Figure 1

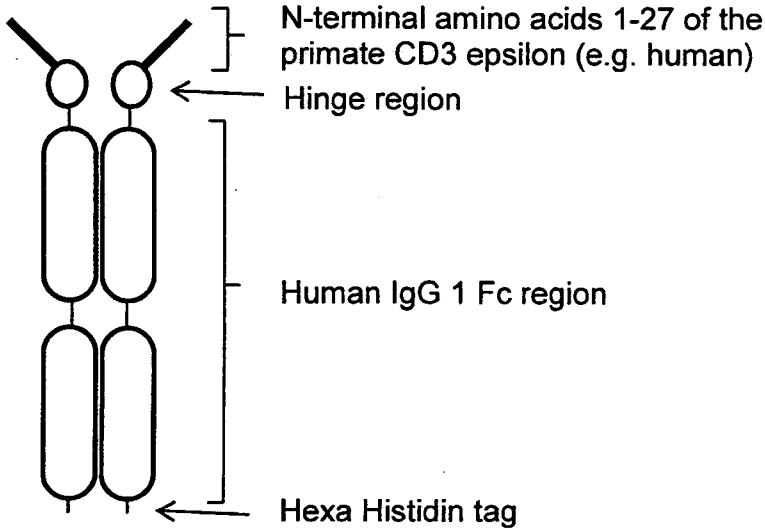
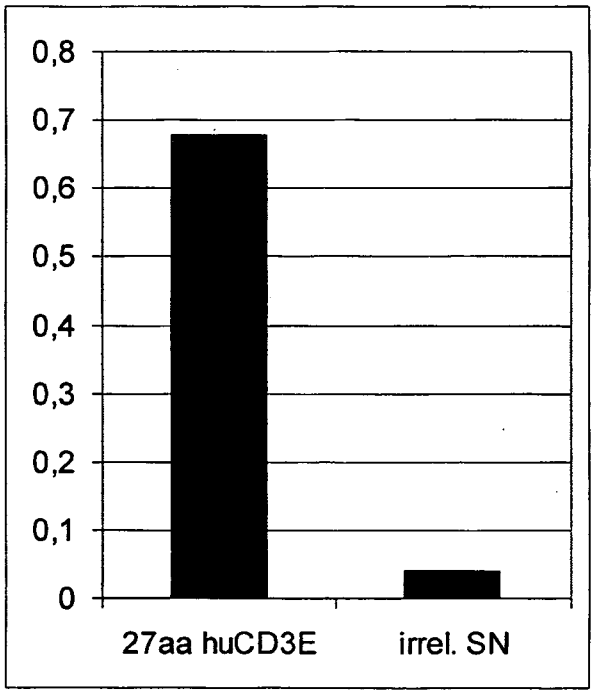

N-terminal amino acids 1-27 of the primate CD3 epsilon (e.g. human)
Hinge region
Human IgG 1 Fc region
Hexa Histidin tag

Figure 2



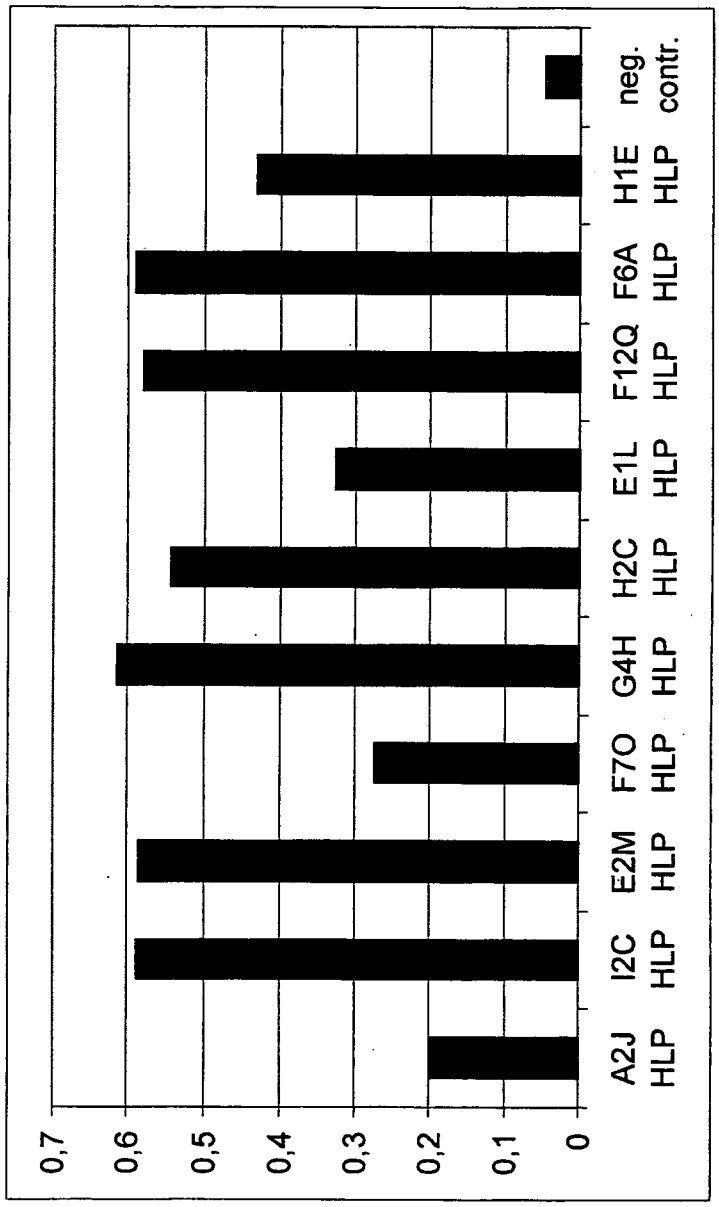

0,7
0,6
0,5
0,4
0,3
0,2
0,1
0
A2J HLP
I2C HLP
E2M HLP
F7O HLP
G4H HLP
H2C HLP
E1L HLP
F12Q HLP
F6A HLP
H1E HLP
neg. contr.

Figure 3

Figure 4

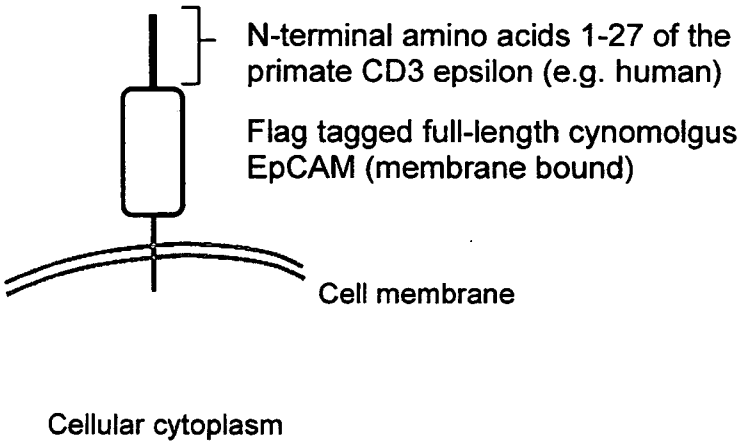

N-terminal amino acids 1-27 of the primate CD3 epsilon (e.g. human)
Flag tagged full-length cynomolgus EpCAM (membrane bound)
Cell membrane
Cellular cytoplasm

Figure 5

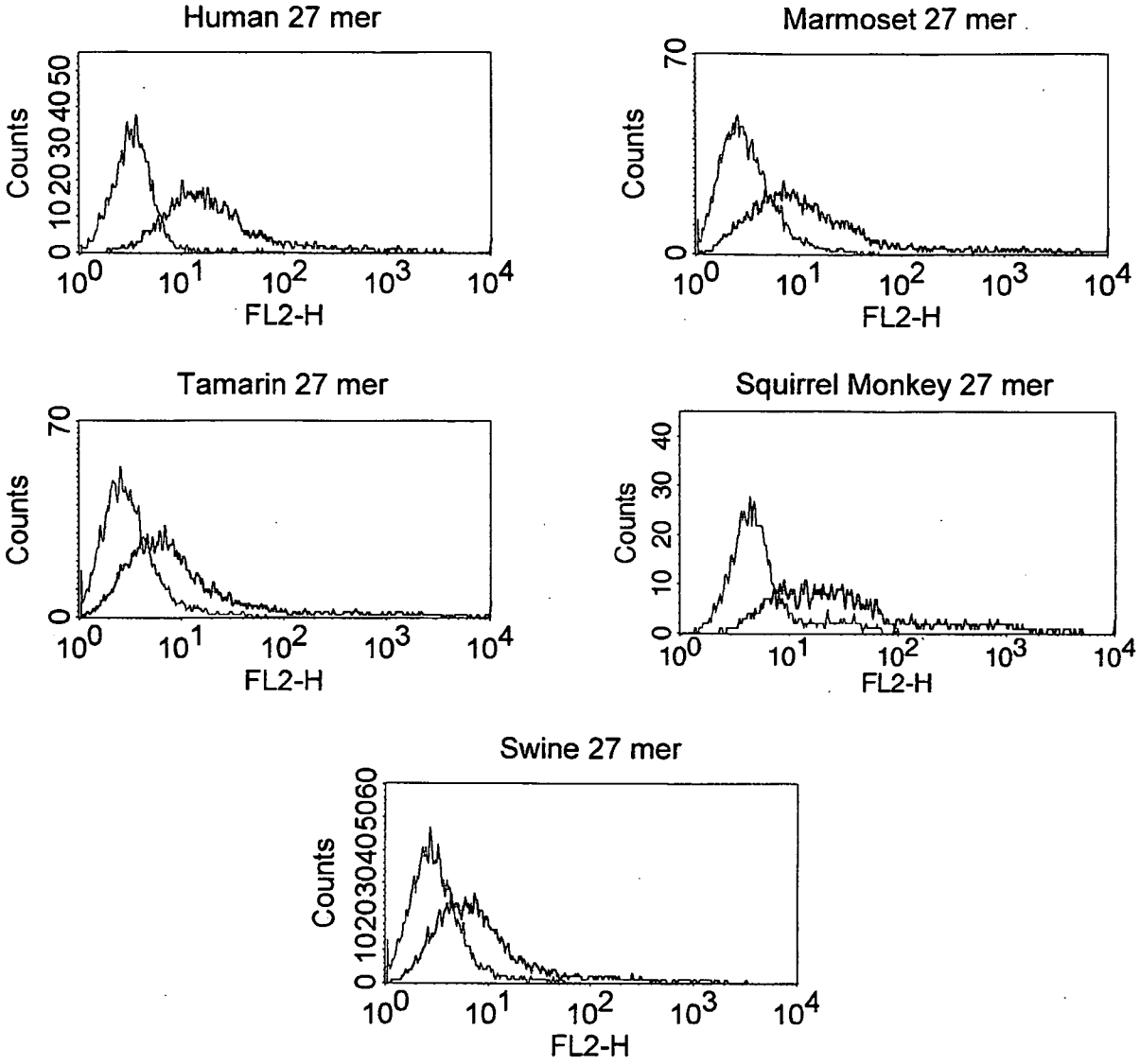
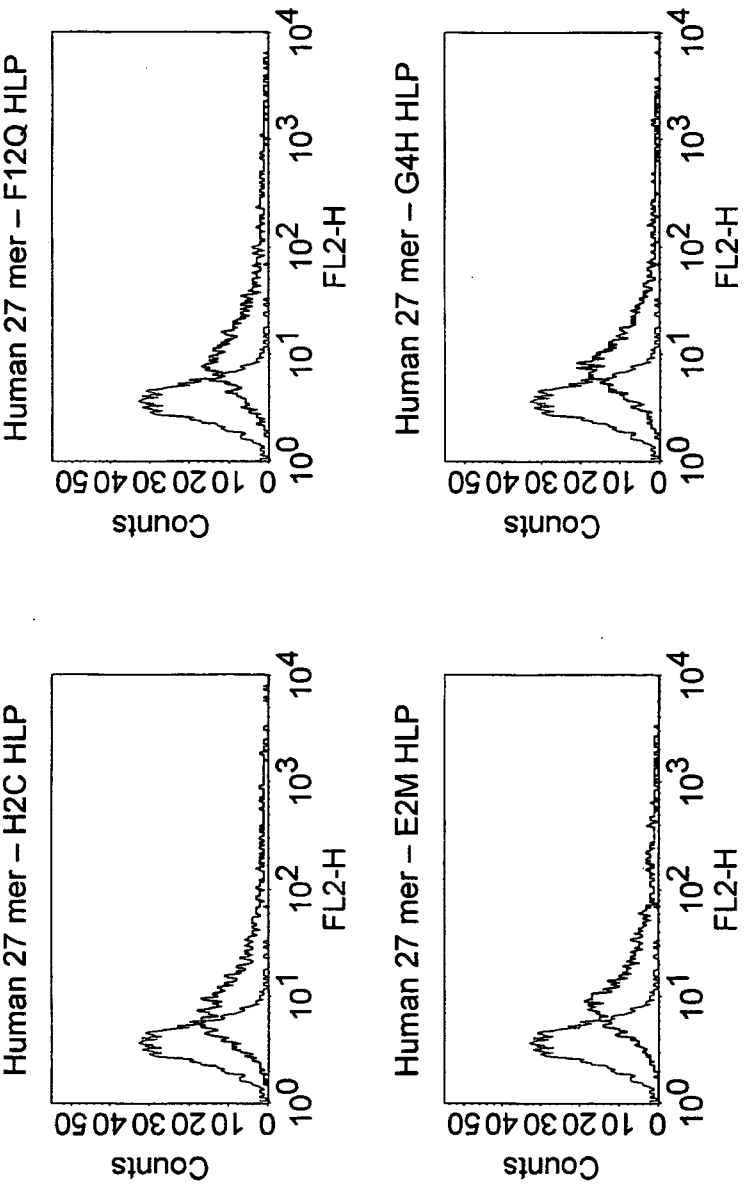

