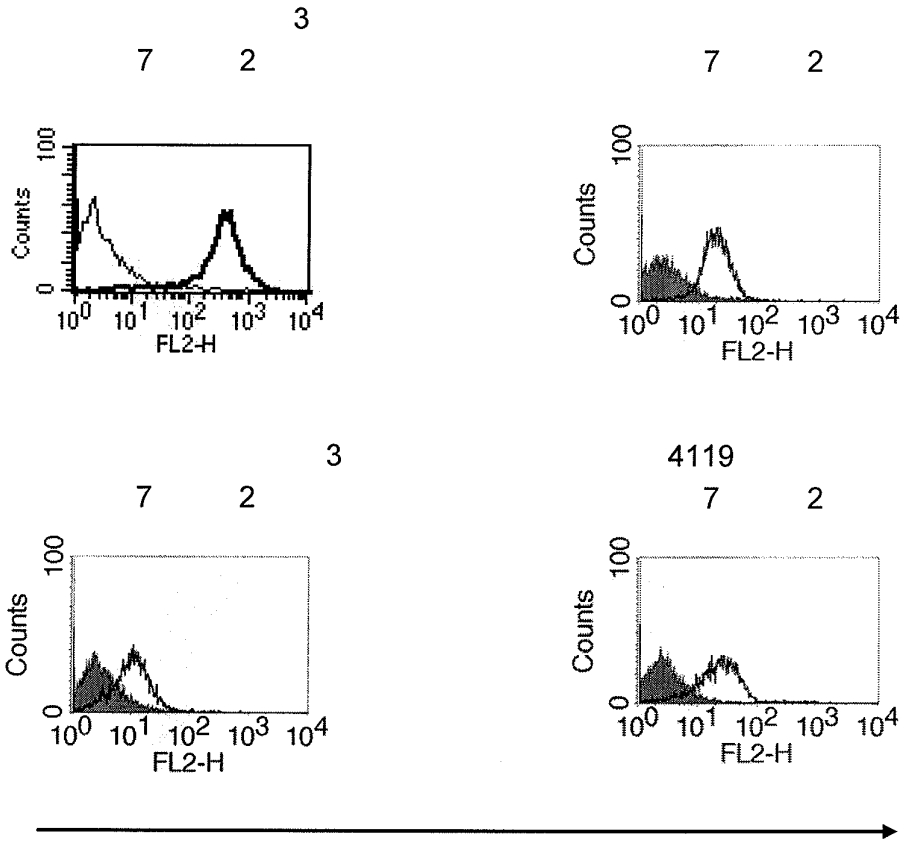

3
7 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
7 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
7 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
7 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

**Figure 39k**

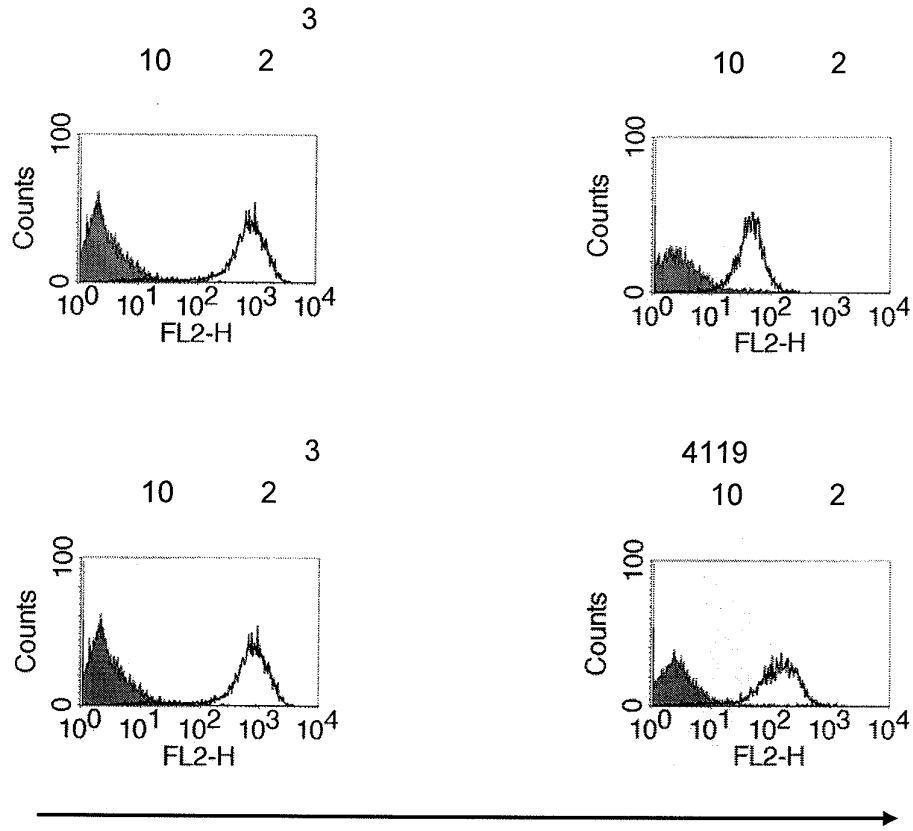
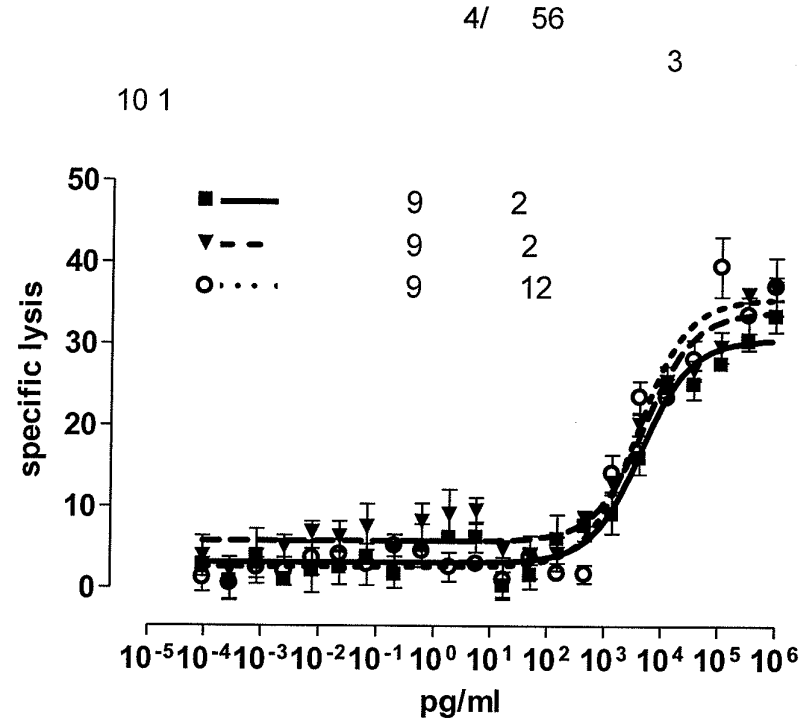

3
10 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
10 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
3
10 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
10 2
Counts
100
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

**Figure 39I**

Figure 40a


4/ 56
3
10 1
50
40
30
20
10
0
specific lysis
9 2
9 2
9 12
10-5 10-4 10-3 10-2 10-1 10 0 10 1 10 2 10 3 10 4 10 5 10 6
pg/ml

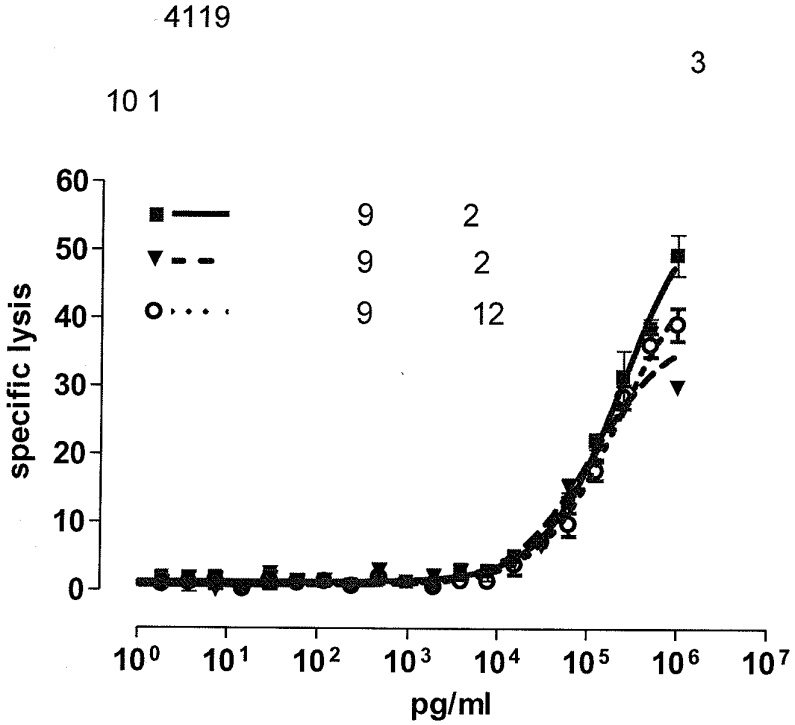
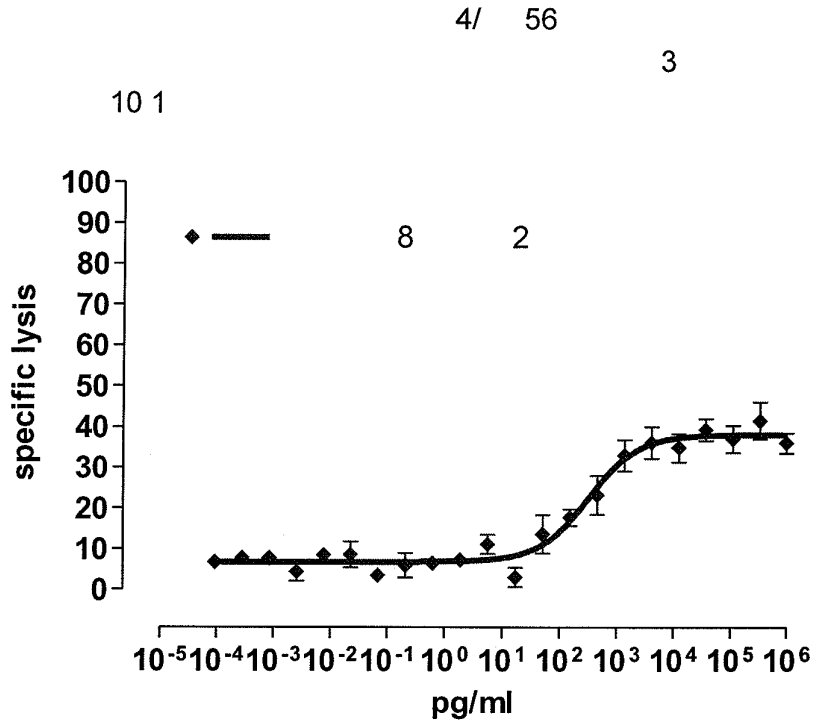

4119
3
10 1
60
50
40
30
20
10
0
specific lysis
9 2
9 2
9 12
10 0 10 1 10 2 10 3 10 4 10 5 10 6 10 7
pg/ml

**Figure 40b**


4/ 56
3
10 1
100
90
80
70
60
50
40
30
20
10
0
specific lysis
8
2
10-5 10-4 10-3 10-2 10-1 10 0 10 1 10 2 10 3 10 4 10 5 10 6
pg/ml

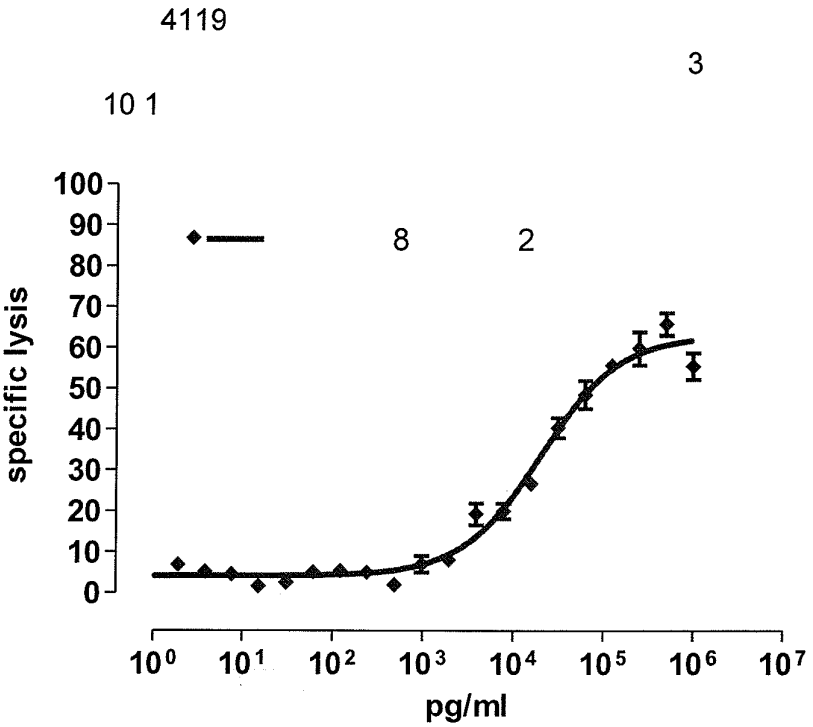

4119
3
10 1
100
90
80
70
60
50
40
30
20
10
0
specific lysis
8
2
10 0 10 1 10 2 10 3 10 4 10 5 10 6 10 7
pg/ml