Human 27 mer
Counts
0 10 20 30 40 50
10^0 10^1 10^2 10^3 10^4
FL2-H
Marmoset 27 mer
Counts
0 70
10^0 10^1 10^2 10^3 10^4
FL2-H
Tamarin 27 mer
Counts
0 70
10^0 10^1 10^2 10^3 10^4
FL2-H
Squirrel Monkey 27 mer
Counts
0 10 20 30 40
10^0 10^1 10^2 10^3 10^4
FL2-H
Swine 27 mer
Counts
0 10 20 30 40 50 60
10^0 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

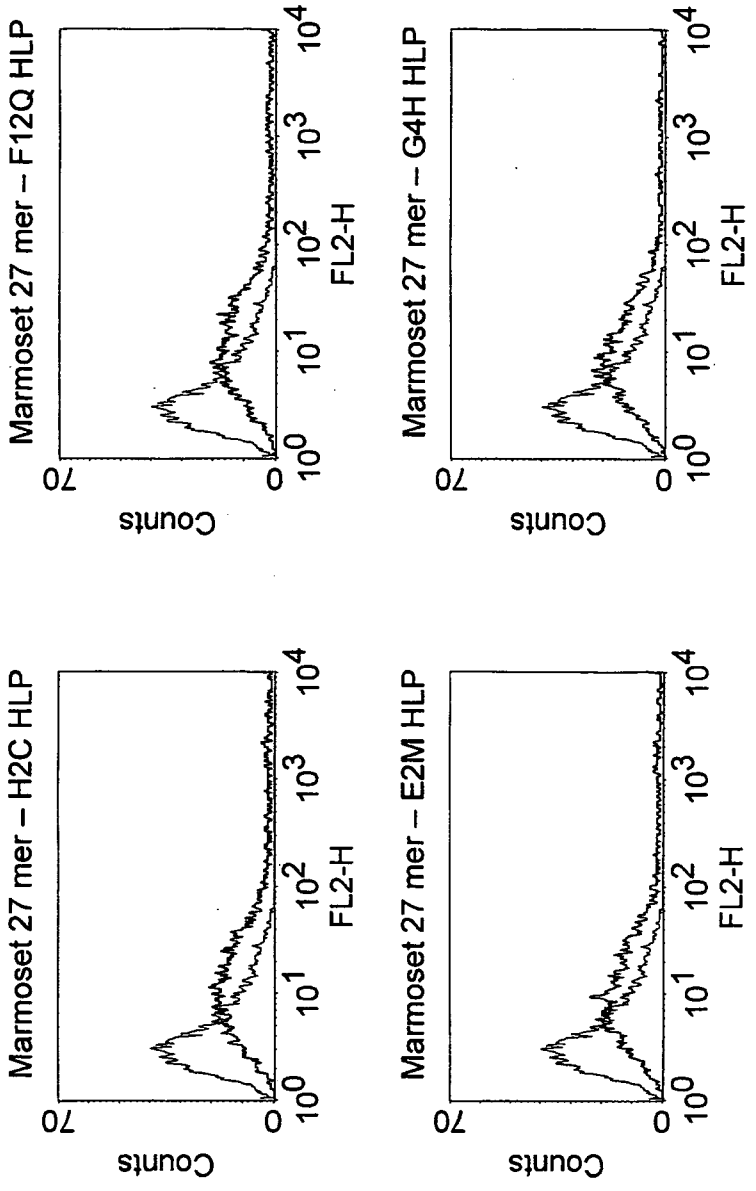

Marmoset 27 mer – F12Q HLP
Marmoset 27 mer – G4H HLP
Marmoset 27 mer – H2C HLP
Marmoset 27 mer – E2M HLP
Counts
FL2-H
0
70
10^0
10^1
10^2
10^3
10^4

Figure 6B

Figure 6C

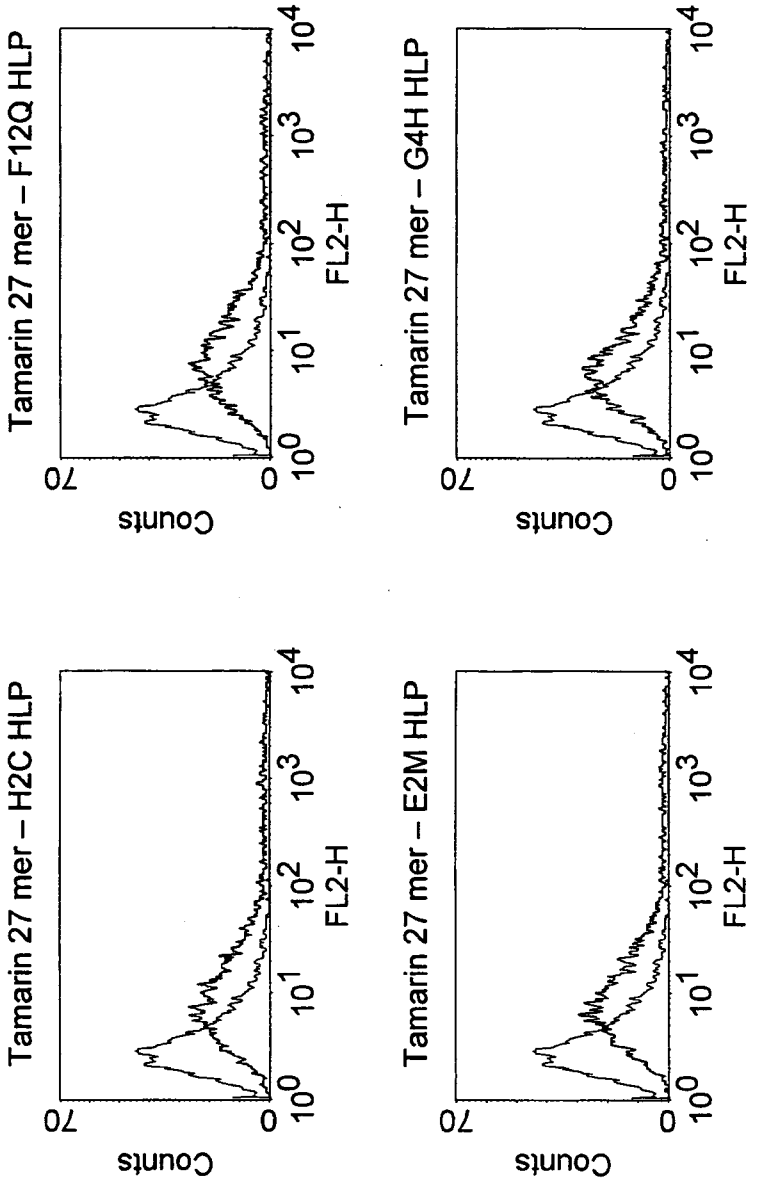

Tamarin 27 mer – F12Q HLP
Tamarin 27 mer – G4H HLP
Tamarin 27 mer – H2C HLP
Tamarin 27 mer – E2M HLP
Counts
FL2-H
0
70
10^0
10^1
10^2
10^3
10^4

Figure 6D

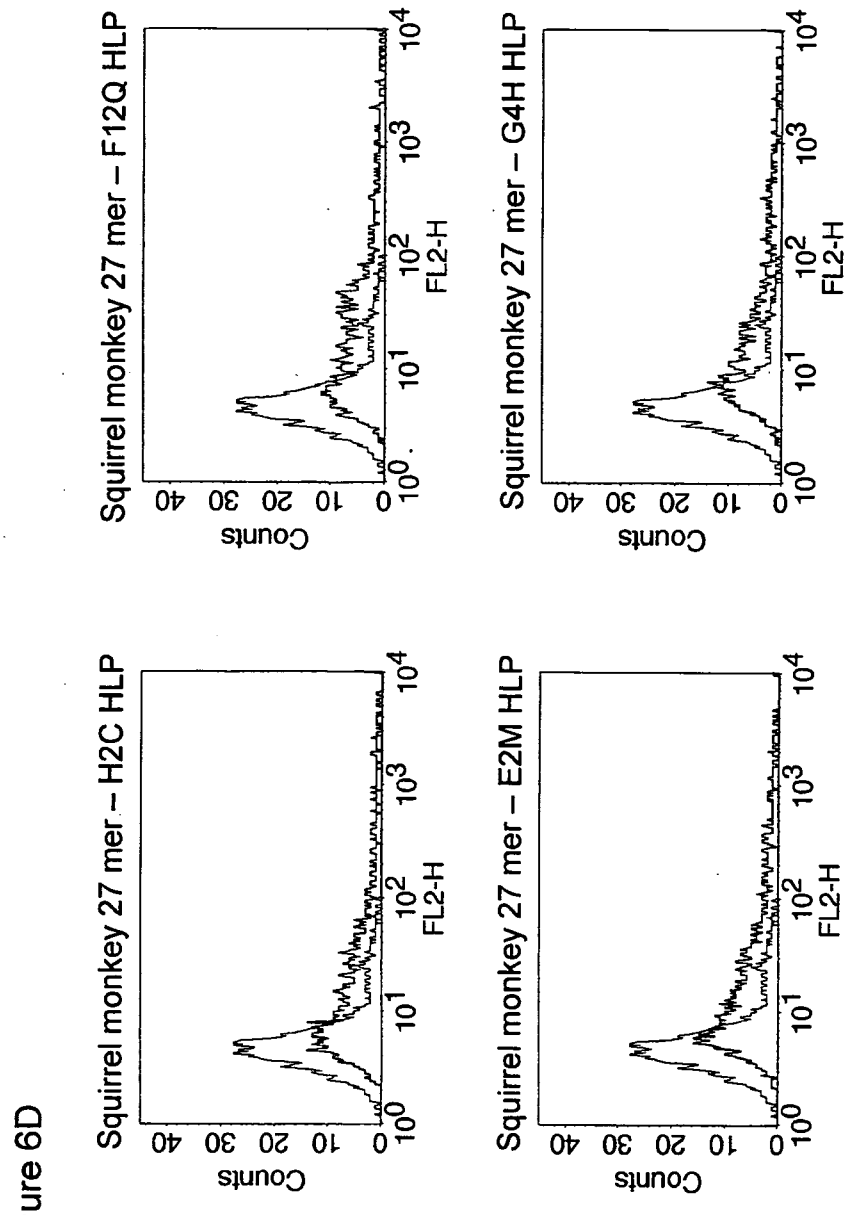

Squirrel monkey 27 mer – H2C HLP
Squirrel monkey 27 mer – F12Q HLP
Squirrel monkey 27 mer – E2M HLP
Squirrel monkey 27 mer – G4H HLP
Counts
FL2-H
0
10
20
30
40
10^0
10^1
10^2
10^3
10^4

Figure 6E

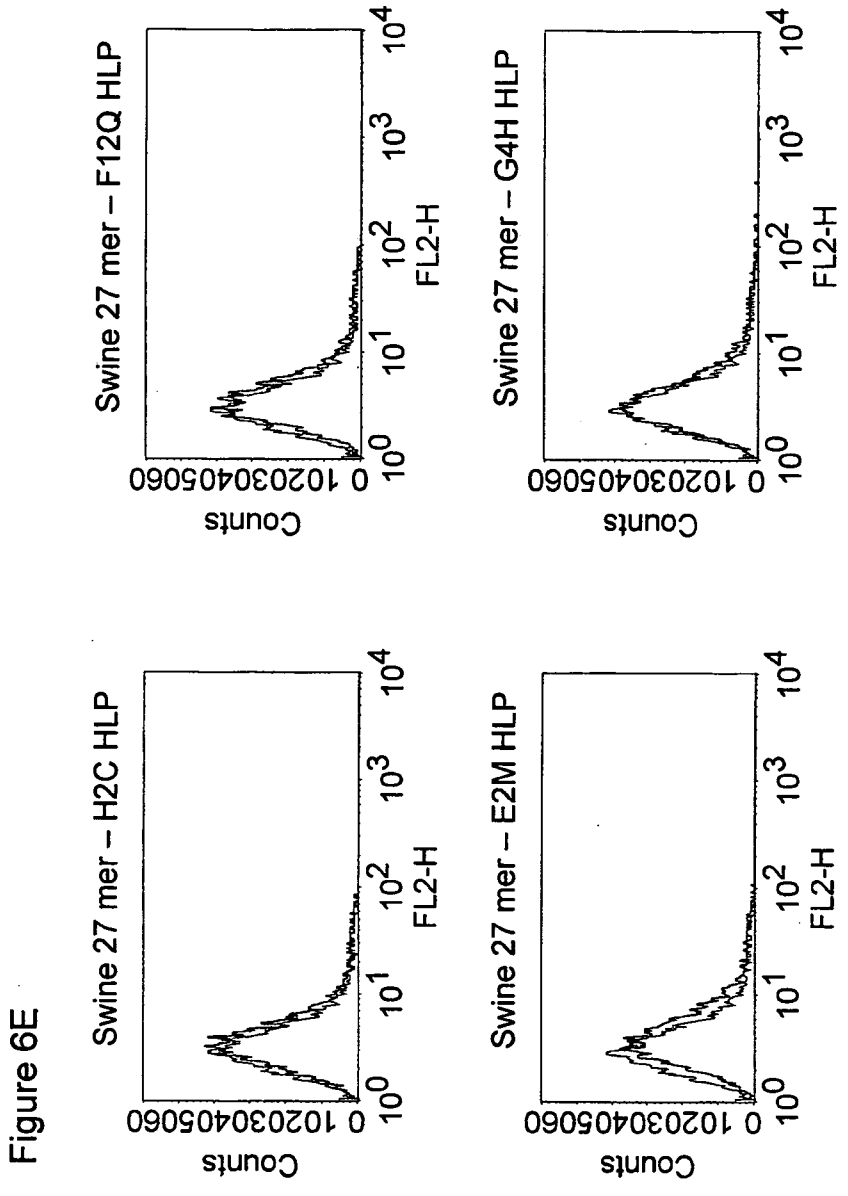
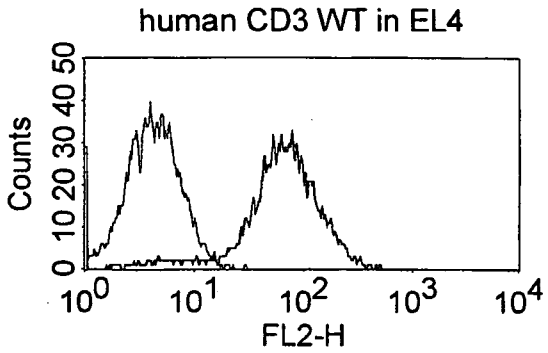

Swine 27 mer – F12Q HLP
Swine 27 mer – G4H HLP
Swine 27 mer – H2C HLP
Swine 27 mer – E2M HLP
Counts
FL2-H
0
10
20
30
40
50
60
10^0
10^1
10^2
10^3
10^4