Figure 40c

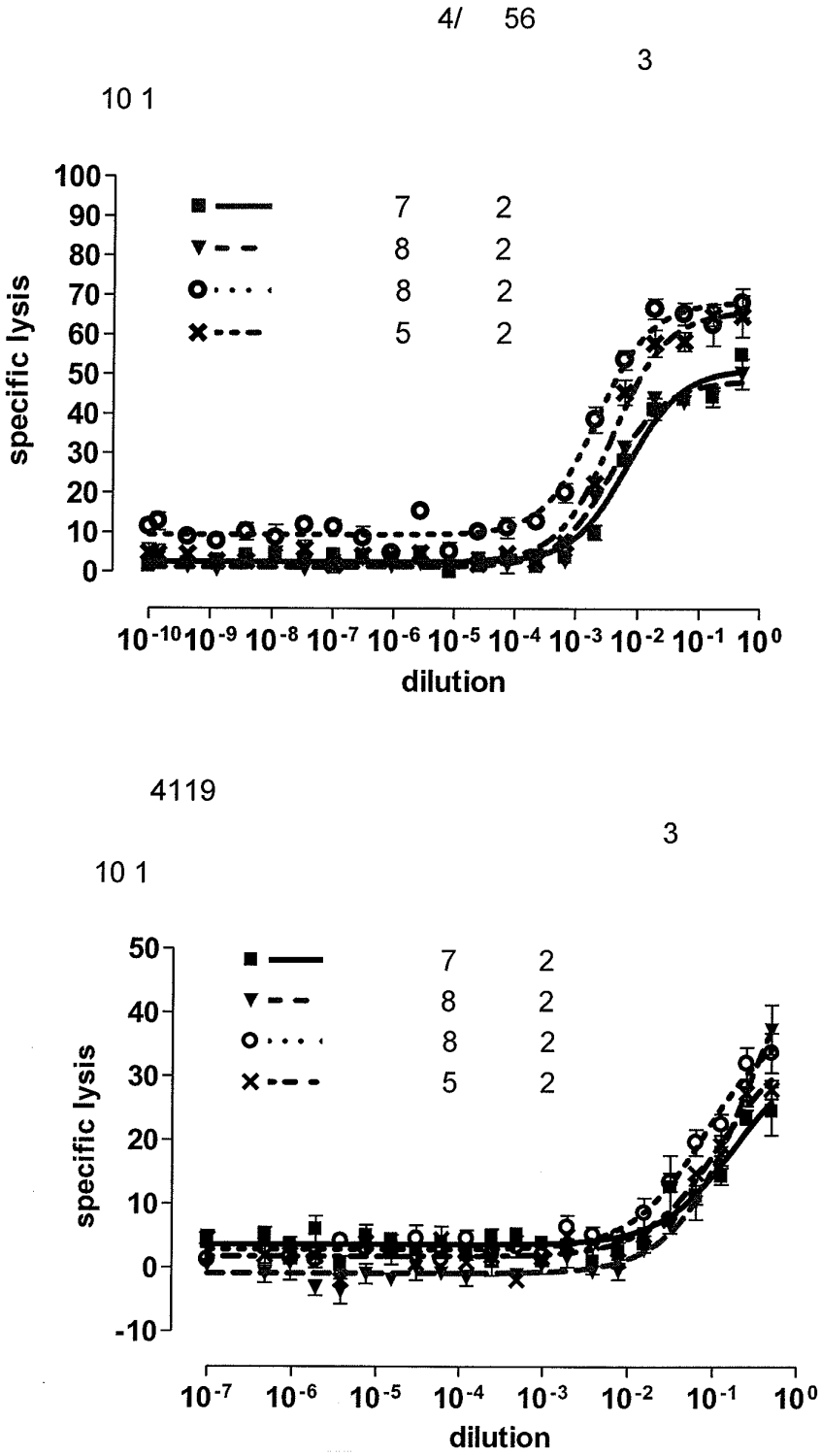
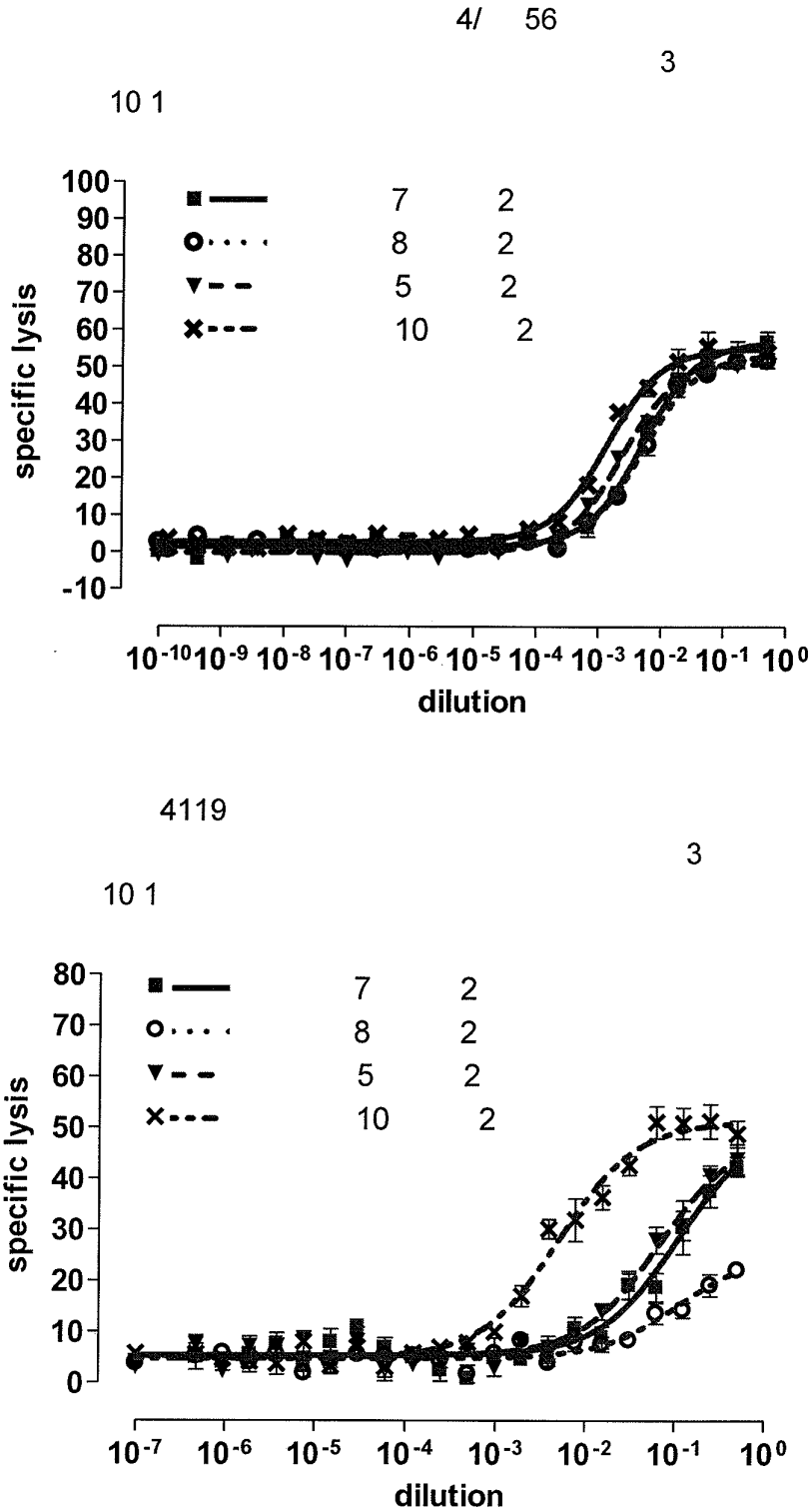
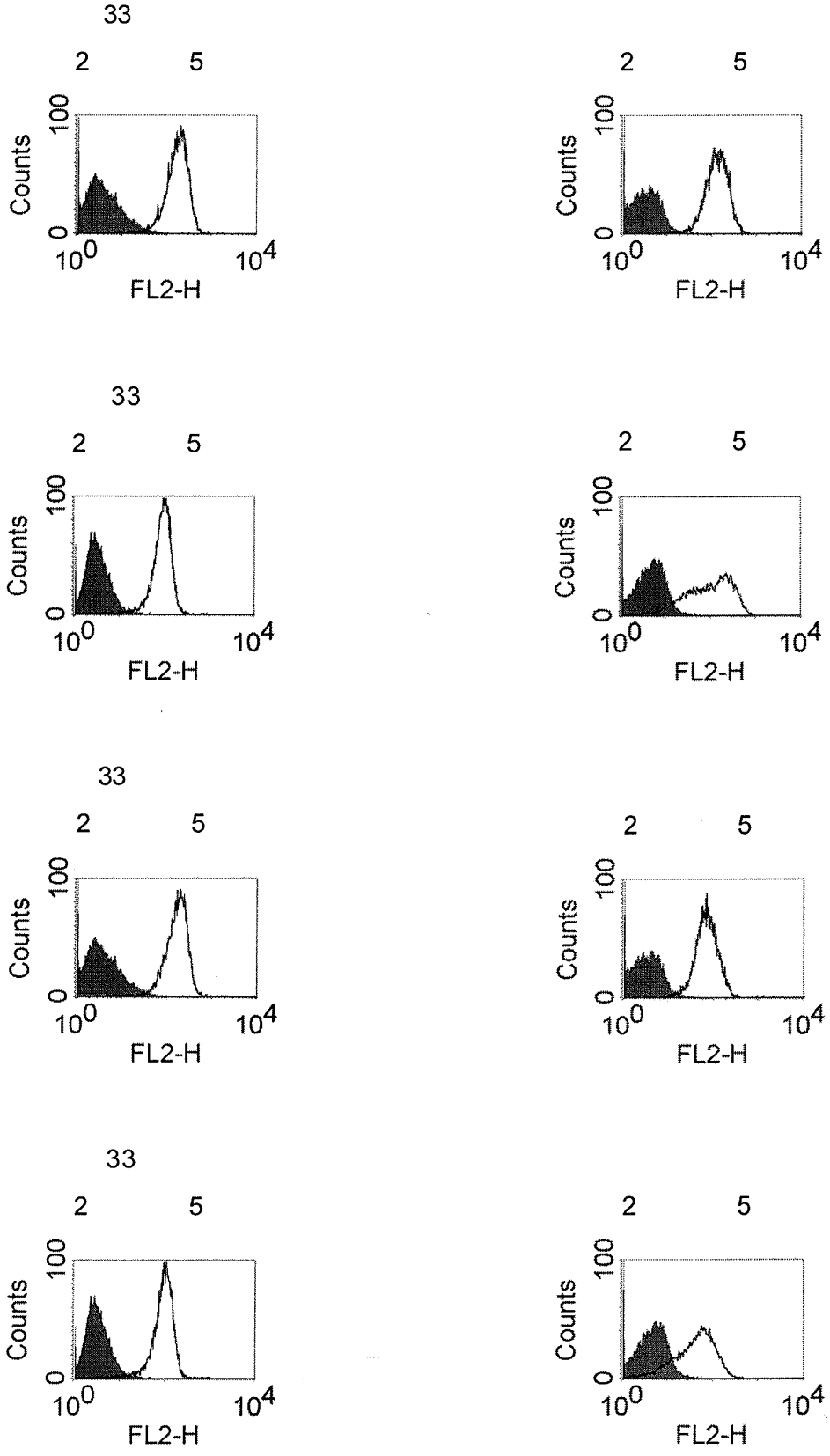

4/ 56
3
10 1
100
90
80
70
60
50
40
30
20
10
0
specific lysis
7 2
8 2
8 2
5 2
10-10 10-9 10-8 10-7 10-6 10-5 10-4 10-3 10-2 10-1 100
dilution
4119
3
10 1
50
40
30
20
10
0
-10
specific lysis
7 2
8 2
8 2
5 2
10-7 10-6 10-5 10-4 10-3 10-2 10-1 100
dilution

**Figure 40d**


4/ 56
3
10 1
100
90
80
70
60
50
40
30
20
10
0
-10
specific lysis
7 2
8 2
5 2
10 2
10-10 10-9 10-8 10-7 10-6 10-5 10-4 10-3 10-2 10-1 100
dilution
4119
3
10 1
80
70
60
50
40
30
20
10
0
specific lysis
7 2
8 2
5 2
10 2
10-7 10-6 10-5 10-4 10-3 10-2 10-1 100
dilution

## Figure 41a



## Figure 41b

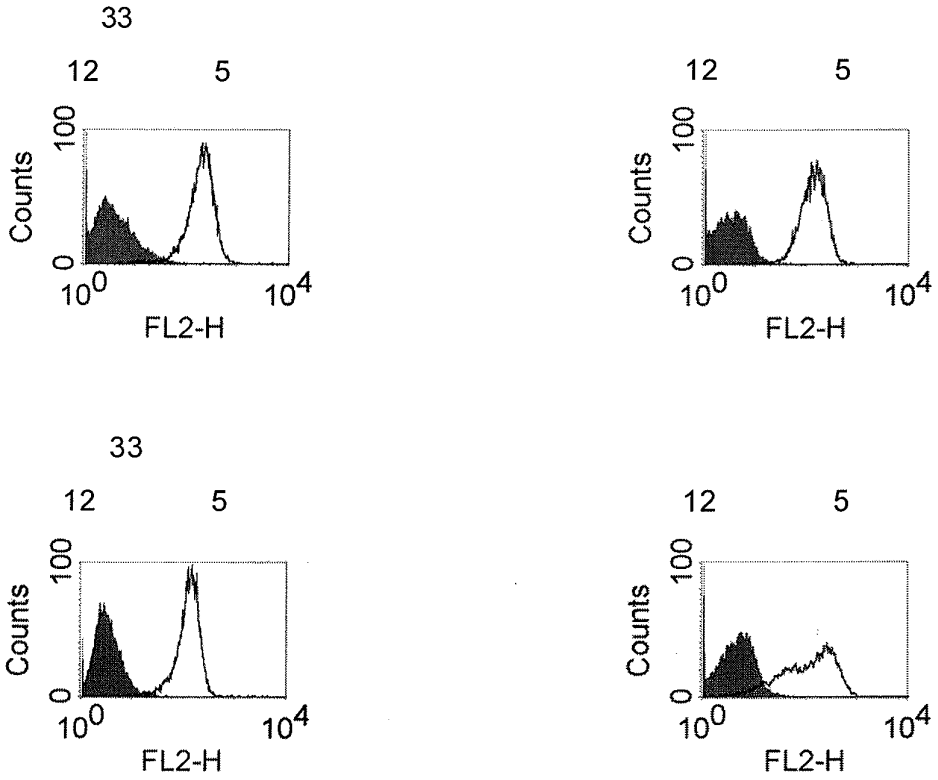
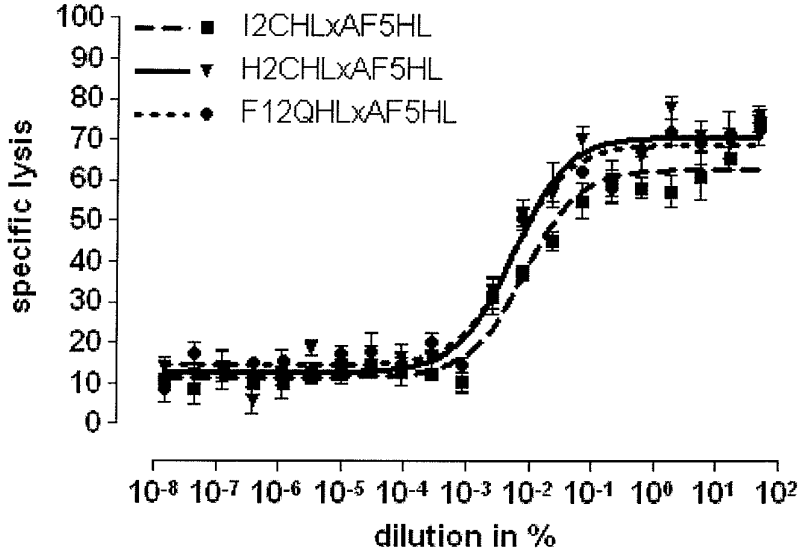

33
12
5
Counts
100
0
$10^0$
$10^4$
FL2-H
12
5
Counts
100
0
$10^0$
$10^4$
FL2-H
33
12
5
Counts
100
0
$10^0$
$10^4$
FL2-H
12
5
Counts
100
0
$10^0$
$10^4$
FL2-H

**Figure 42**

4/ 56

33




4119

33

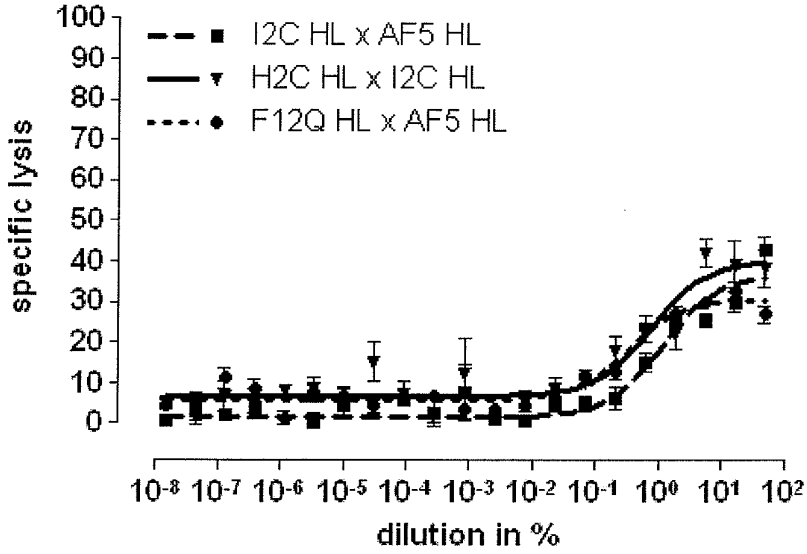


**Figure 43**

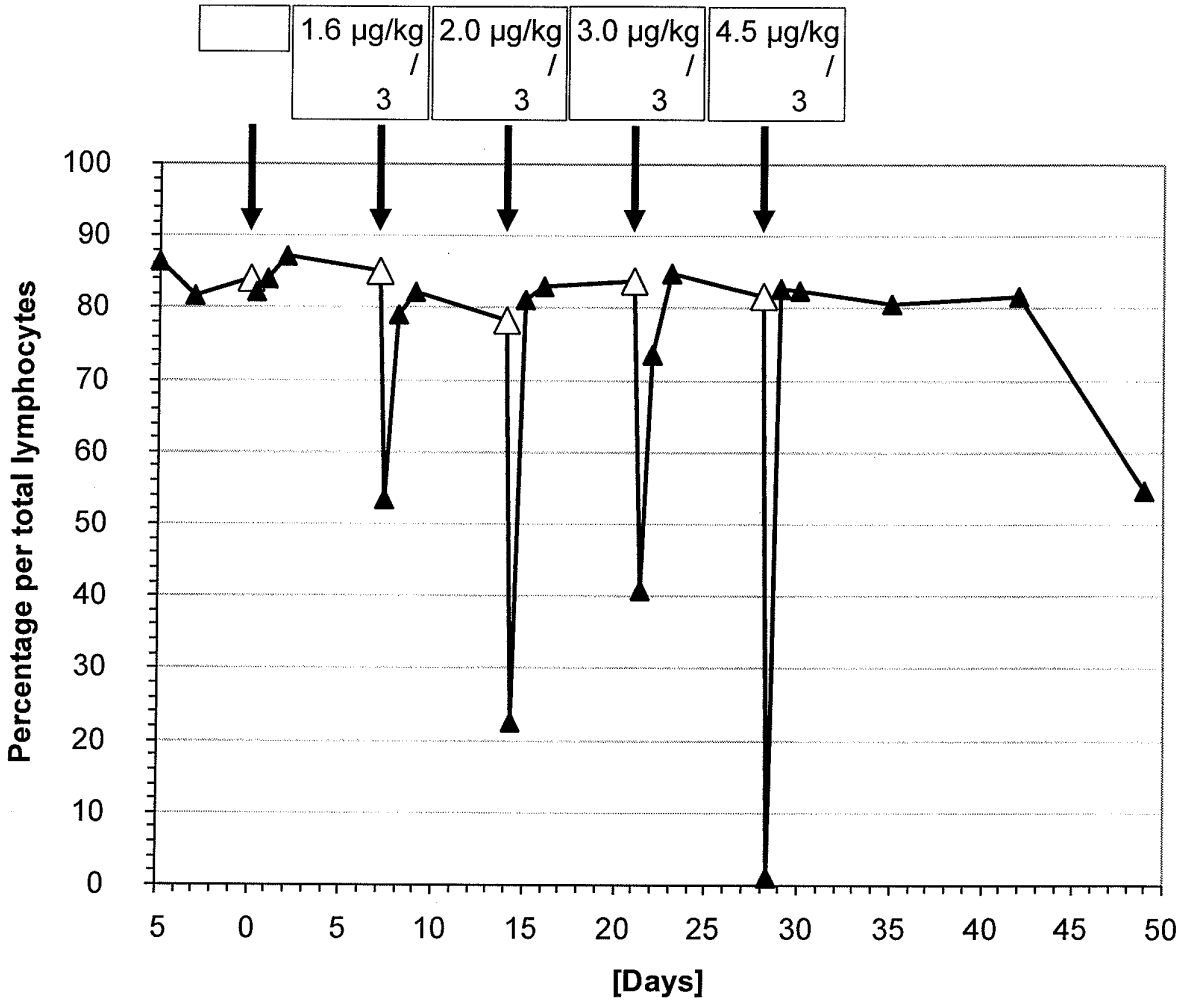

1.6 µg/kg / 3
2.0 µg/kg / 3
3.0 µg/kg / 3
4.5 µg/kg / 3
Percentage per total lymphocytes
100
90
80
70
60
50
40
30
20
10
0
5
0
5
10
15
20
25
30
35
40
45
50
[Days]