Figure 7


human CD3 WT in EL4
Counts
0 10 20 30 40 50
10^0 10^1 10^2 10^3 10^4
FL2-H

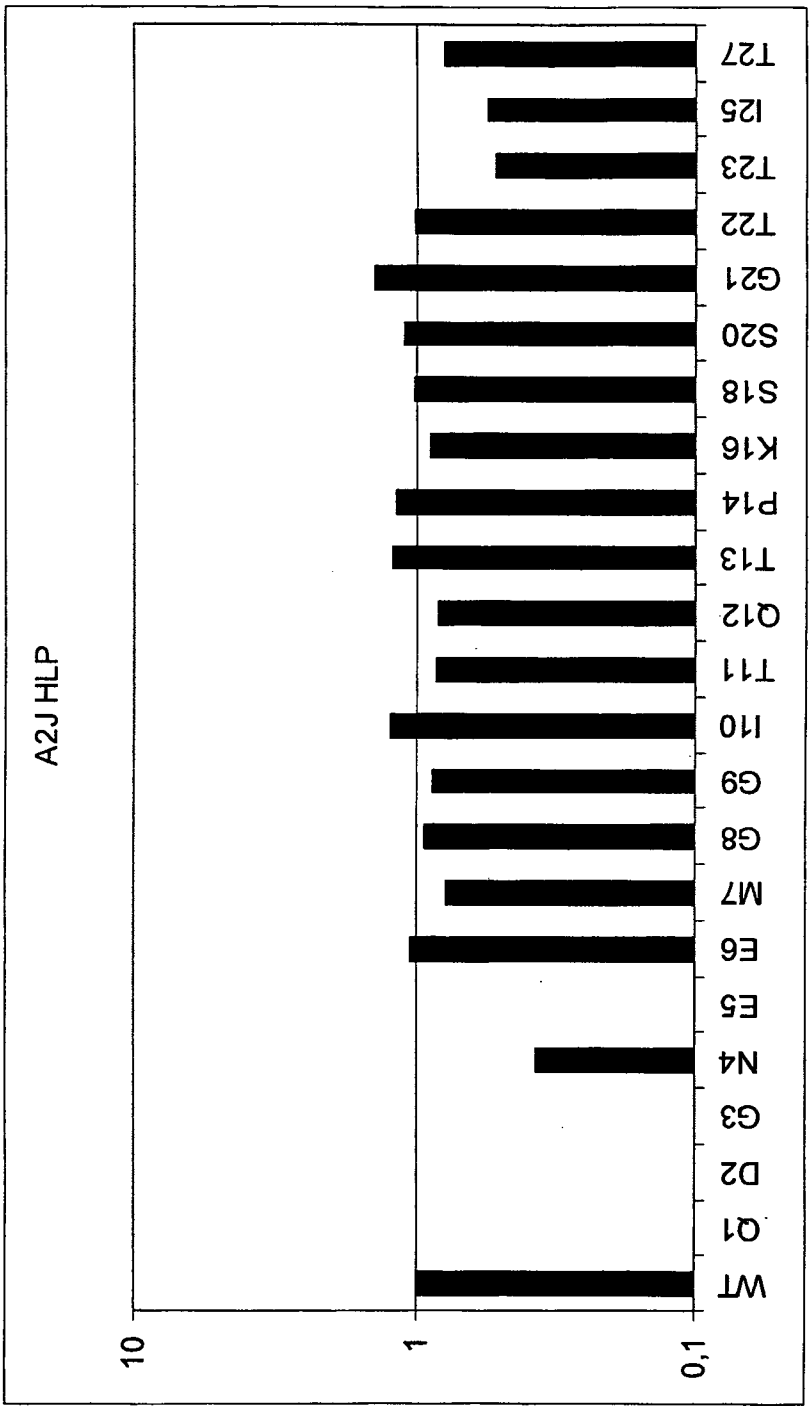

A2J HLP
10
1
0,1
WT
Q1
D2
G3
N4
E5
E6
M7
G8
G9
I10
T11
Q12
T13
P14
K16
S18
S20
G21
T22
T23
I25
T27

Figure 8A

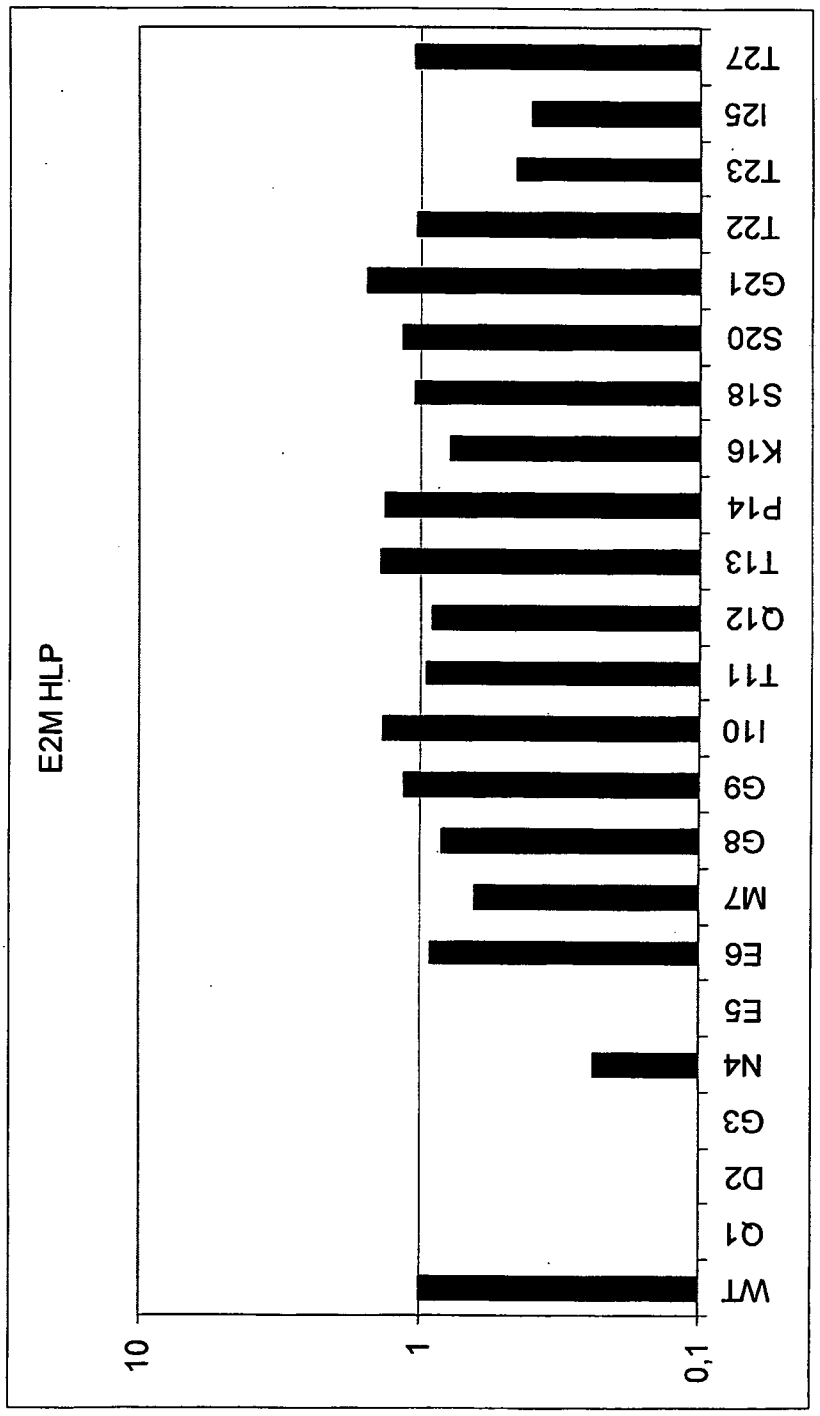

E2M HLP
10
1
0,1
WT
Q1
D2
G3
N4
E5
E6
M7
G8
G9
I10
T11
Q12
T13
P14
K16
S18
S20
G21
T22
T23
I25
T27

Figure 8B

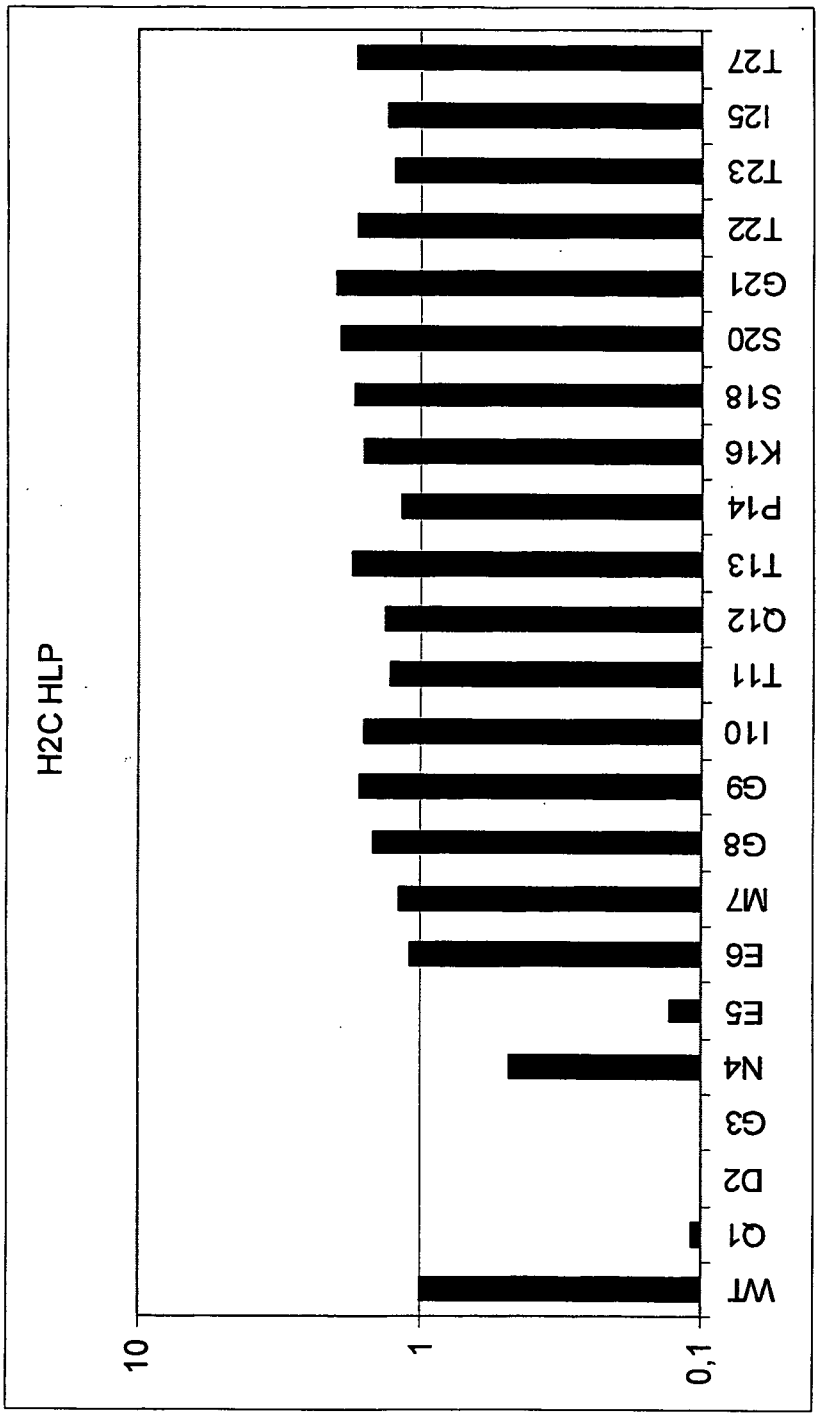

H2C HLP
10
1
0,1
WT
Q1
D2
G3
N4
E5
E6
M7
G8
G9
I10
T11
Q12
T13
P14
K16
S18
S20
G21
T22
T23
I25
T27

Figure 8C

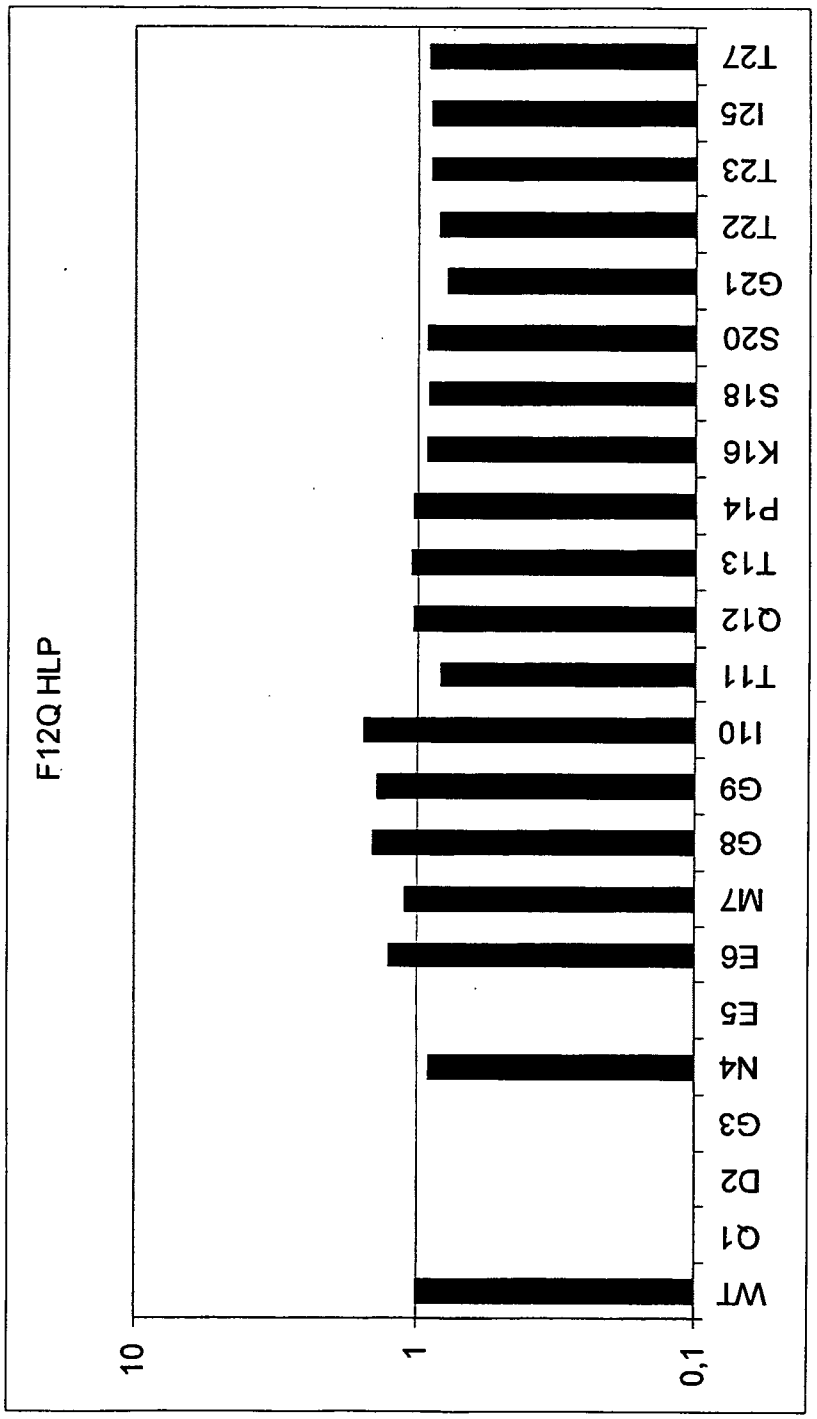
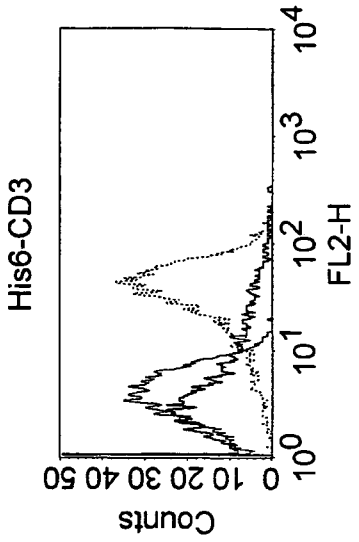

F12Q HLP
10
1
0,1
WT
Q1
D2
G3
N4
E5
E6
M7
G8
G9
I10
T11
Q12
T13
P14
K16
S18
S20
G21
T22
T23
I25
T27

Figure 8D

Figure 9


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

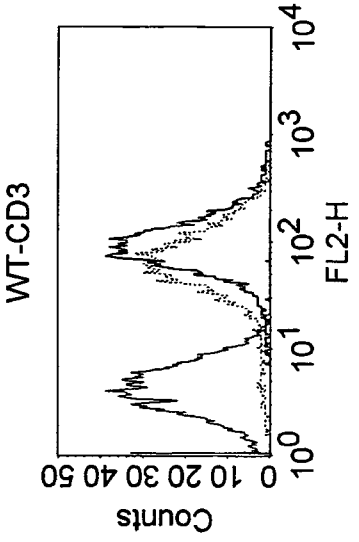

WT-CD3
Counts
0 10 20 30 40 50
10^0 10^1 10^2 10^3 10^4
FL2-H

Figure 10

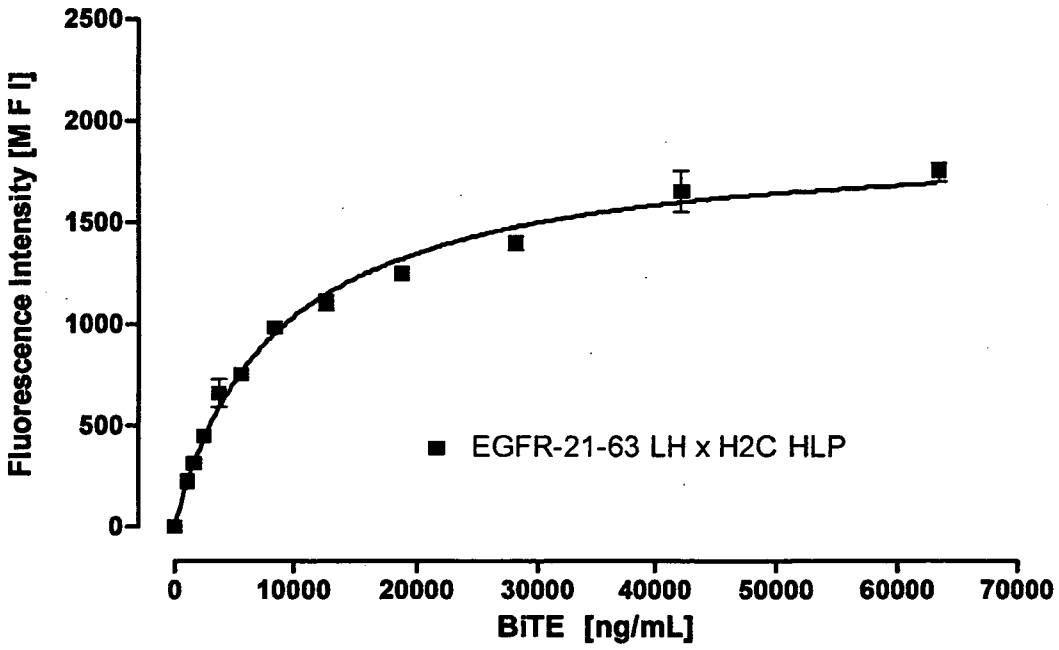

Fluorescence Intensity [M F I]
2500
2000
1500
1000
500
0
EGFR-21-63 LH x H2C HLP
0
10000
20000
30000
40000
50000
60000
70000
BiTE [ng/mL]

Figure 11a

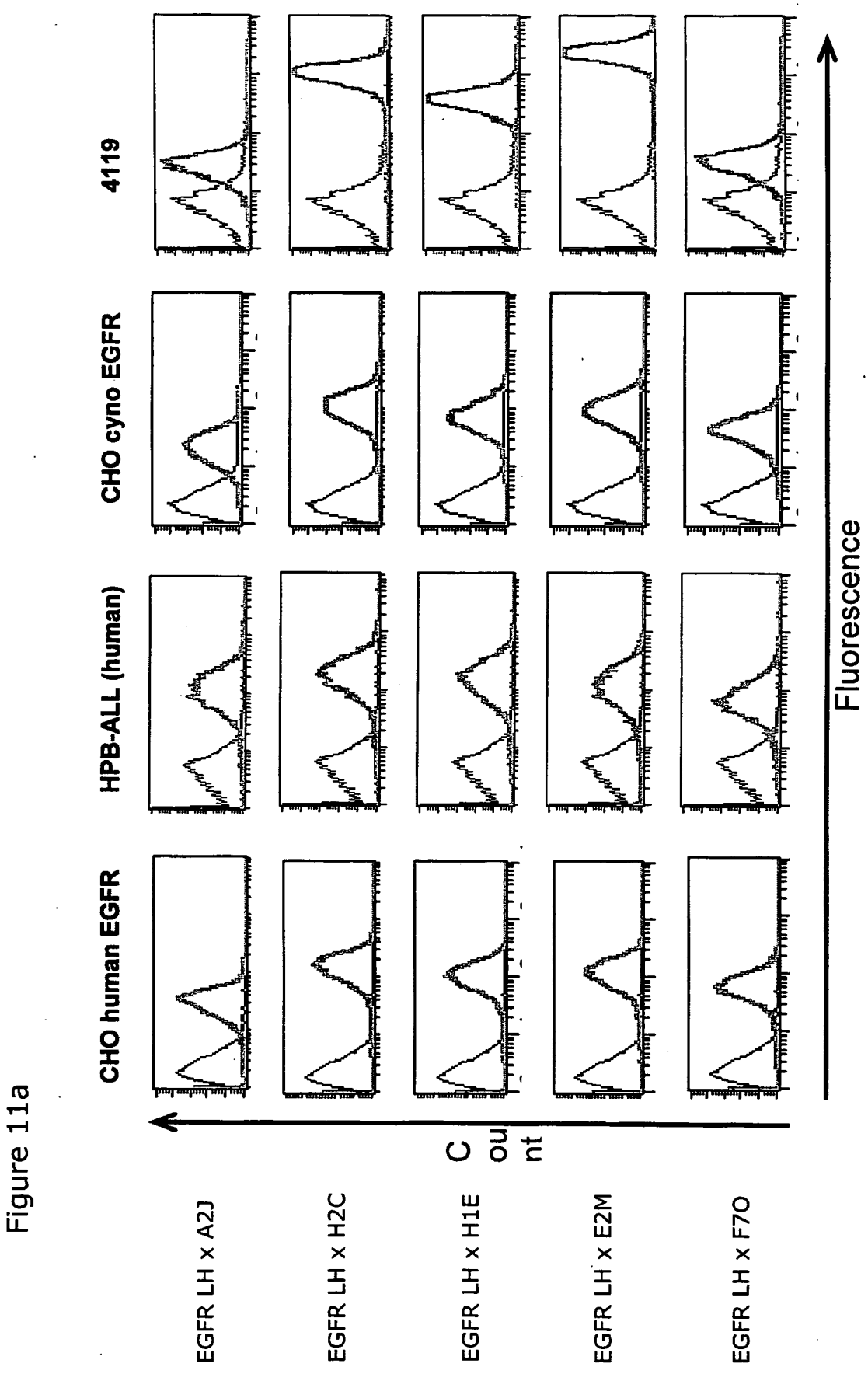

CHO human EGFR
HPB-ALL (human)
CHO cyno EGFR
4119
EGFR LH x A2J
EGFR LH x H2C
EGFR LH x H1E
EGFR LH x E2M
EGFR LH x F7O
Count
Fluorescence

Figure: 11b

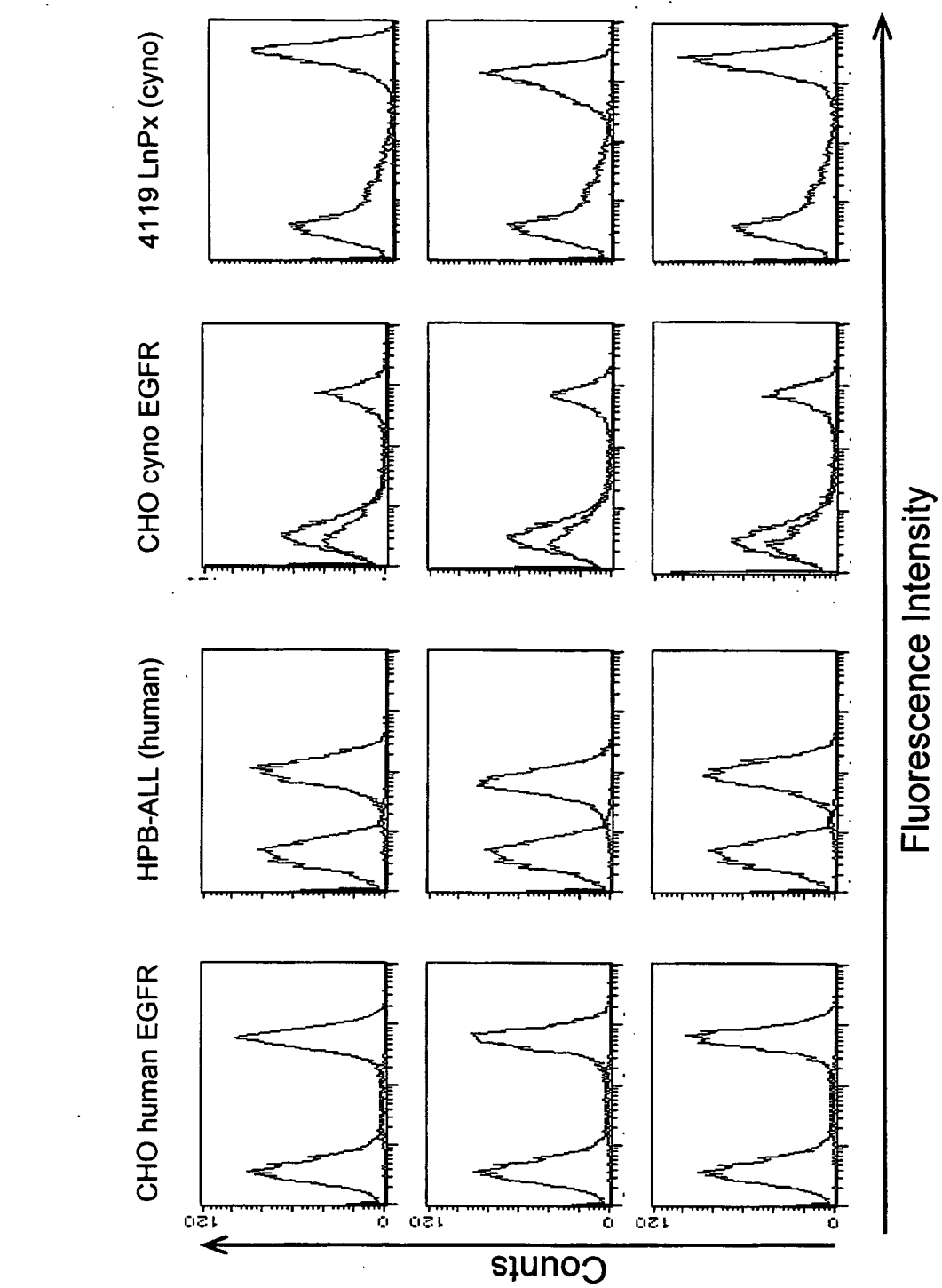

CHO human EGFR
HPB-ALL (human)
CHO cyno EGFR
4119 LnPx (cyno)
E291C4 HL x I2C HL
E291C4 HL x H2C HL
E291C4 HL x F12Q HL
Counts
120
0
Fluorescence Intensity

Figure: 11c

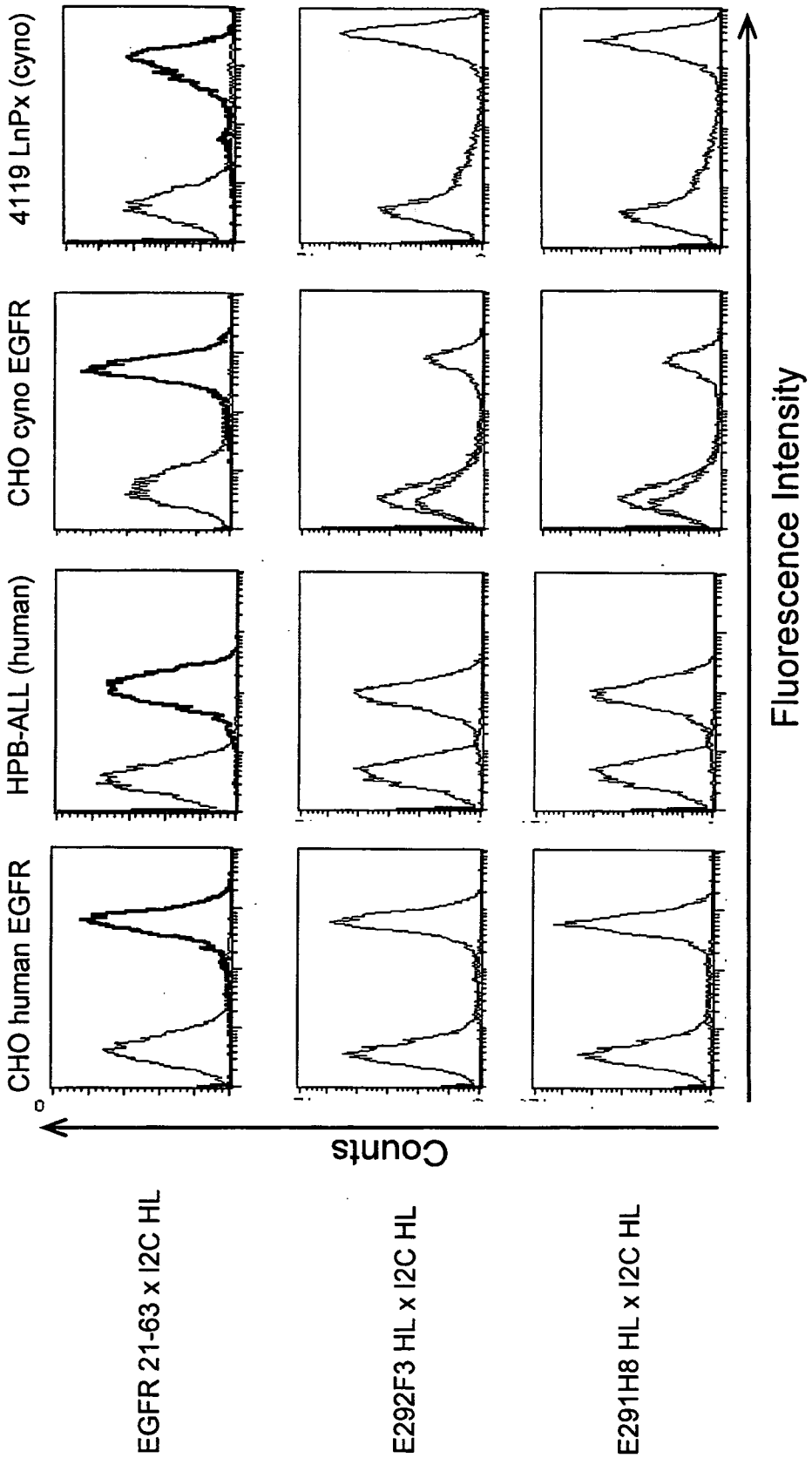

CHO human EGFR
HPB-ALL (human)
CHO cyno EGFR
4119 LnPx (cyno)
EGFR 21-63 x I2C HL
E292F3 HL x I2C HL
E291H8 HL x I2C HL
Counts
0
Fluorescence Intensity

Figure: 11d

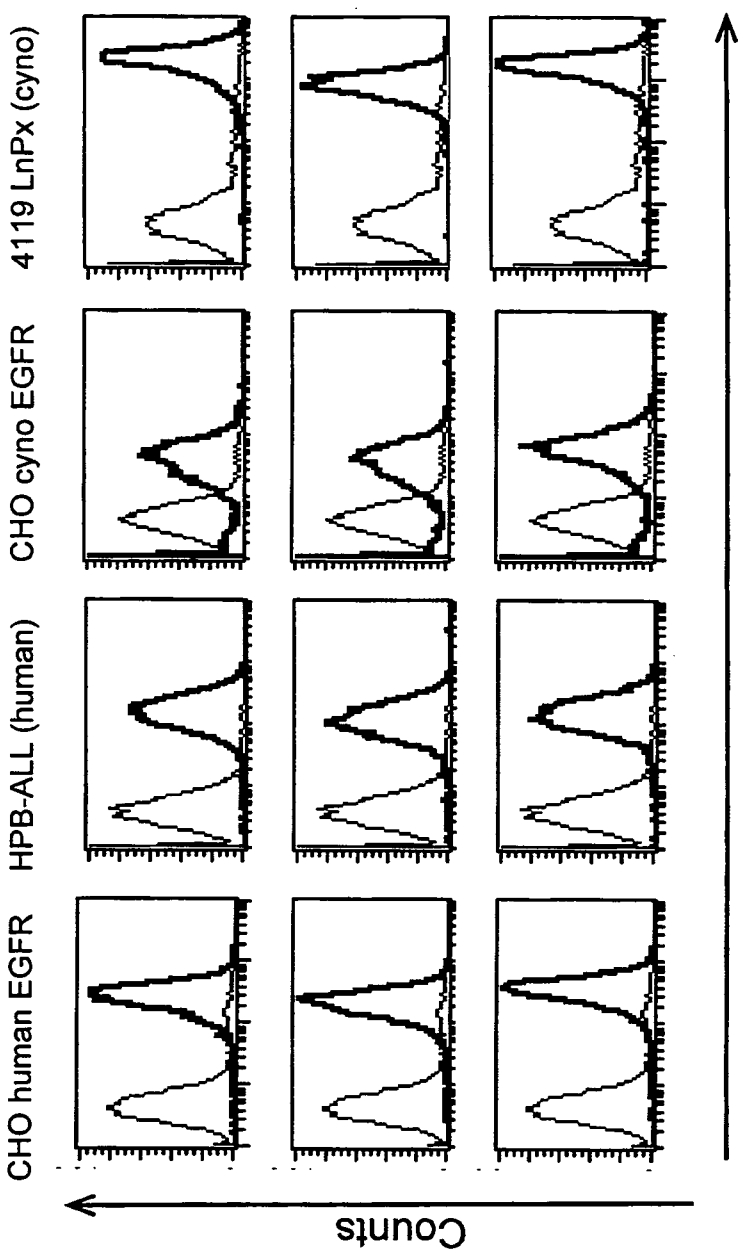

CHO human EGFR
HPB-ALL (human)
CHO cyno EGFR
4119 LnPx (cyno)
E97H9 HL x I2C HL
E97H9 HL x H2C HL
E97H9 HL x F12Q HL
Counts
Fluorescence Intensity