**Figure 44**

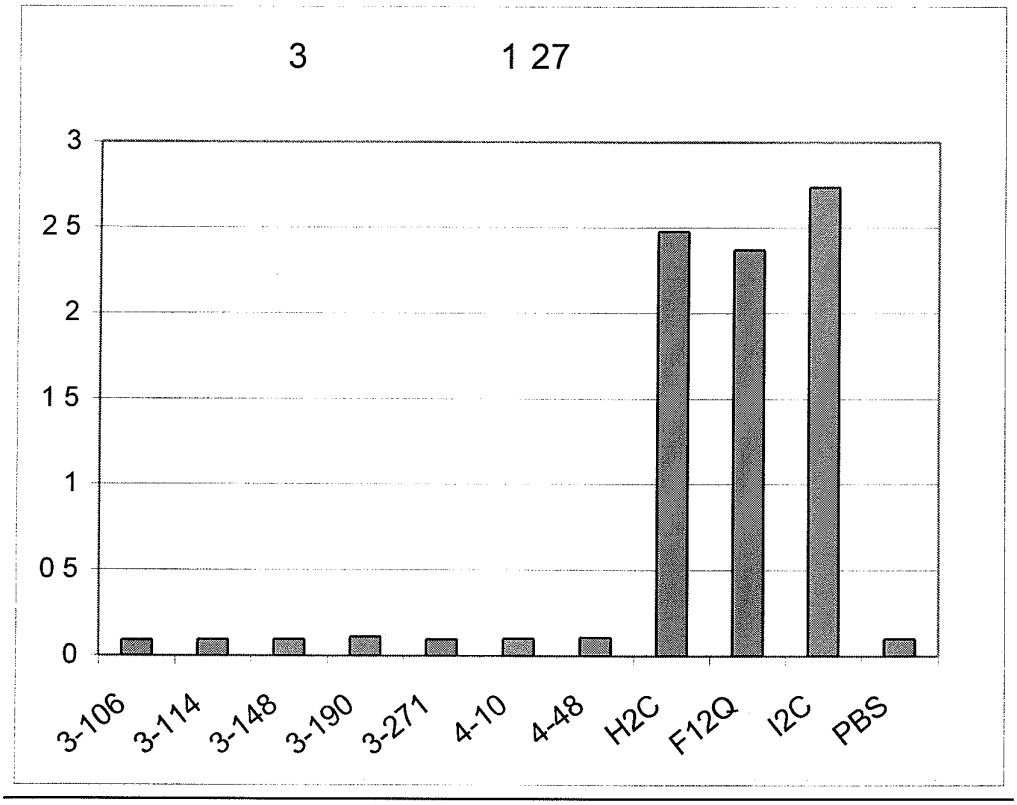

3 1 27
3
2 5
2
1 5
1
0 5
0
3-106
3-114
3-148
3-190
3-271
4-10
4-48
H2C
F12Q
I2C
PBS

**Figure 45**

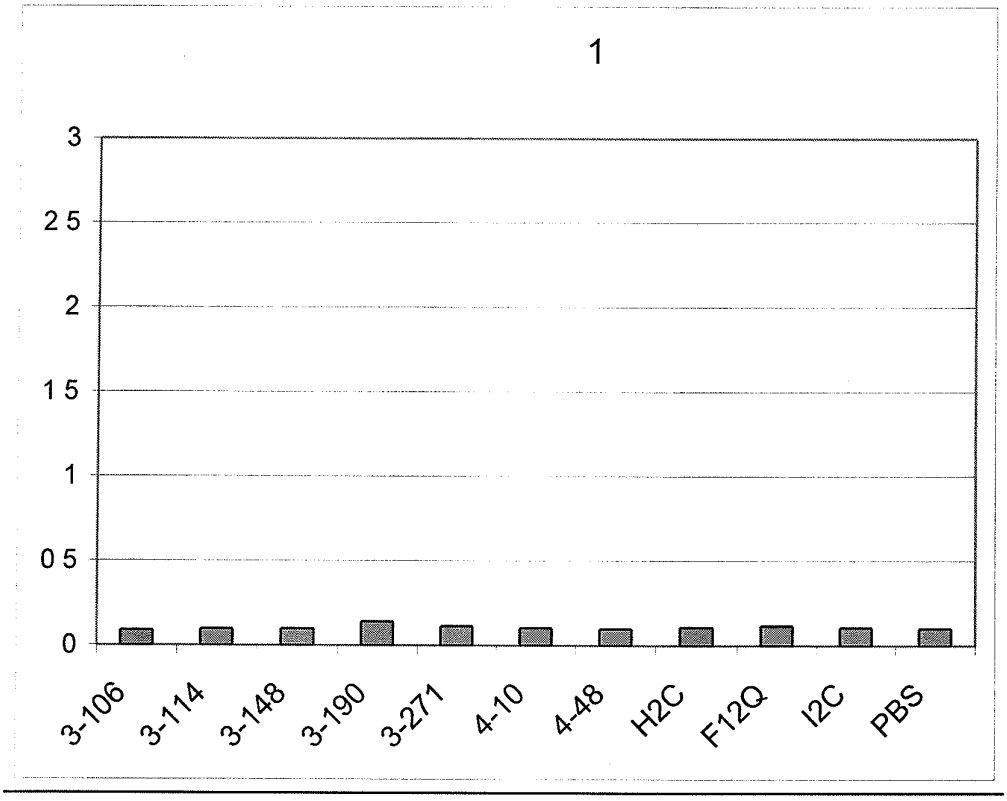
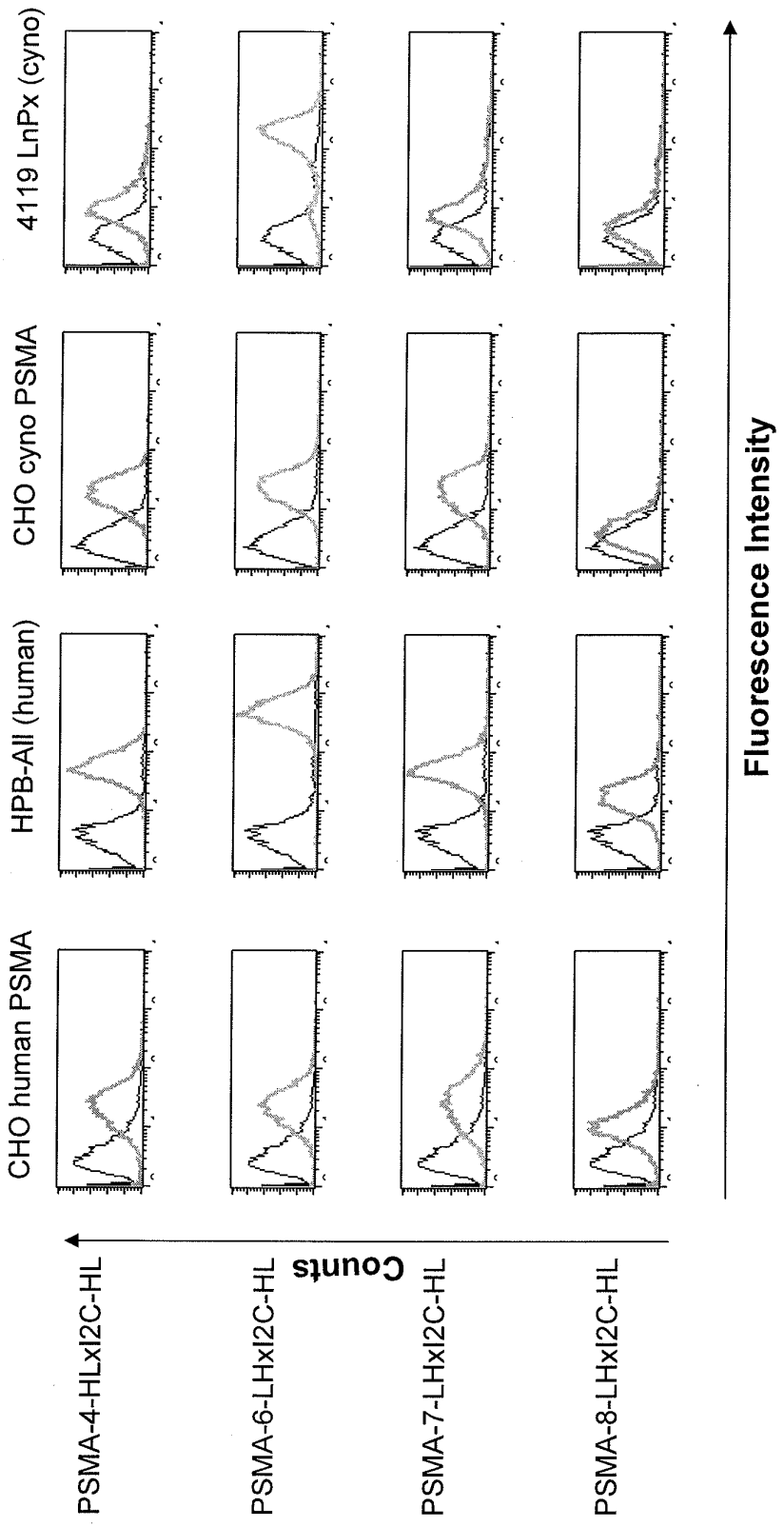

1
3
2 5
2
1 5
1
0 5
0
3-106
3-114
3-148
3-190
3-271
4-10
4-48
H2C
F12Q
I2C
PBS

Figure 46 (1)


CHO human PSMA
HPB-All (human)
CHO cyno PSMA
4119 LnPx (cyno)
PSMA-4-HLxI2C-HL
PSMA-6-LHxI2C-HL
PSMA-7-LHxI2C-HL
PSMA-8-LHxI2C-HL
Counts
Fluorescence Intensity

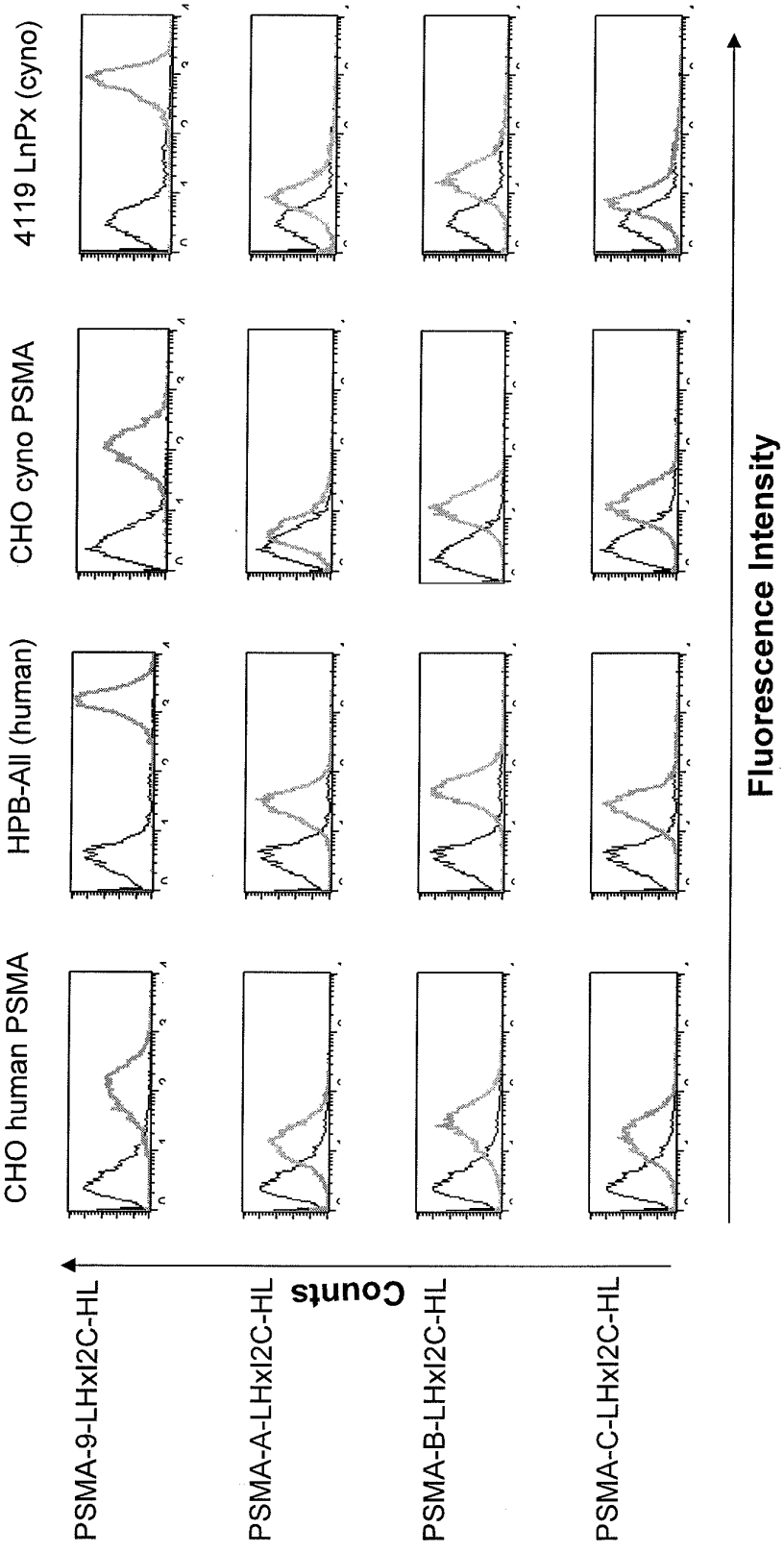

CHO human PSMA
HPB-All (human)
CHO cyno PSMA
4119 LnPx (cyno)
PSMA-9-LHxl2C-HL
PSMA-A-LHxl2C-HL
PSMA-B-LHxl2C-HL
PSMA-C-LHxl2C-HL
Counts
Fluorescence Intensity

Figure 46 (2)