Figure: 11e

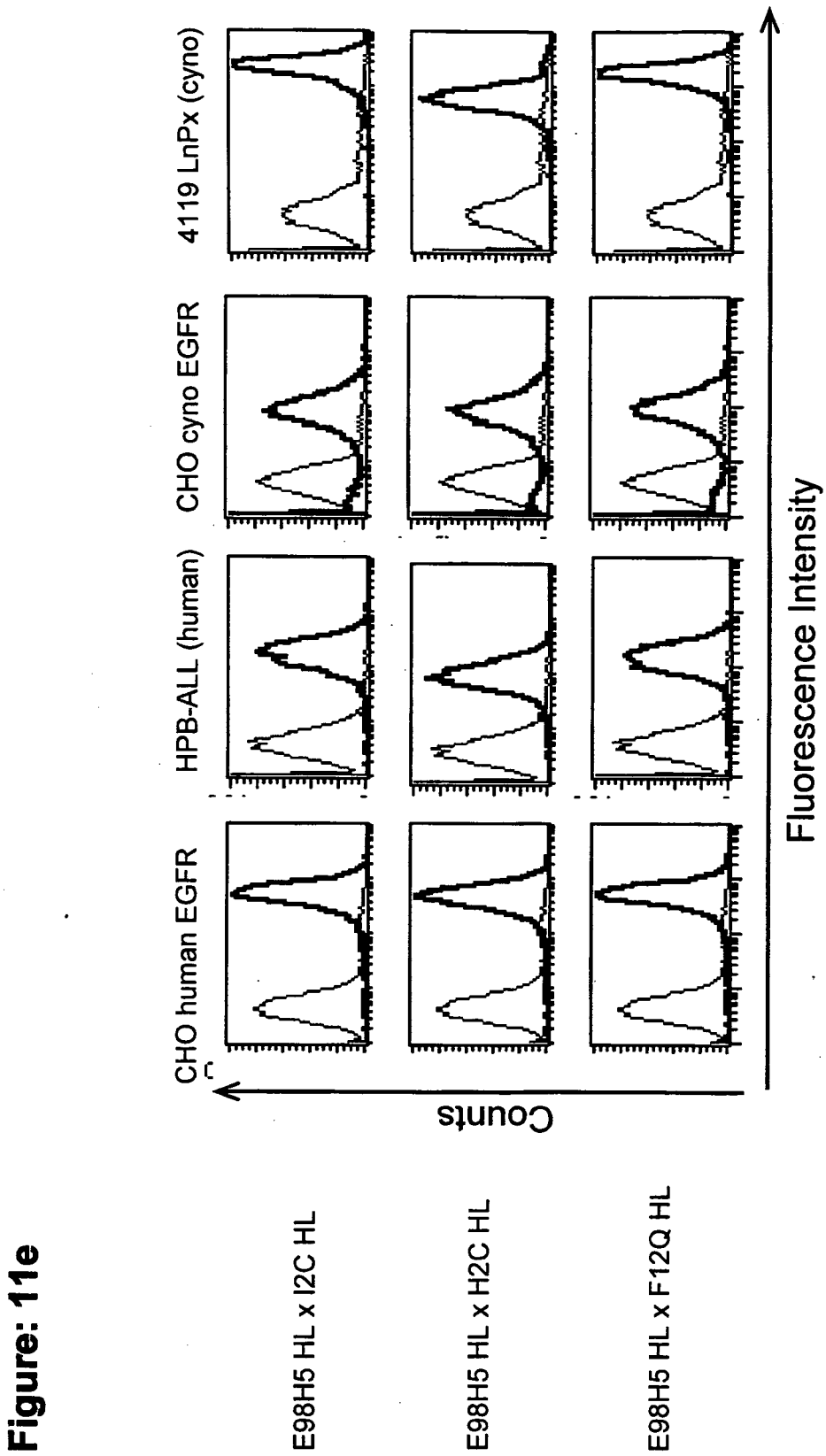

CHO human EGFR
HPB-ALL (human)
CHO cyno EGFR
4119 LnPx (cyno)
Counts
Fluorescence Intensity
E98H5 HL x I2C HL
E98H5 HL x H2C HL
E98H5 HL x F12Q HL

Figure: 11f

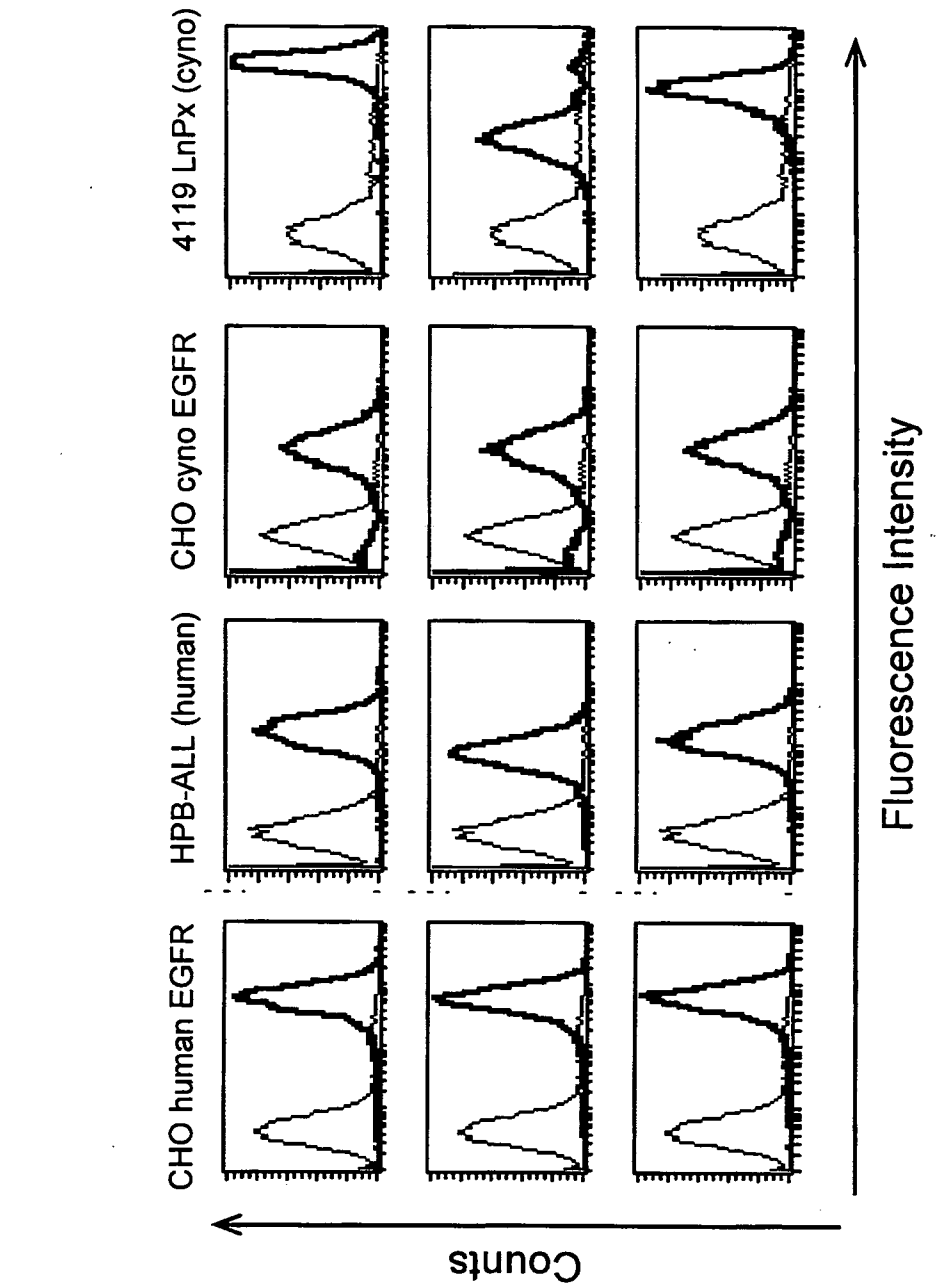

CHO human EGFR
HPB-ALL (human)
CHO cyno EGFR
4119 LnPx (cyno)
E98C3 HL x I2C HL
E98C3 HL x H2C HL
E98C3 HL x F12Q HL
Counts
Fluorescence Intensity

Figure: 11g

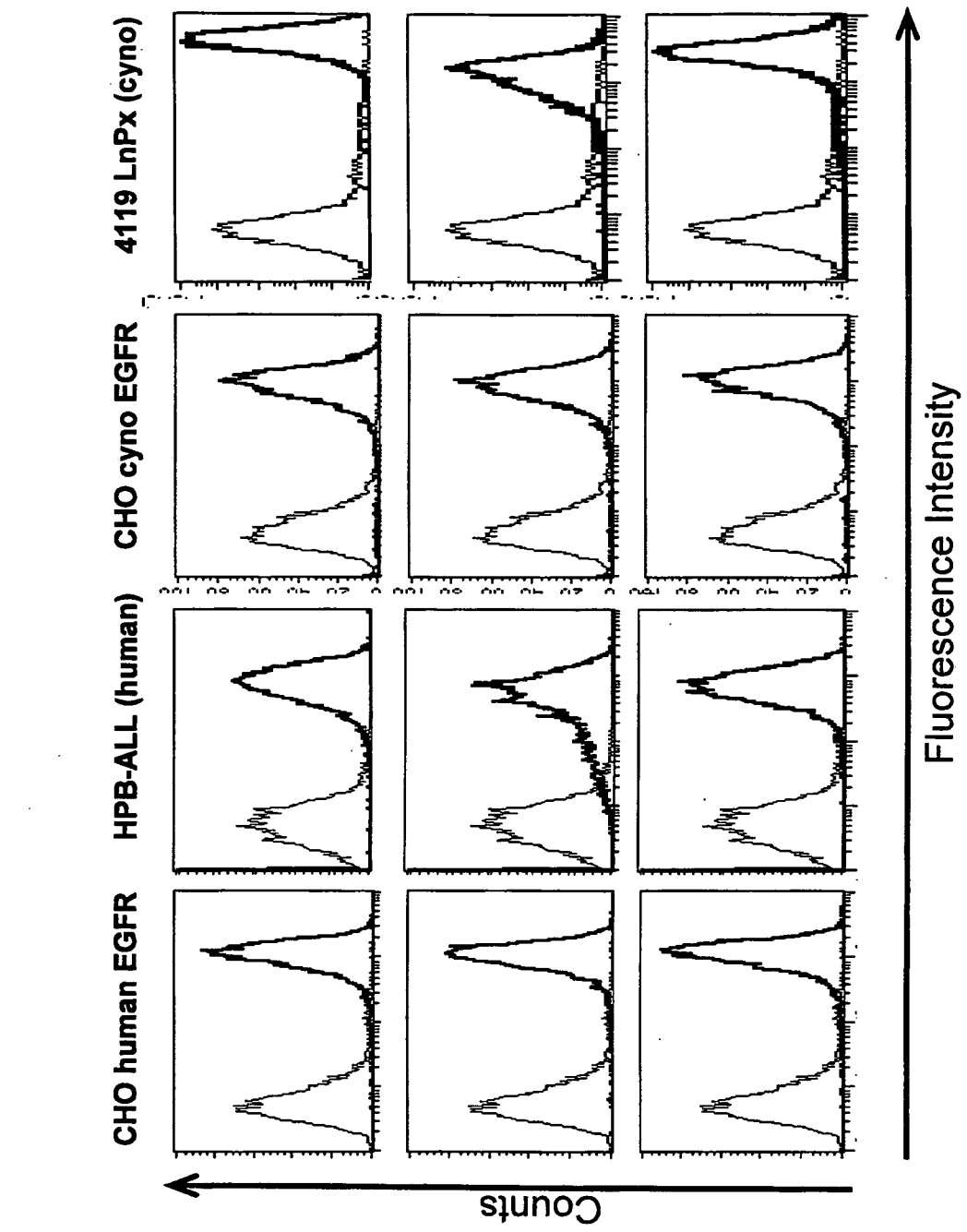

CHO human EGFR
HPB-ALL (human)
CHO cyno EGFR
4119 LnPx (cyno)
E97B11 HL x I2C HL
E97B11 HL x H2C HL
E97B11 HL x F12Q HL
Counts
Fluorescence Intensity

Figure: 11h

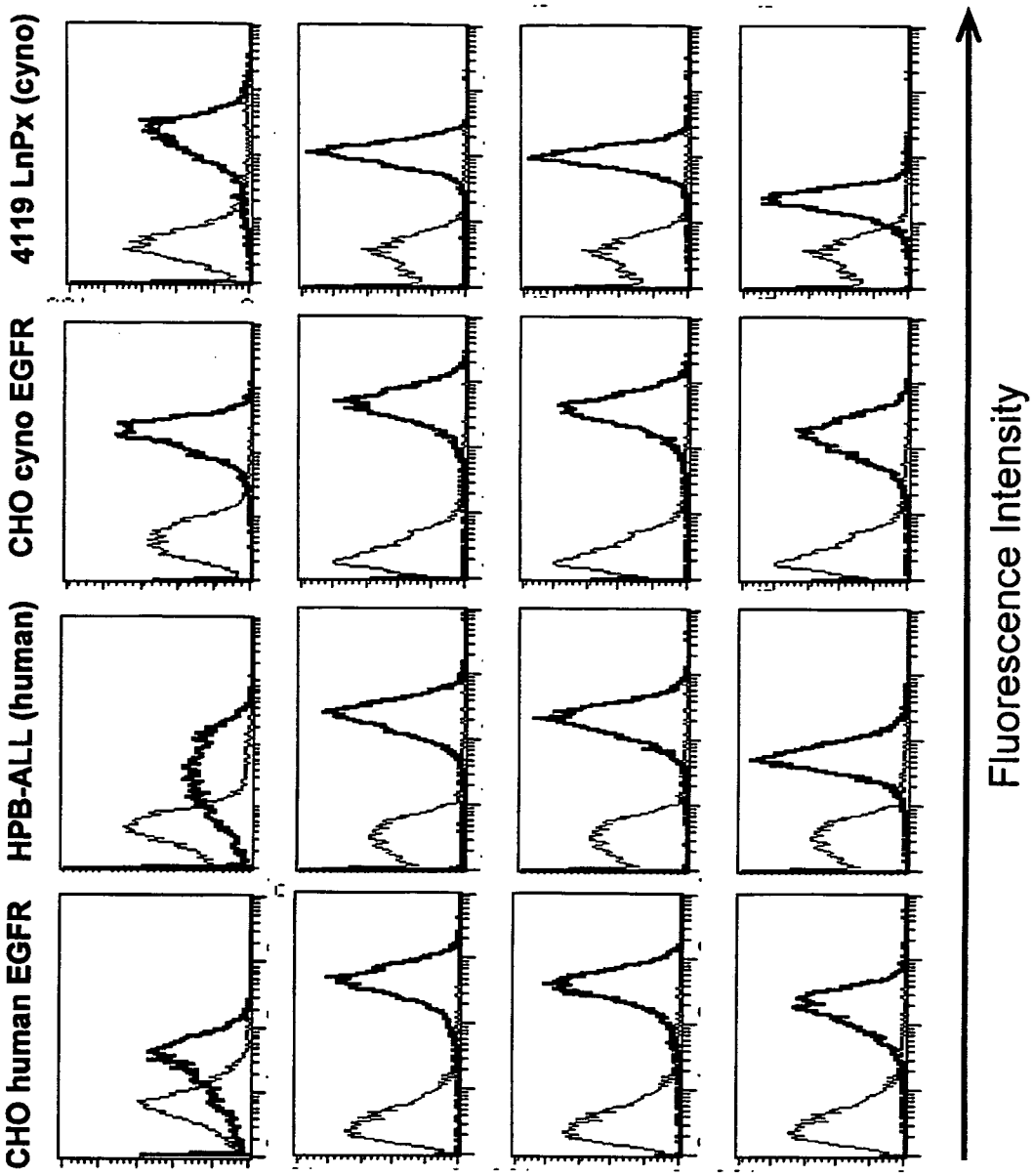

CHO human EGFR
HPB-ALL (human)
CHO cyno EGFR
4119 LnPx (cyno)
E13H7 HL x I2C HL
E12B7 HL x I2C HL
E12F12 HL x I2C HL
E13E6 HL x I2C HL
Counts
Fluorescence Intensity

Figure: 11i

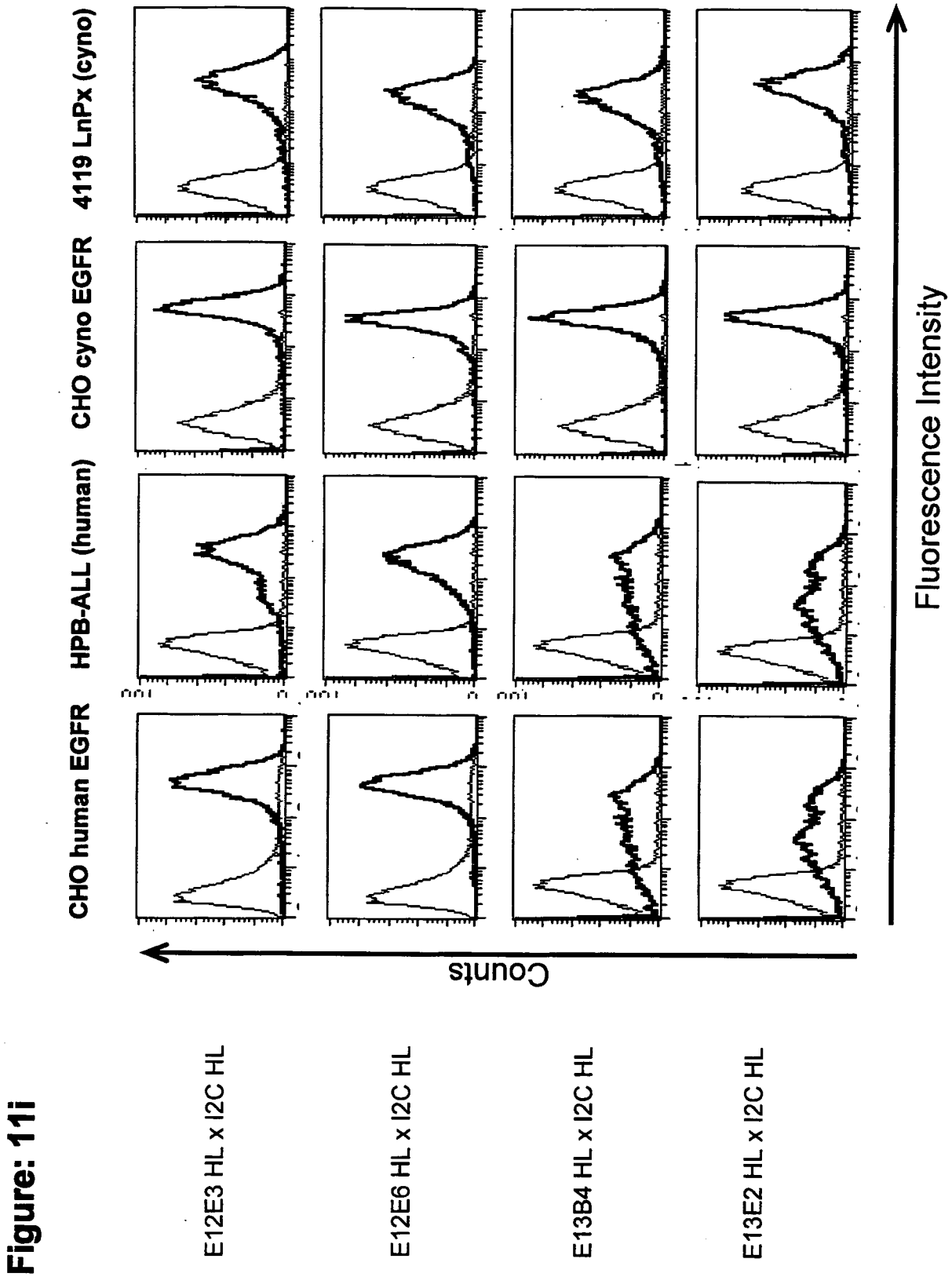
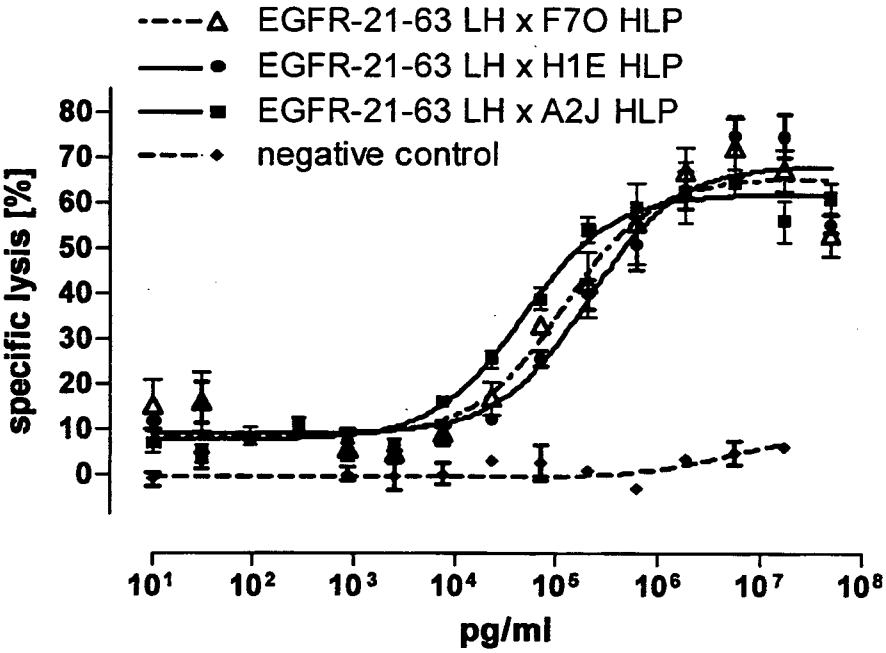

CHO human EGFR
HPB-ALL (human)
CHO cyno EGFR
4119 LnPx (cyno)
E12E3 HL x I2C HL
E12E6 HL x I2C HL
E13B4 HL x I2C HL
E13E2 HL x I2C HL
Counts
Fluorescence Intensity

Figure 12

A)

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



B)

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

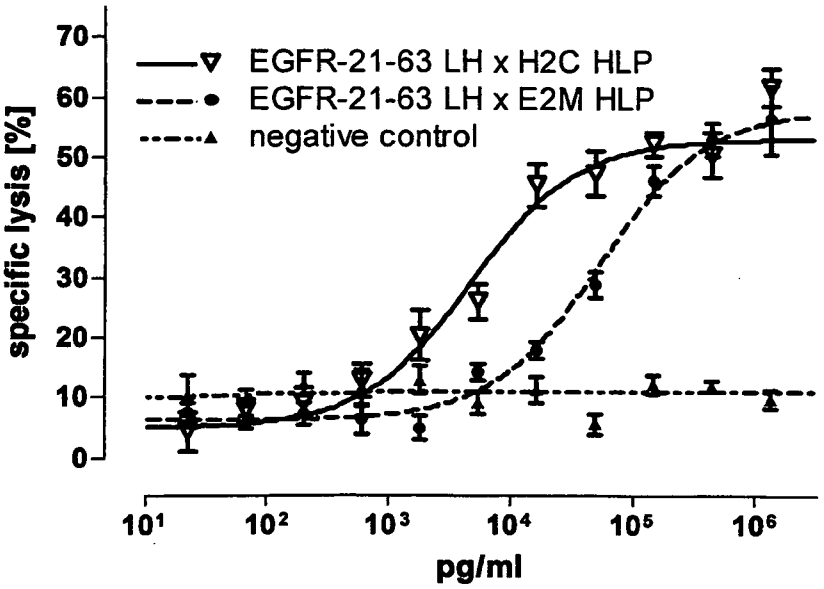
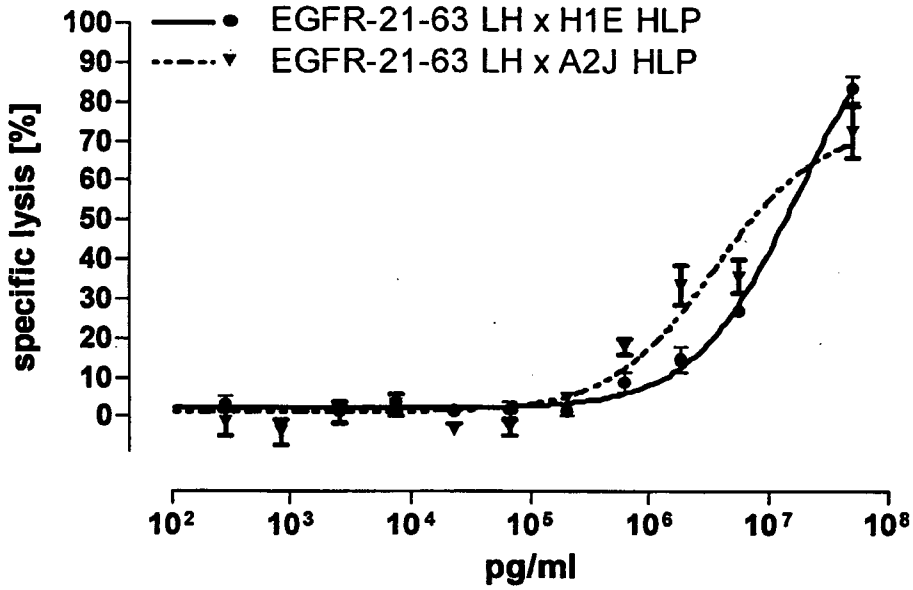


Figure 13 a

A)

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



B)