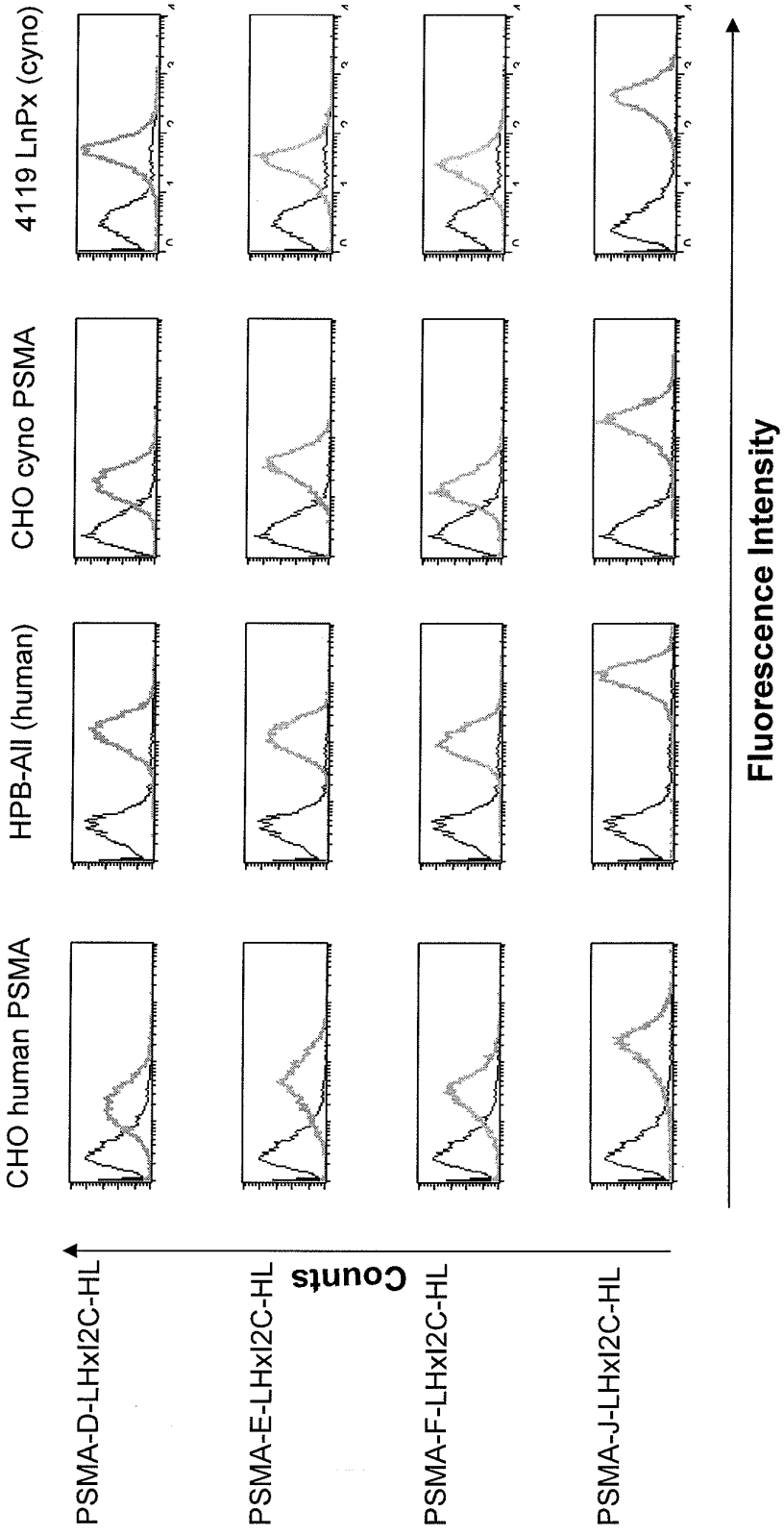

CHO human PSMA
HPB-All (human)
CHO cyno PSMA
4119 LnPx (cyno)
PSMA-D-LHxl2C-HL
PSMA-E-LHxl2C-HL
PSMA-F-LHxl2C-HL
PSMA-J-LHxl2C-HL
Counts
Fluorescence Intensity

Figure 46 (3)

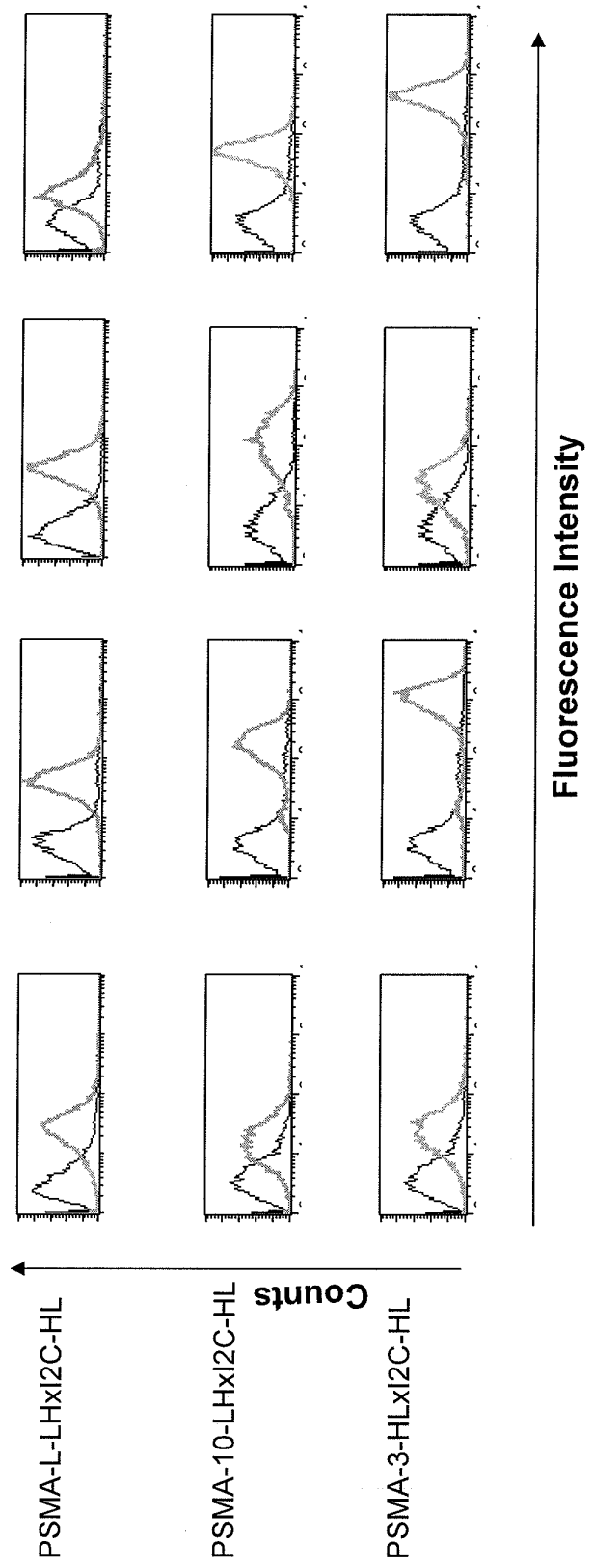
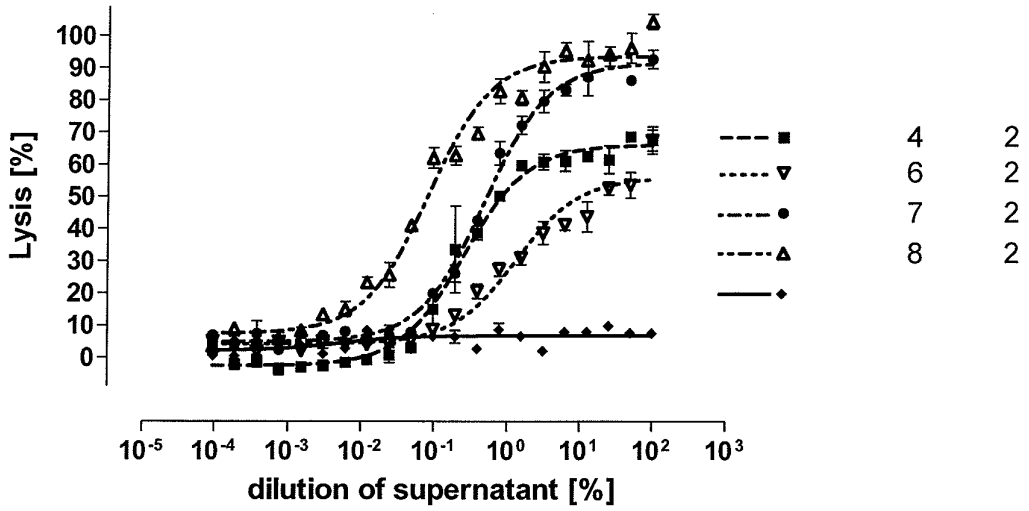

CHO human PSMA
HPB-All (human)
CHO cyno PSMA
4119 LnPx (cyno)
PSMA-L-LHxl2C-HL
PSMA-10-LHxl2C-HL
PSMA-3-HLxl2C-HL
Counts
Fluorescence Intensity

Figure 46 (4)

Figure 47(1)

A) Effector cells: CD56 depleted unstimulated human PBMC
Target cells: CHO transfected with human PSMA




B) Effector cells: CD56 depleted unstimulated human PBMC
Target cells: CHO transfected with human PSMA

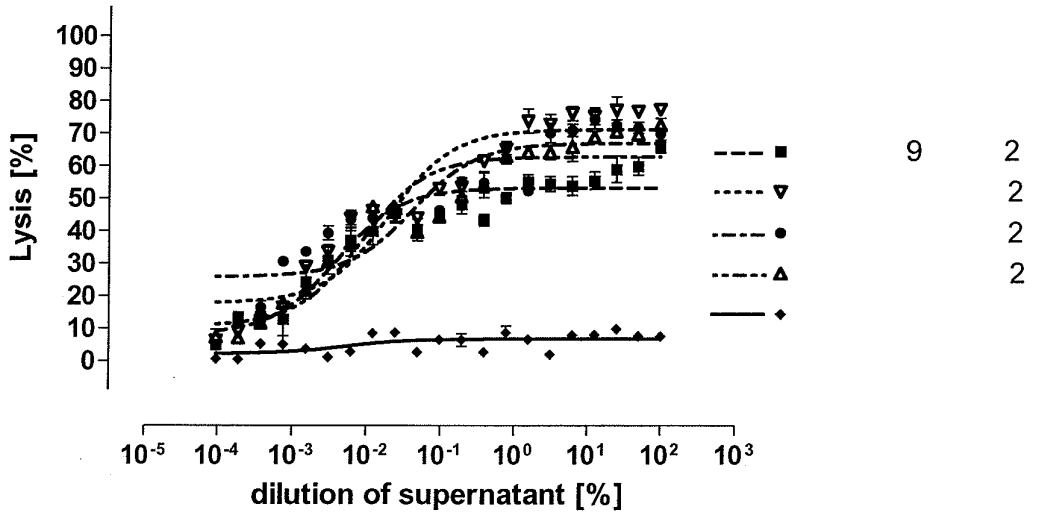
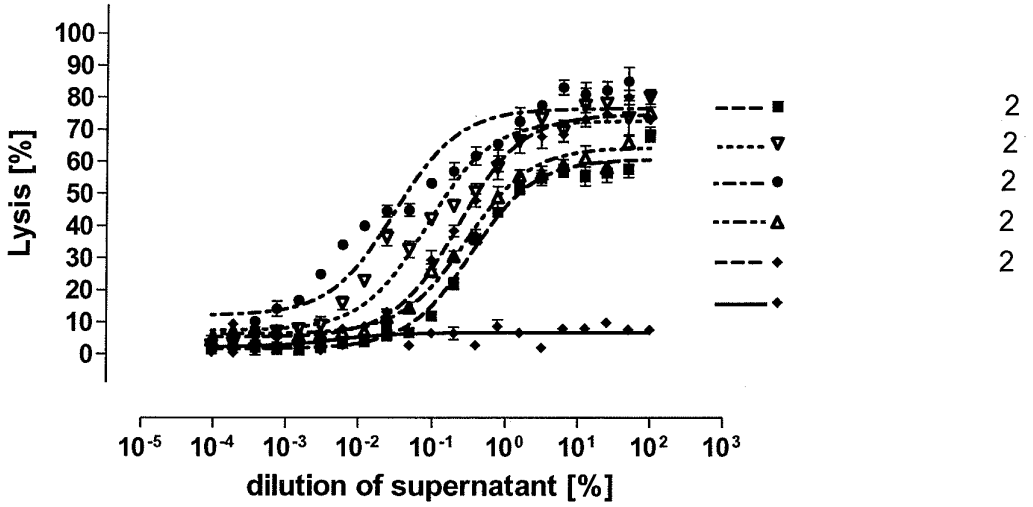


Figure 47(2)

A) Effector cells: CD56 depleted unstimulated human PBMC
Target cells: CHO transfected with human PSMA




B) Effector cells: CD56 depleted unstimulated human PBMC
Target cells: CHO transfected with human PSMA

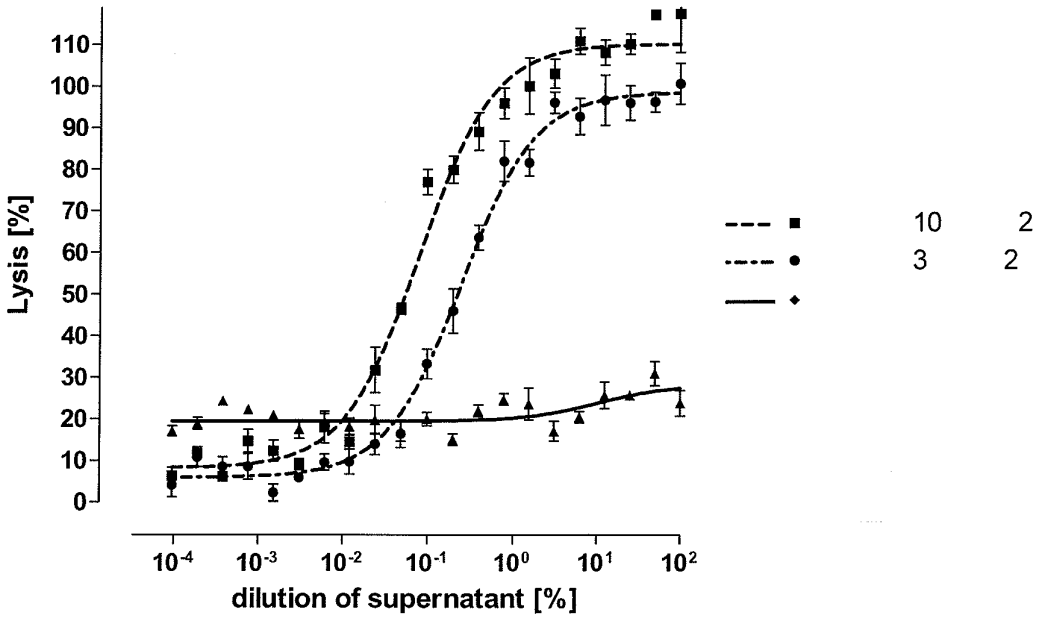
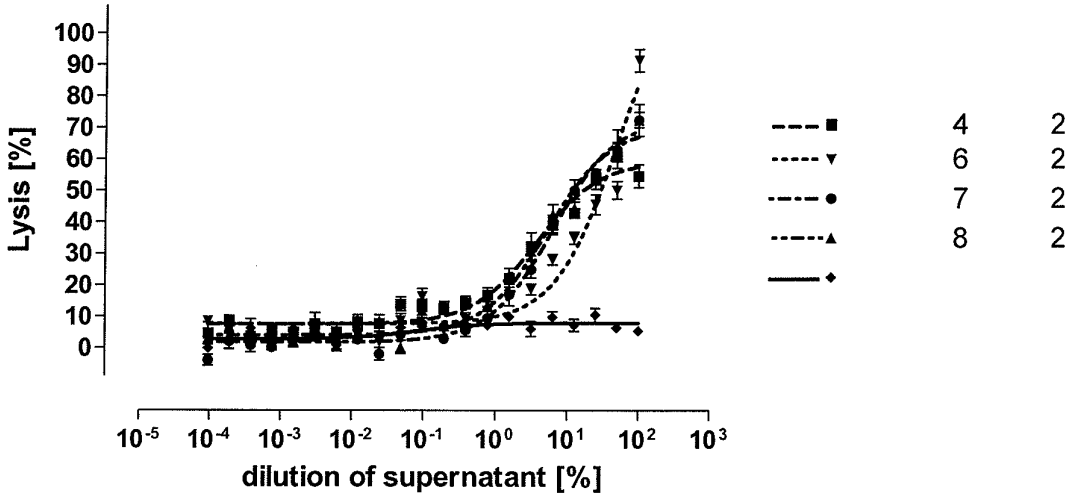


Figure 48(1)

A) Effector cells: 4119LnPx
Target cells: CHO transfected with macaque PSMA




B) Effector cells: 4119LnPx
Target cells: CHO transfected with macaque PSMA

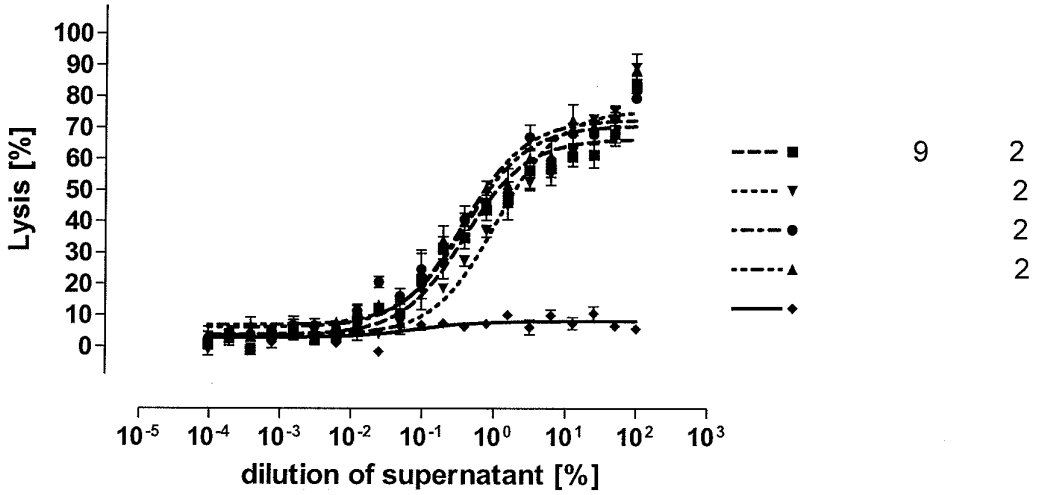
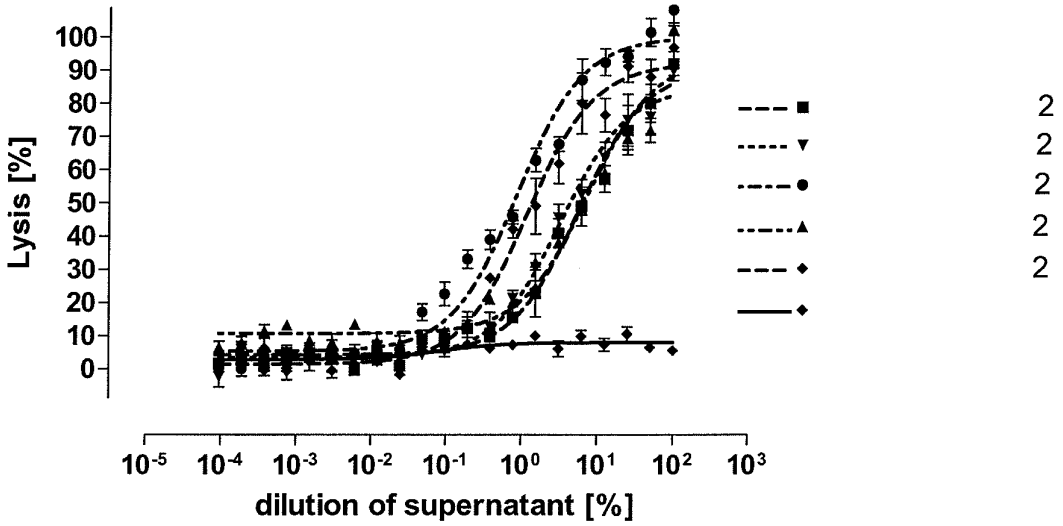
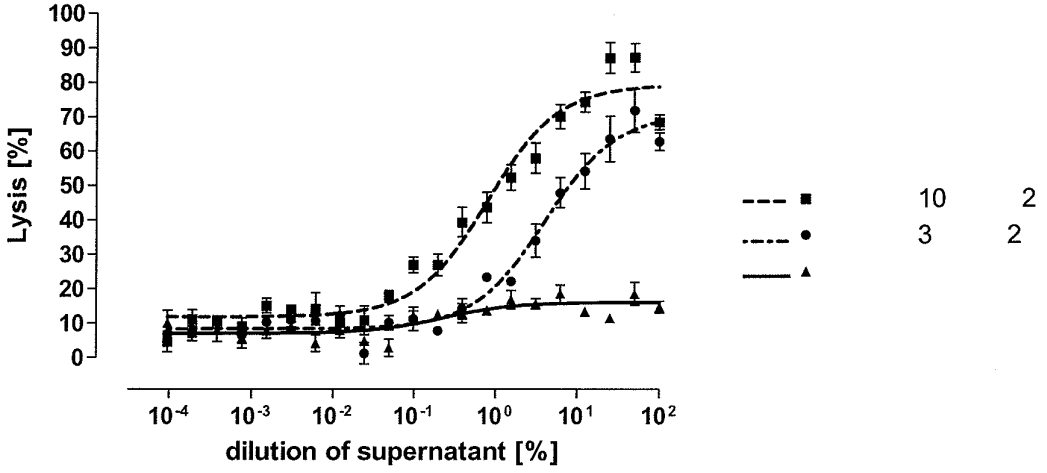


Figure 48(2)

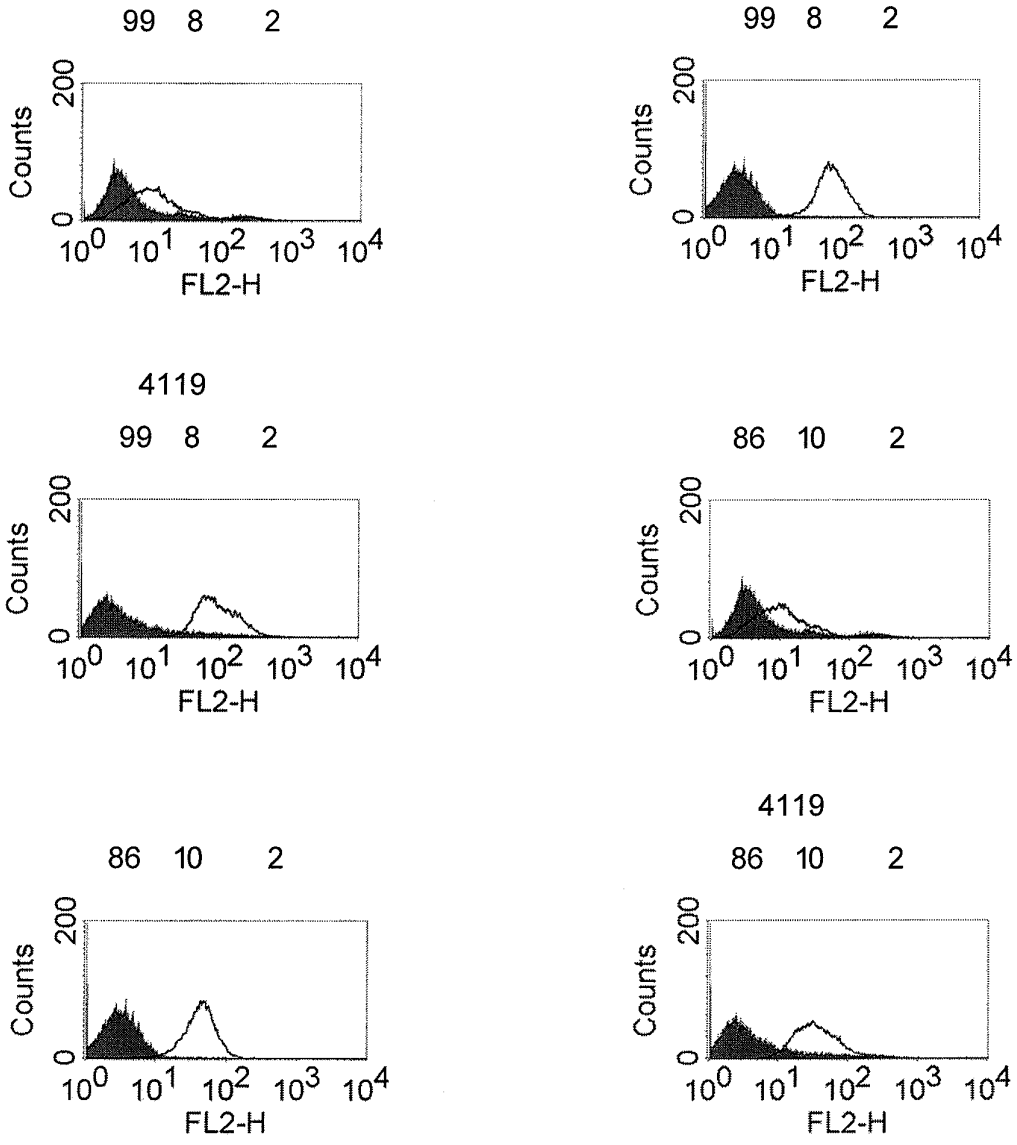
A) Effector cells: 4119LnPx
Target cells: CHO transfected with macaque PSMA



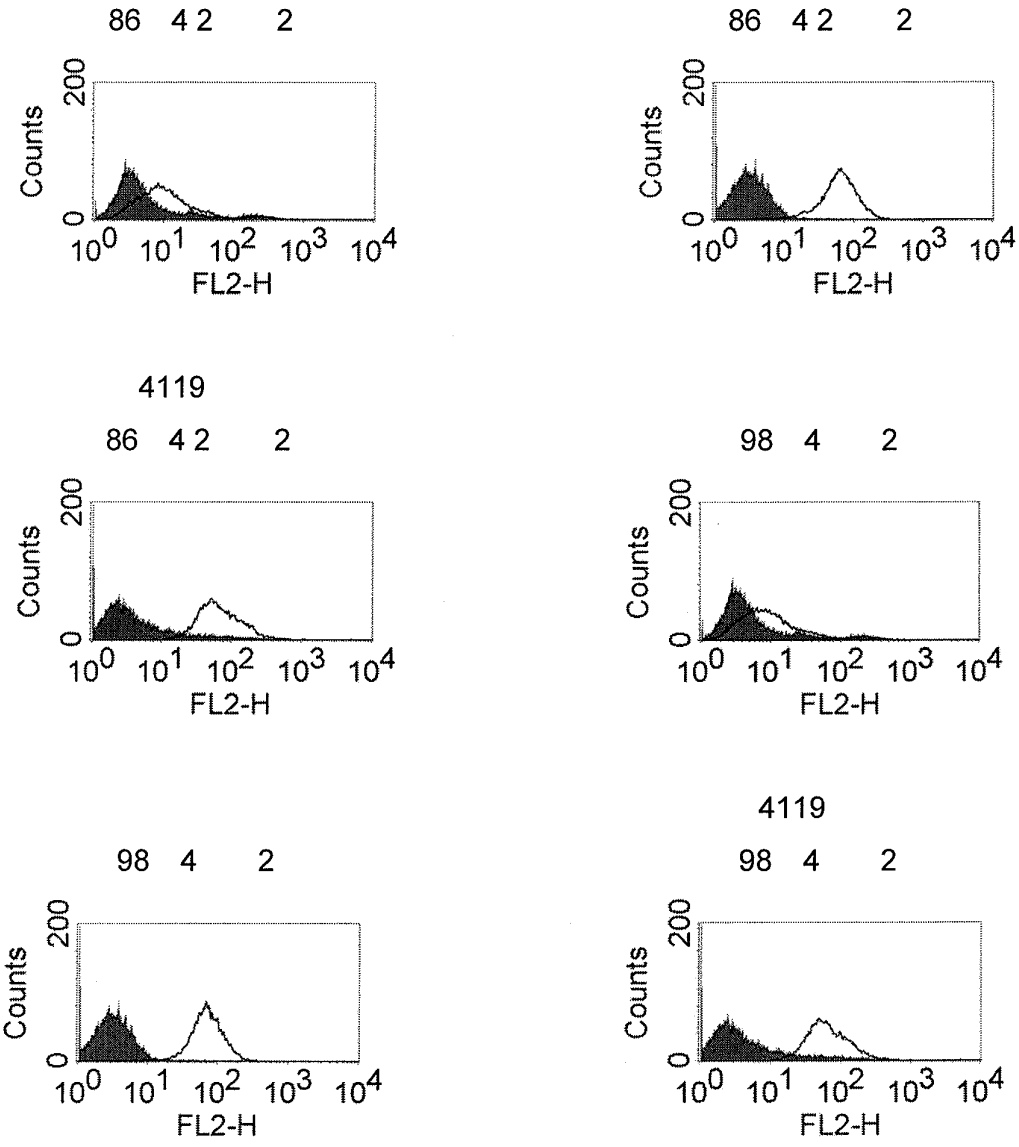

B) Effector cells: 4119LnPx
Target cells: CHO transfected with macaque PSMA



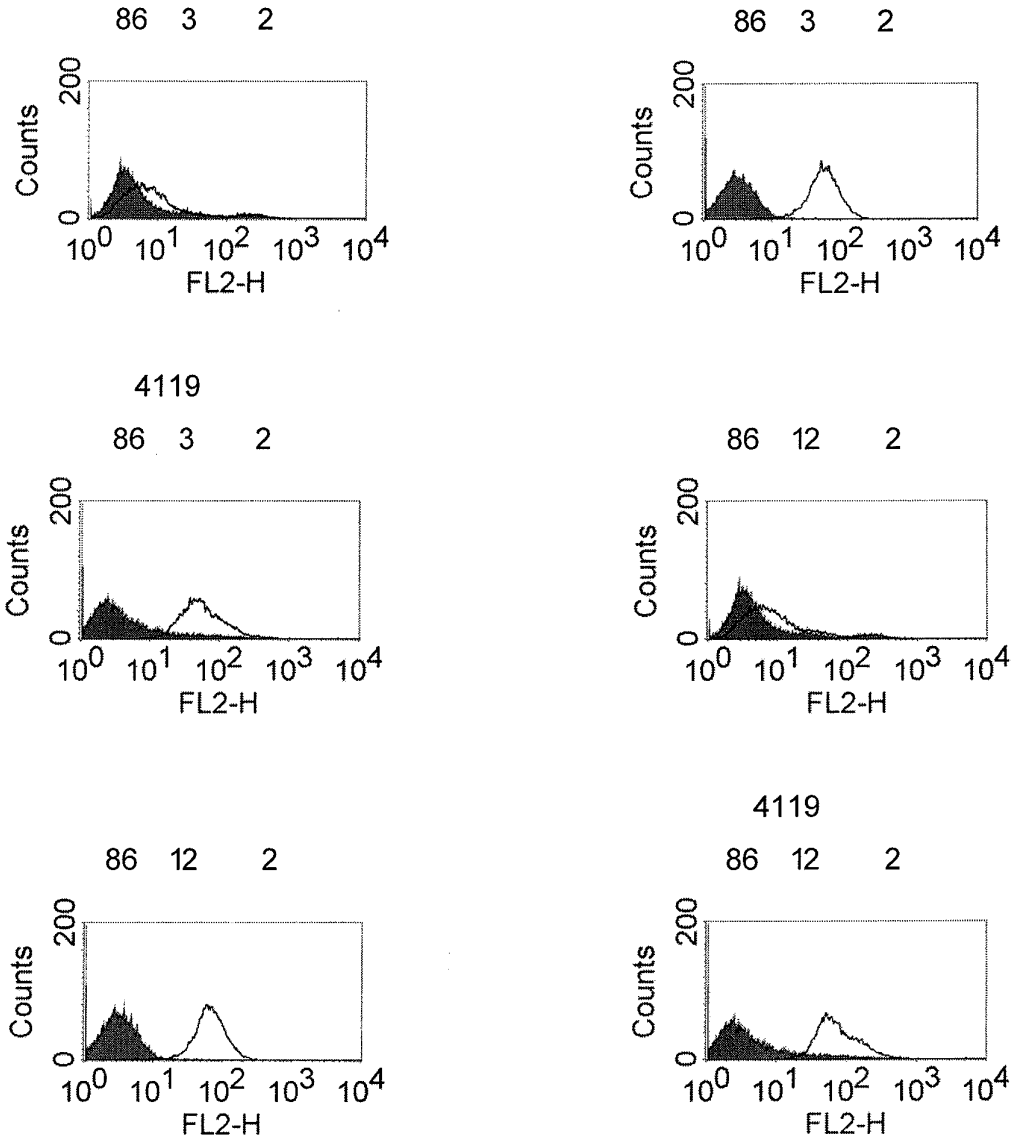
## Figure 49a


99 8 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
99 8 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
99 8 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
86 10 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
86 10 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
86 10 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

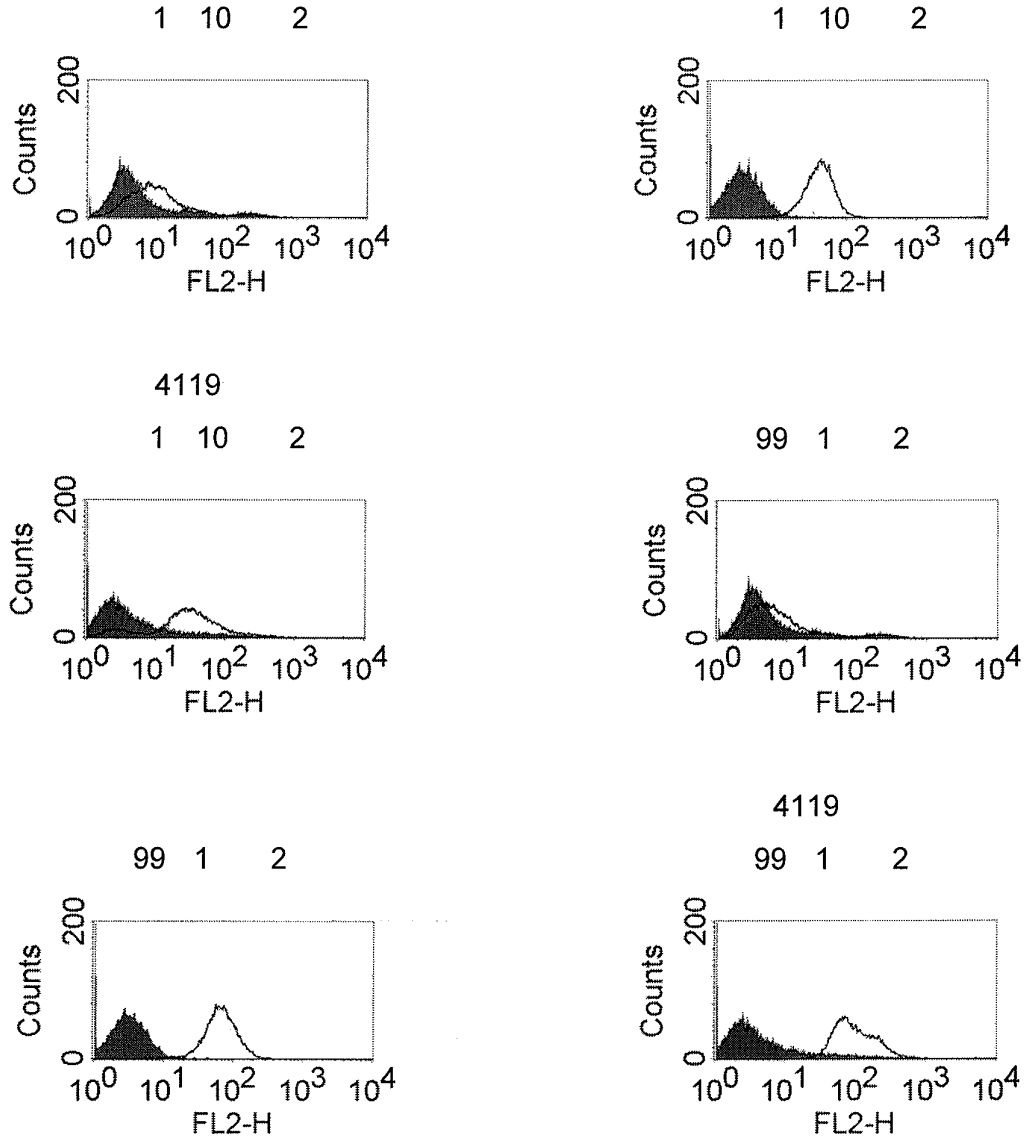
## Figure 49b


86 4 2 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
86 4 2 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
86 4 2 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
98 4 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
98 4 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
98 4 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

## Figure 49c


86 3 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
86 3 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
86 3 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
86 12 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
86 12 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
86 12 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

## Figure 49d


1 10 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
1 10 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
1 10 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
99 1 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
99 1 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
99 1 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

## Figure 49e

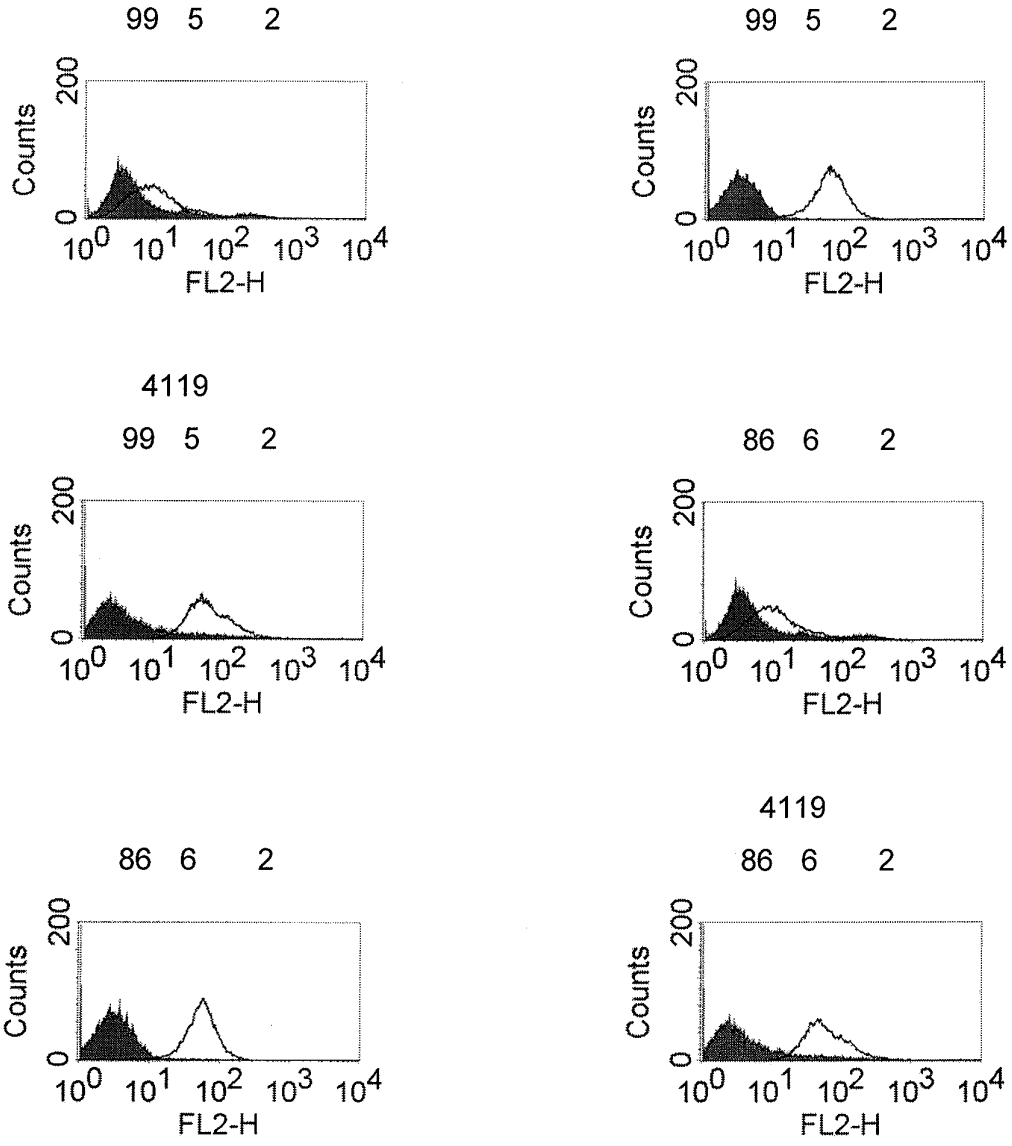
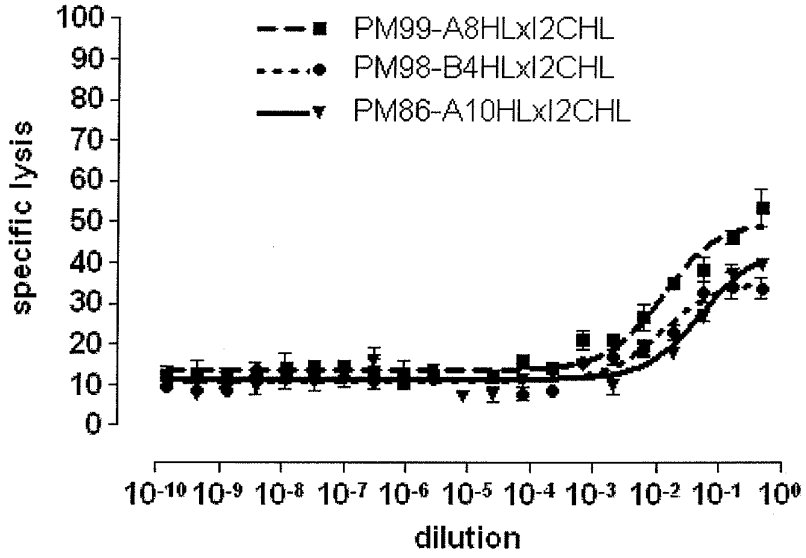

99 5 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
99 5 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
99 5 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
86 6 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
86 6 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H
4119
86 6 2
Counts
200
0
$10^0$ $10^1$ $10^2$ $10^3$ $10^4$
FL2-H

**Figure 50(1)**

4/ 56




4/ 56

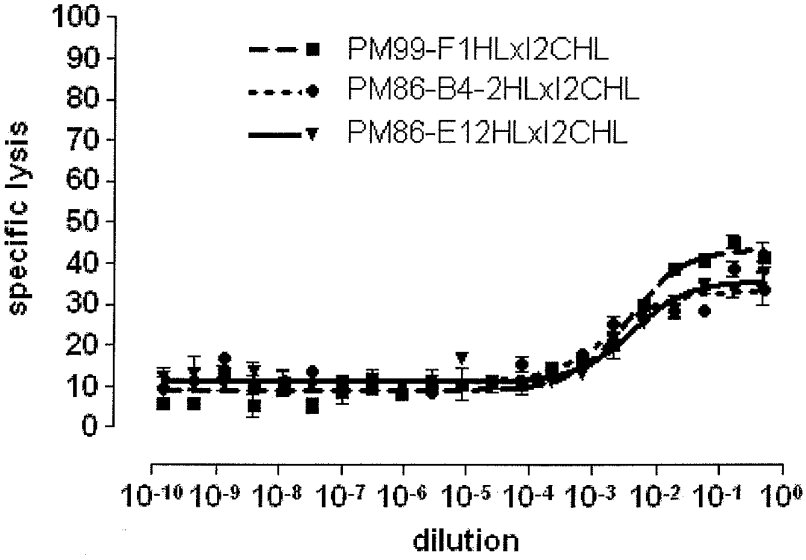
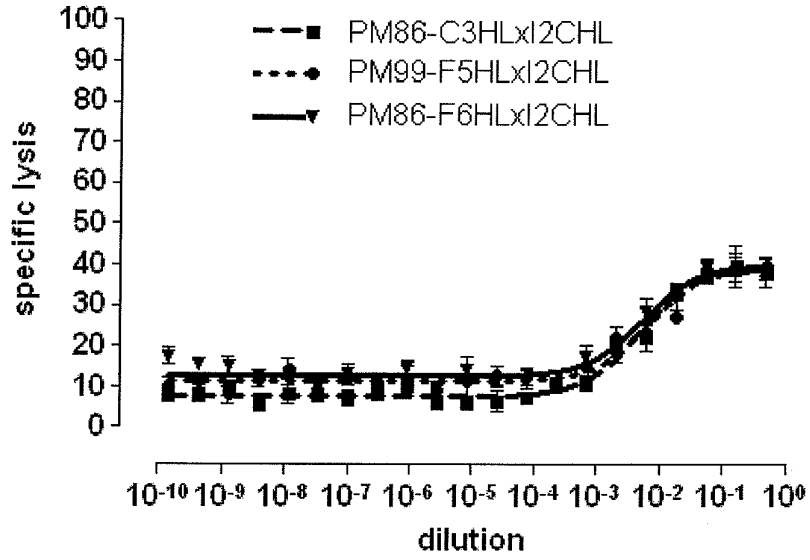


**Figure 50(2)**

4/ 56




4/ 56

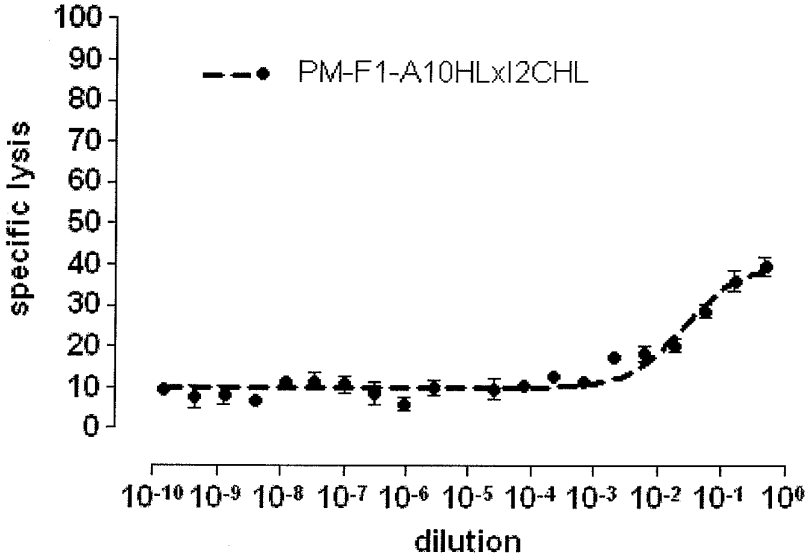
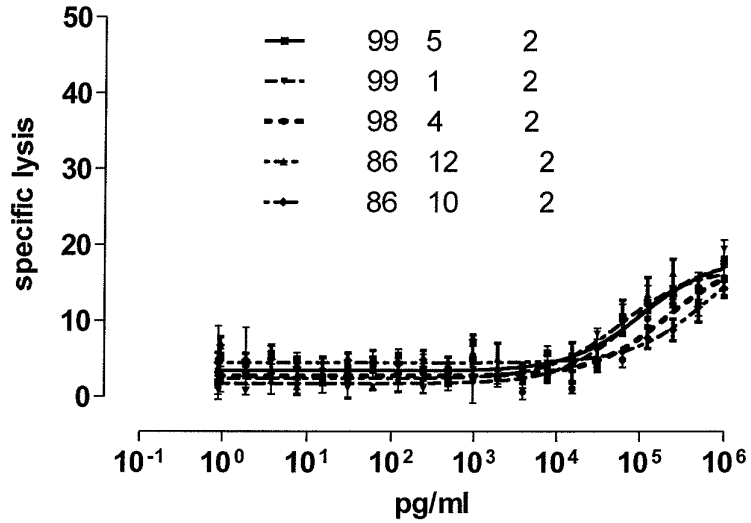
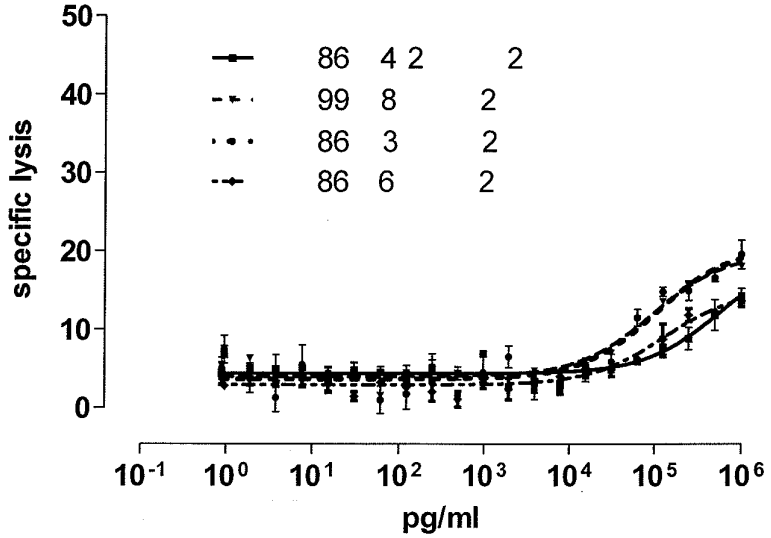


Figure 50(3)

A) Effector cells: 4119LnPx
Target cells: CHO transfected with macaque PSMA




B) Effector cells: 4119LnPx
Target cells: CHO transfected with macaque PSMA



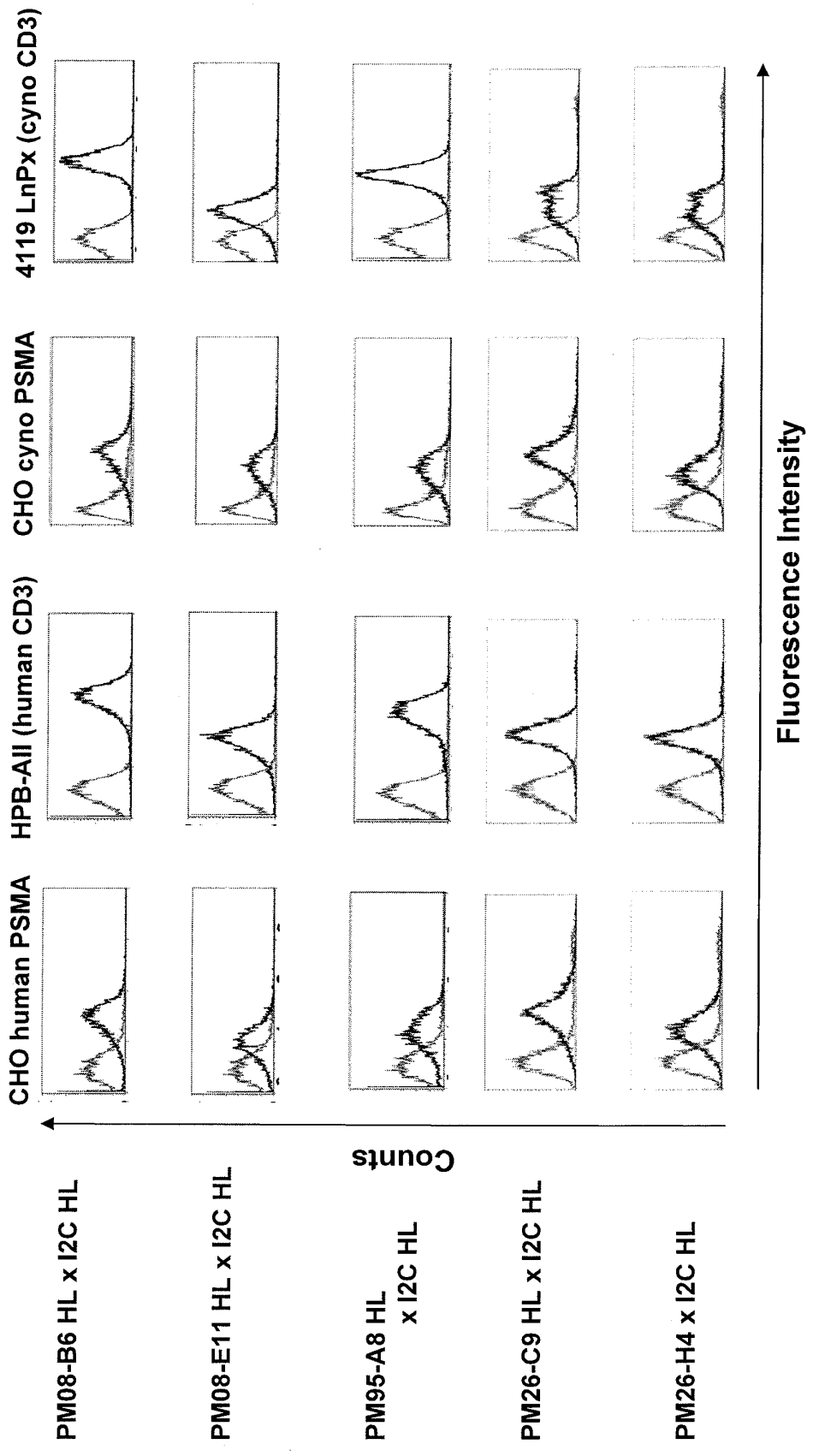

CHO human PSMA
HPB-All (human CD3)
CHO cyno PSMA
4119 LnPx (cyno CD3)
PM08-B6 HL x I2C HL
PM08-E11 HL x I2C HL
PM95-A8 HL x I2C HL
PM26-C9 HL x I2C HL
PM26-H4 x I2C HL
Counts
Fluorescence Intensity

Figure: 51a

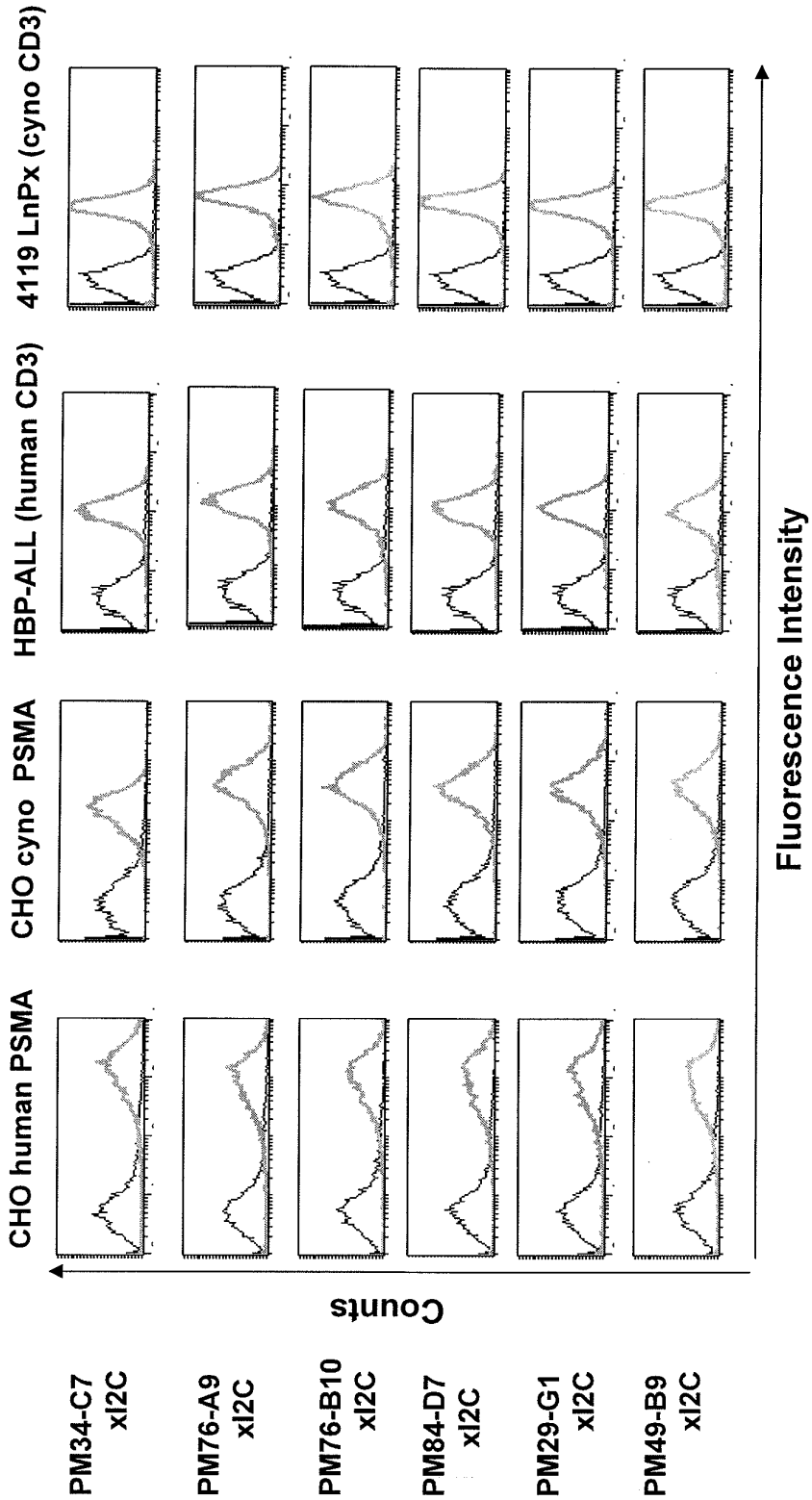

CHO human PSMA
CHO cyno PSMA
HBP-ALL (human CD3)
4119 LnPx (cyno CD3)
PM34-C7 xl2C
PM76-A9 xl2C
PM76-B10 xl2C
PM84-D7 xl2C
PM29-G1 xl2C
PM49-B9 xl2C
Counts
Fluorescence Intensity

Figure: 51b

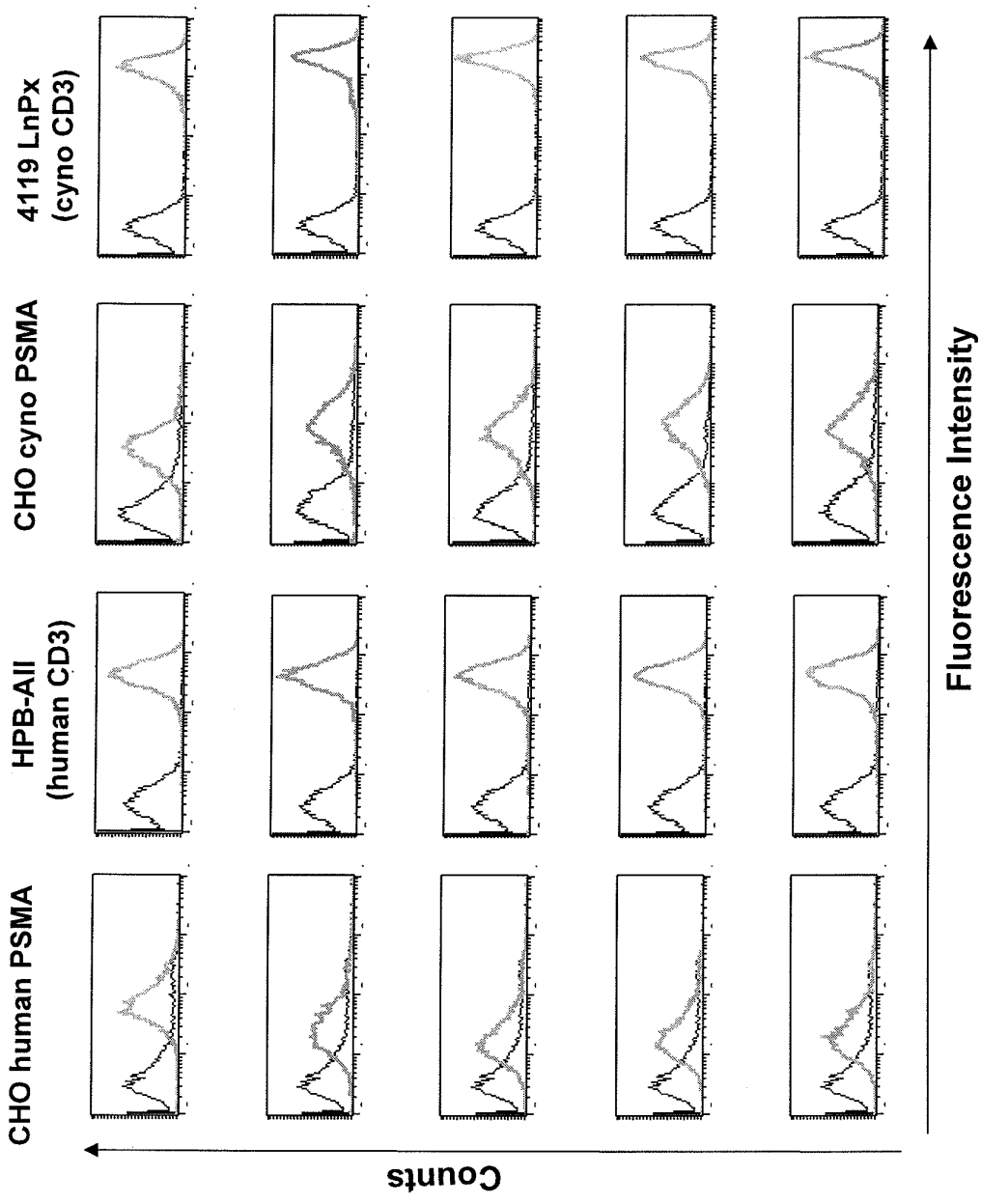
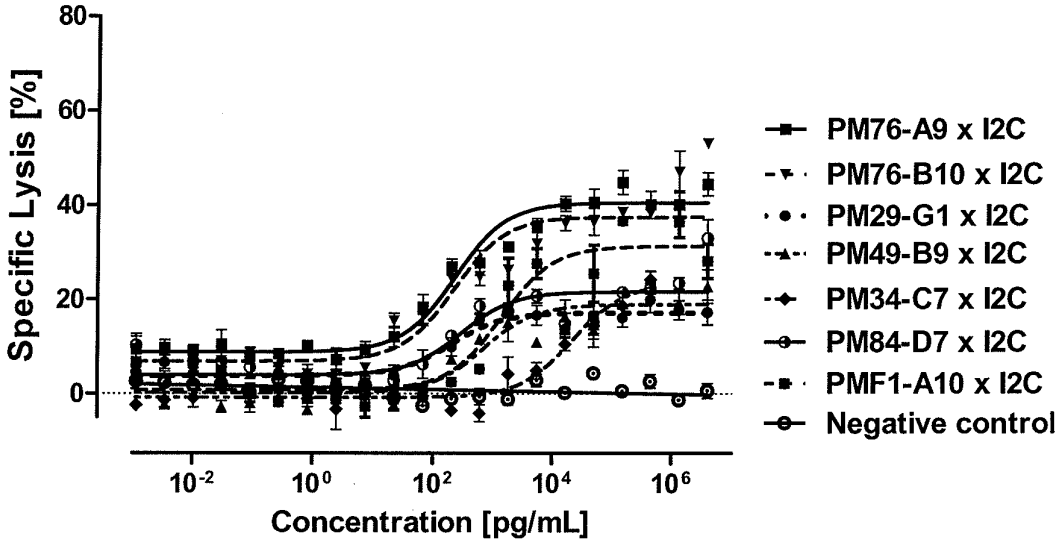

CHO human PSMA
HPB-All (human CD3)
CHO cyno PSMA
4119 LnPx (cyno CD3)
PM95-H6xI2C
PM07-D3xI2C
PM07-A12xI2C
PM07-F8xI2C
PM07-E5xI2C
Counts
Fluorescence Intensity

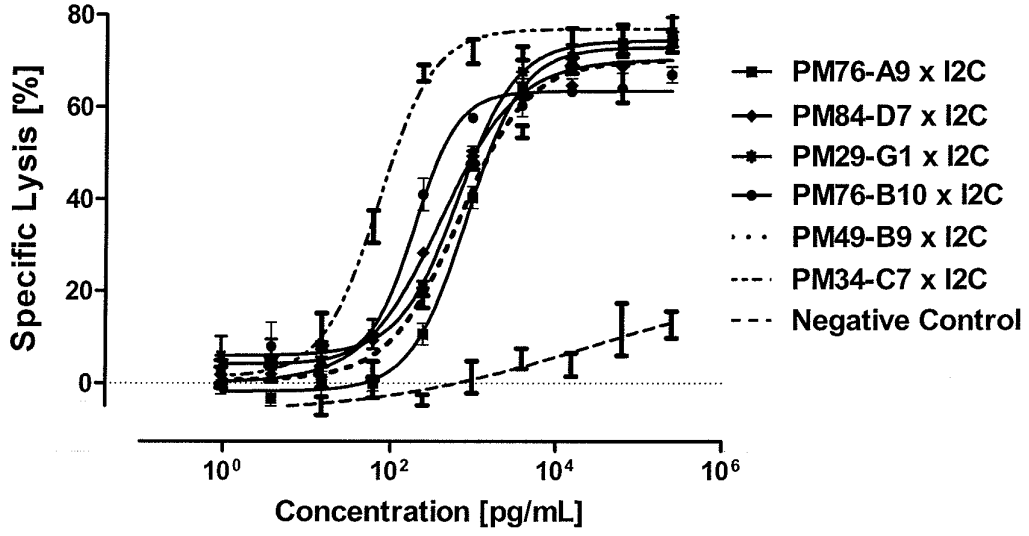
Figure: 51c

Figure 52

A) Effector cells: 4119LnPx
Target cells: CHO transfected with macaque PSMA




B) Effector cells: human unstimulated PBMC
Target cells: CHO transfected with human PSMA



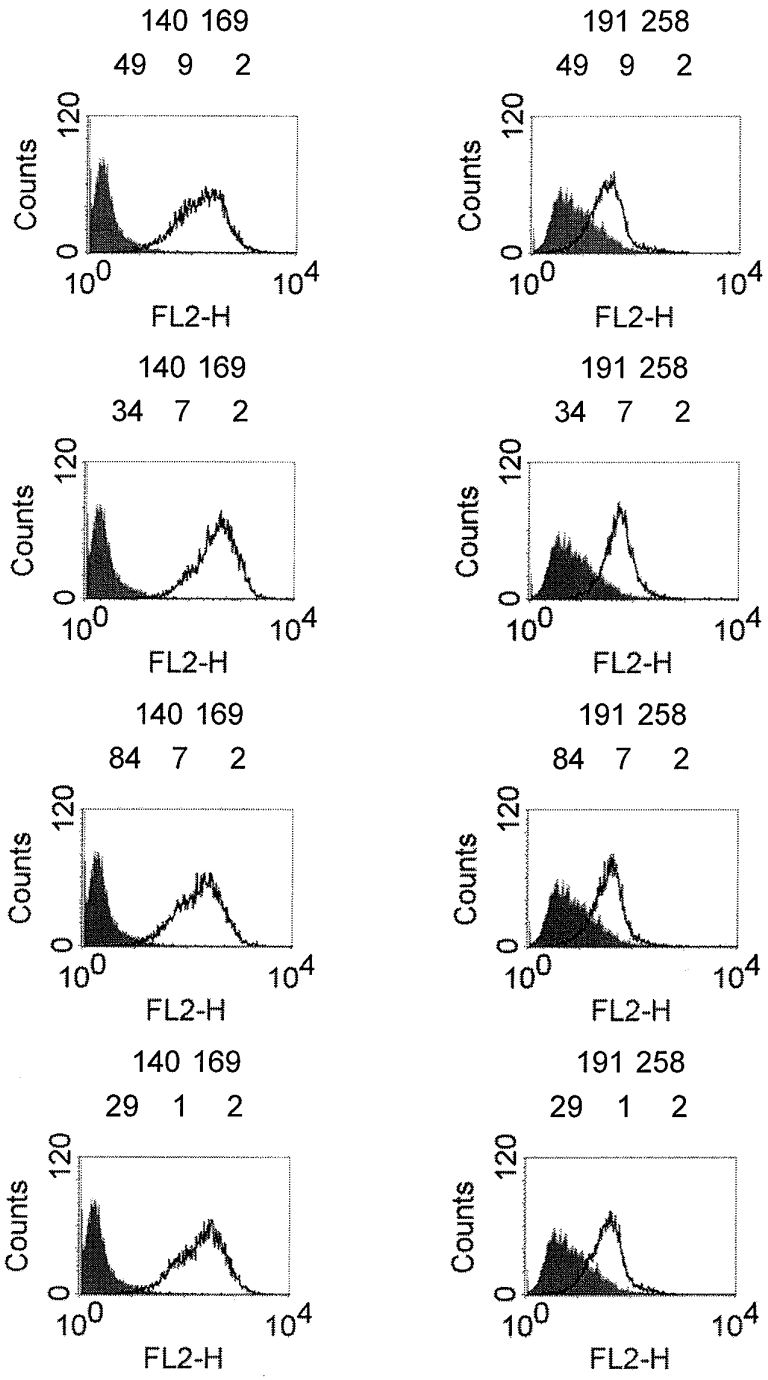

140 169
49 9 2
191 258
49 9 2
140 169
34 7 2
191 258
34 7 2
140 169
84 7 2
191 258
84 7 2
140 169
29 1 2
191 258
29 1 2
Counts
120
0
$10^0$
$10^4$
FL2-H

Figure 53a

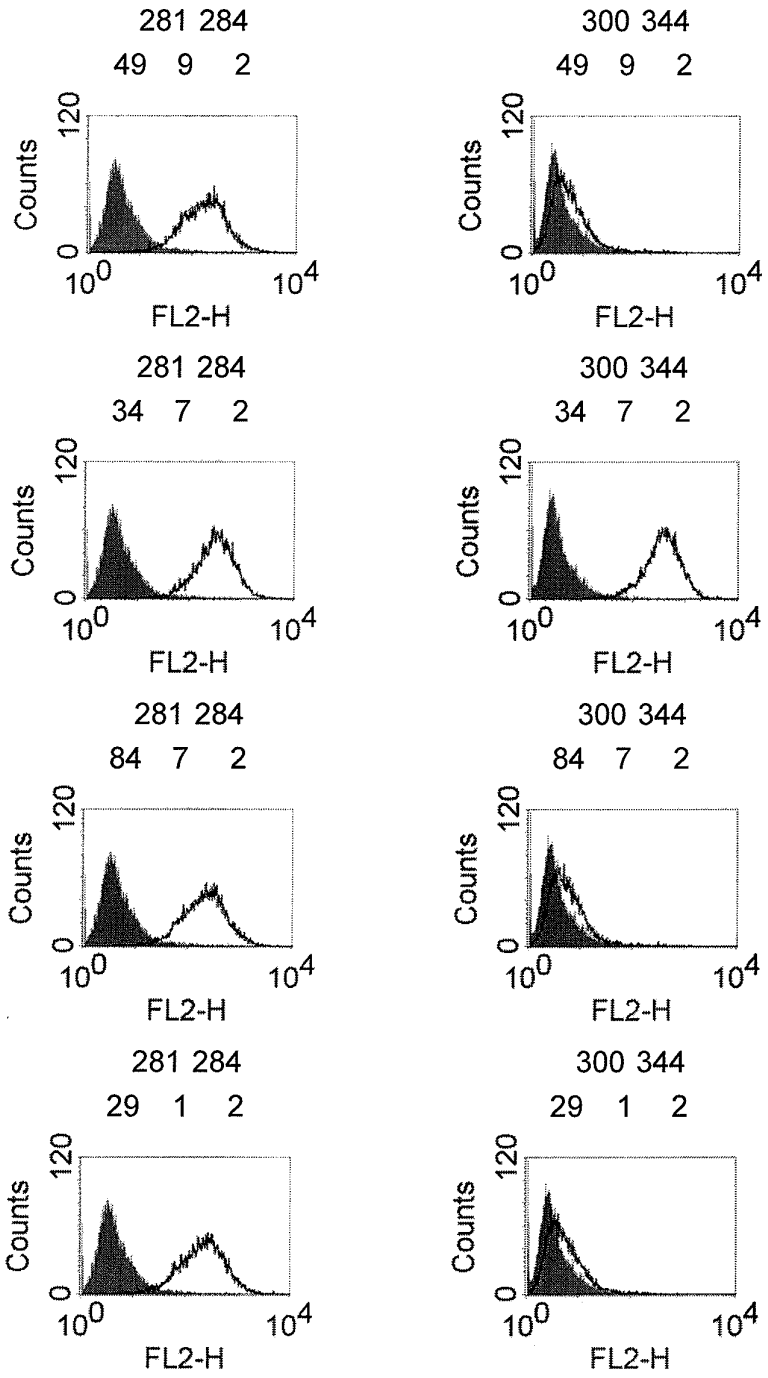

281 284
49 9 2
300 344
49 9 2
281 284
34 7 2
300 344
34 7 2
281 284
84 7 2
300 344
84 7 2
281 284
29 1 2
300 344
29 1 2
Counts
120
0
$10^0$
$10^4$
FL2-H

Figure 53b

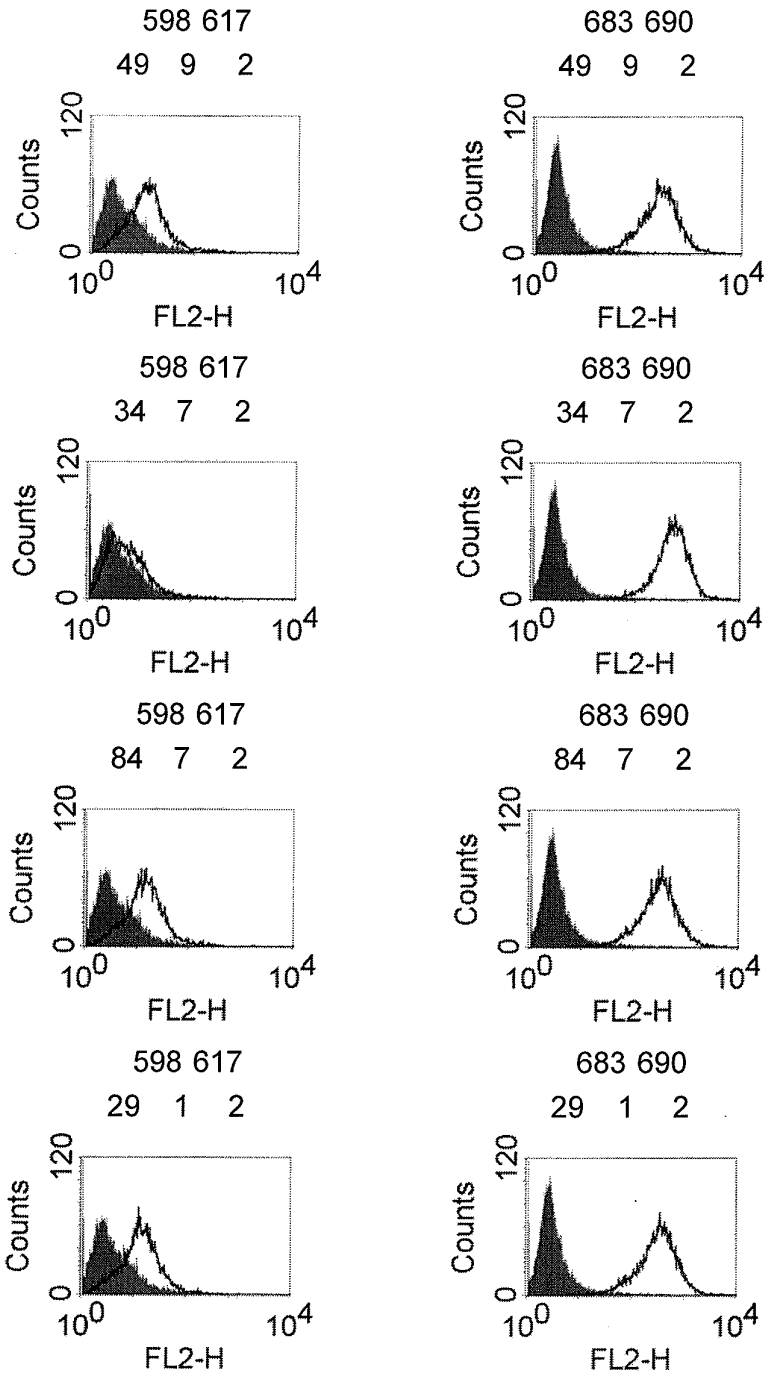

598 617
49 9 2
683 690
49 9 2
598 617
34 7 2
683 690
34 7 2
598 617
84 7 2
683 690
84 7 2
598 617
29 1 2
683 690
29 1 2
Counts
120
0
$10^0$
$10^4$
FL2-H

Figure 53c

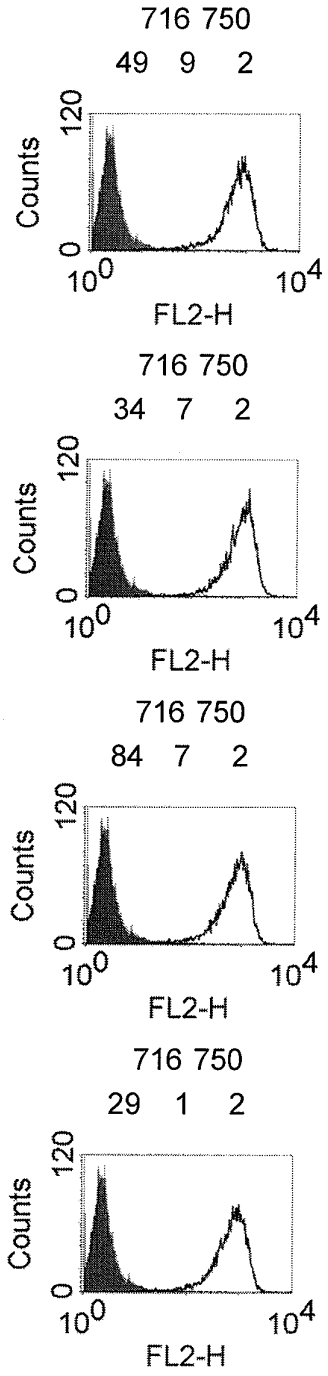

716 750
49 9 2
Counts
120
0
$10^0$
$10^4$
FL2-H
716 750
34 7 2
Counts
120
0
$10^0$
$10^4$
FL2-H
716 750
84 7 2
Counts
120
0
$10^0$
$10^4$
FL2-H
716 750
29 1 2
Counts
120
0
$10^0$
$10^4$
FL2-H

**Figure 53d**

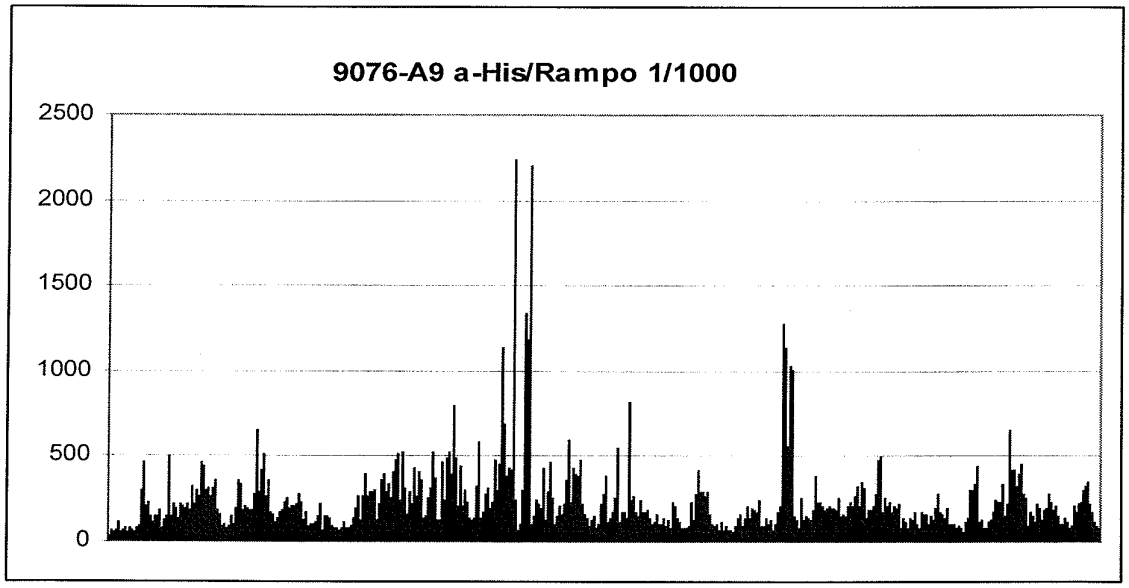



Figure 54

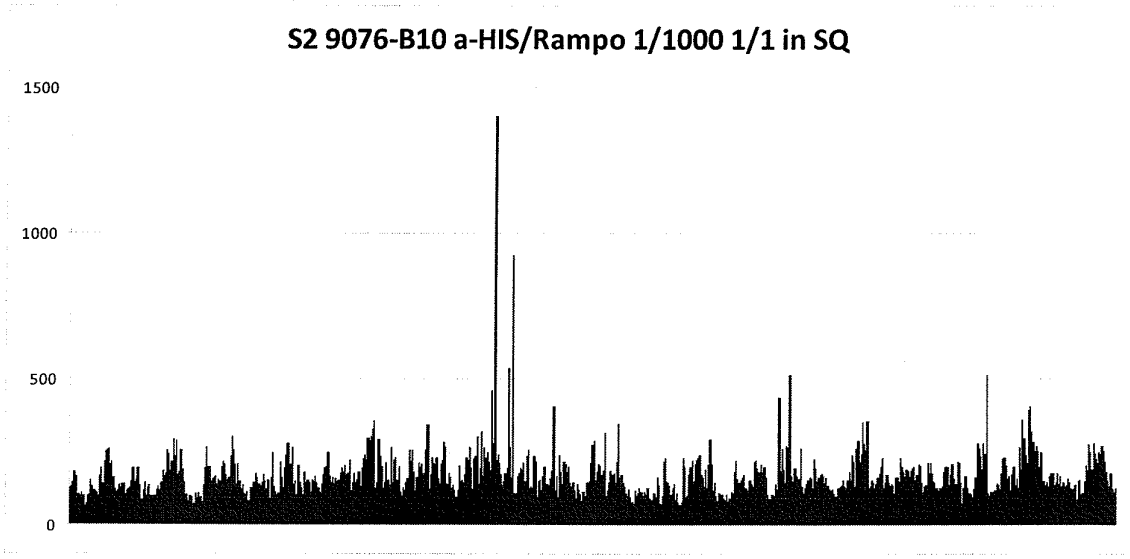



Figure 55

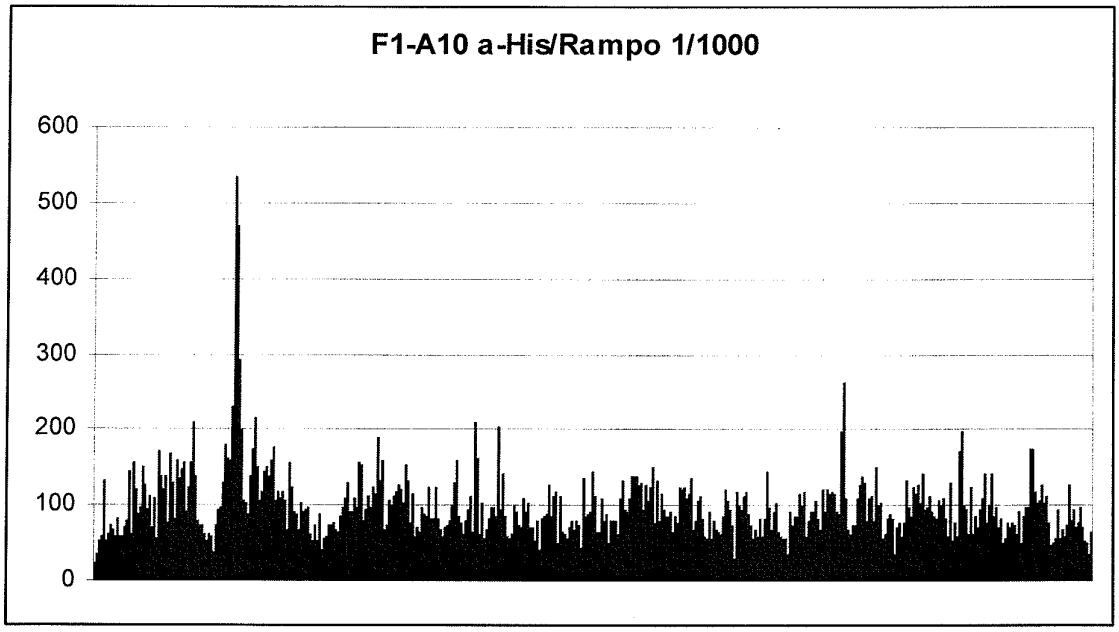



Figure 56

Figure 57