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

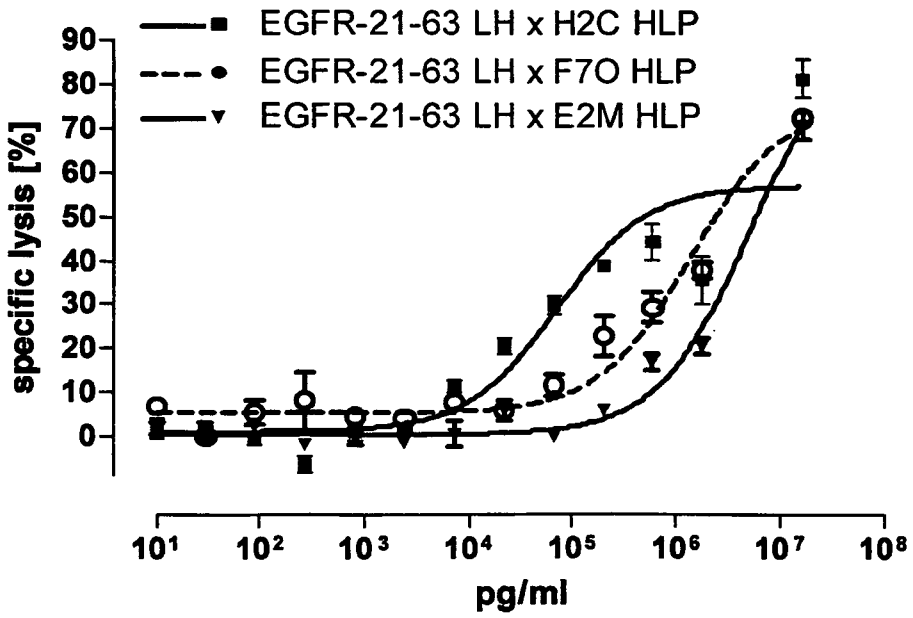
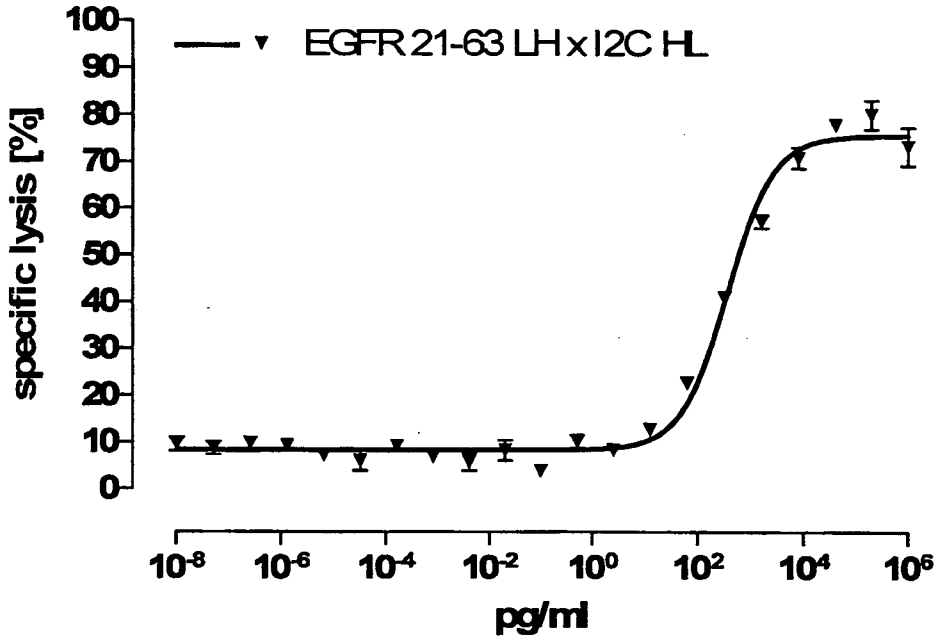


Figure 13b

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



B) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFR

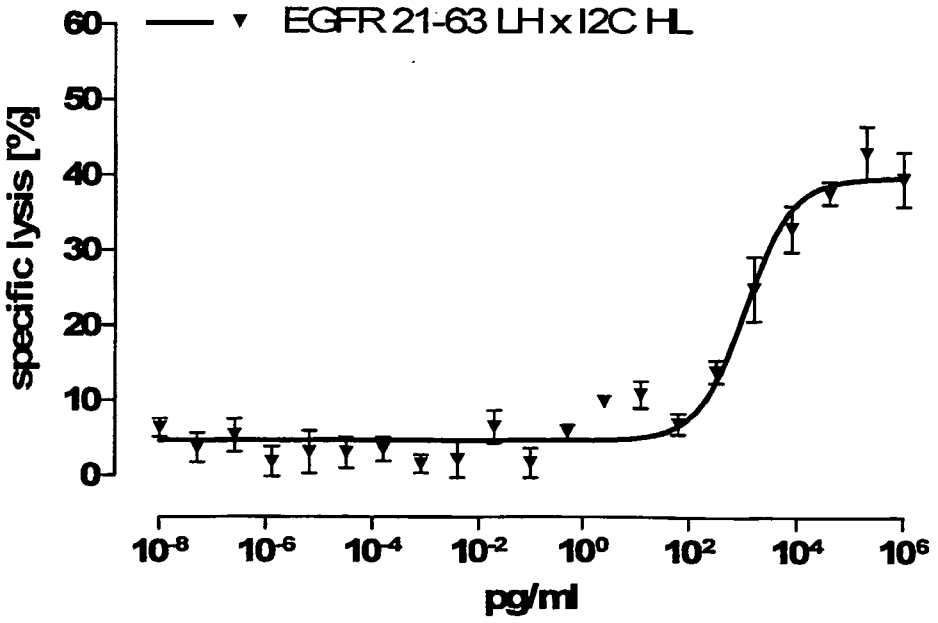
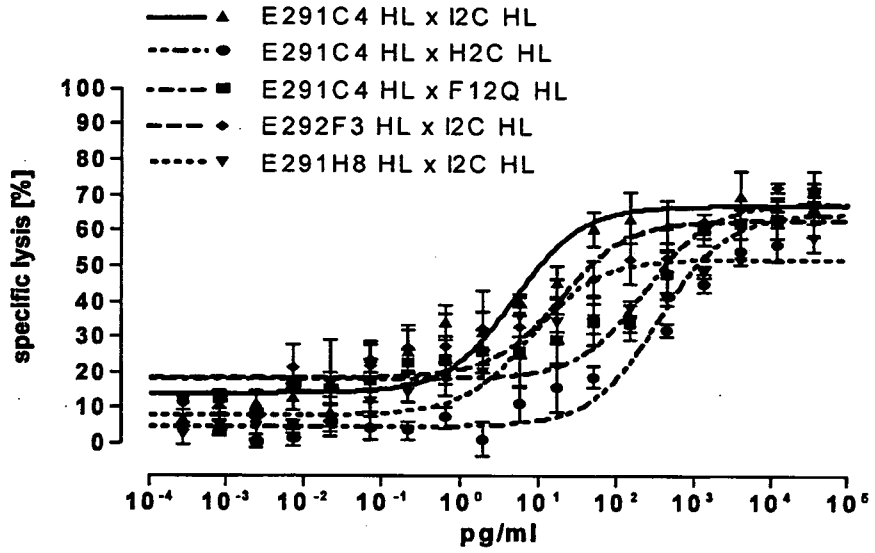


Figure 13c

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



B) **Effector cells: 4119LnPx**
Target cells: CHO transfected with cyno EGFR

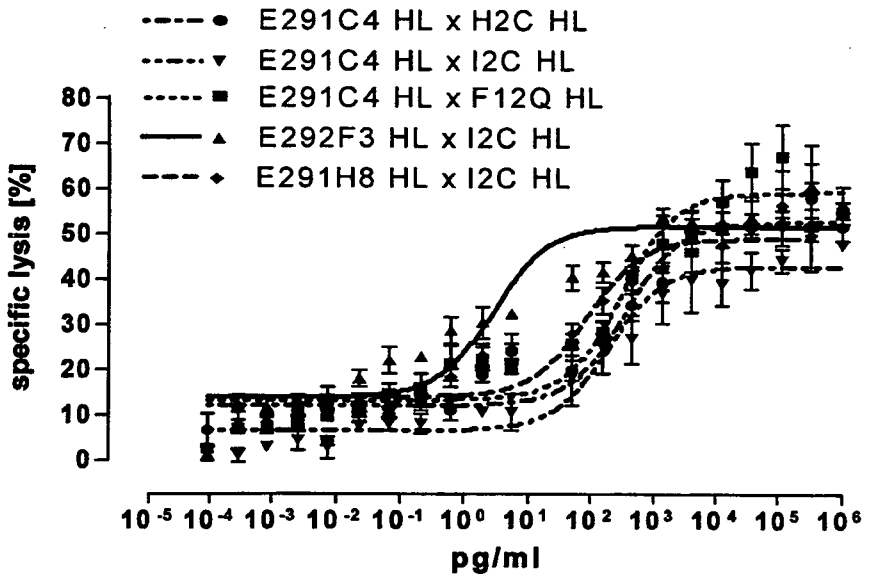
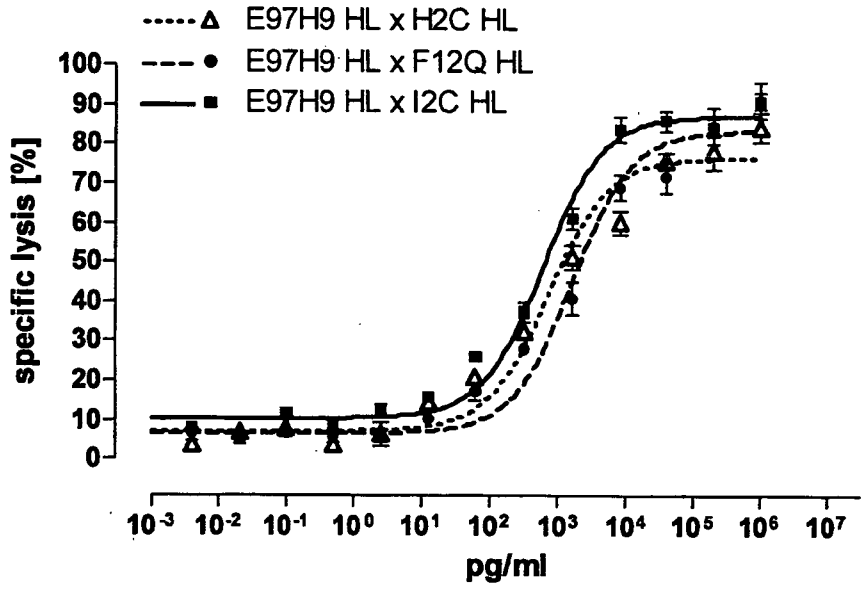


Figure 13d

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



B) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFR

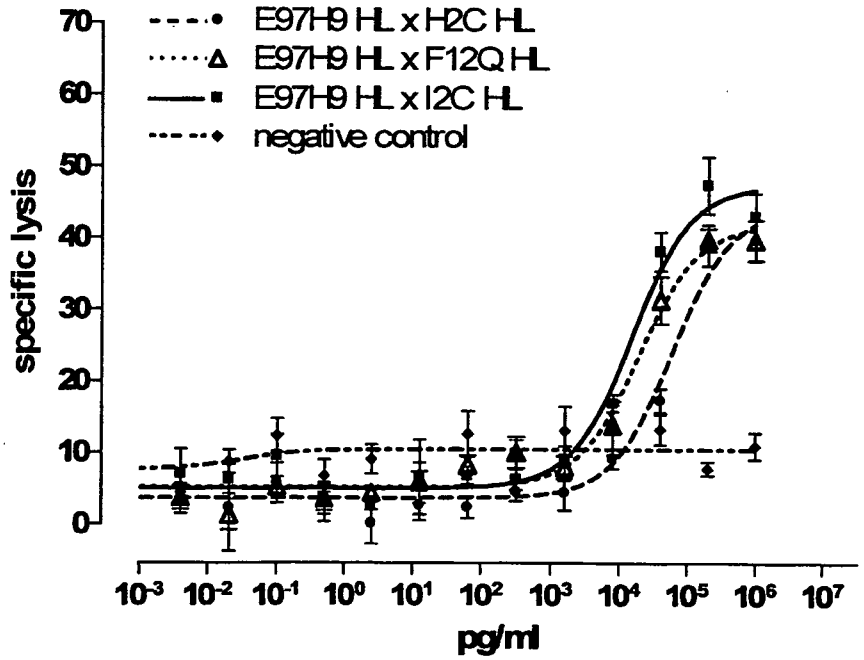
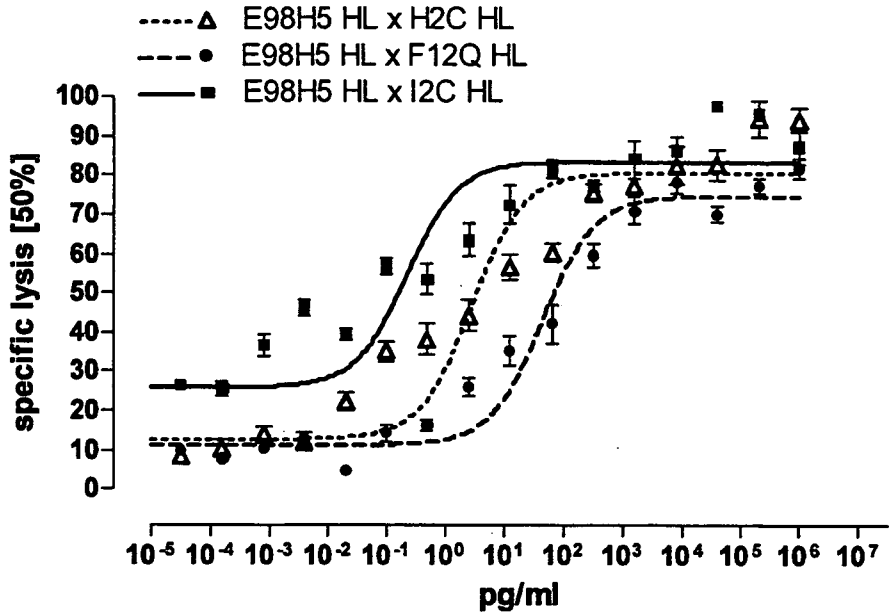


Figure 13e

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



B) **Effector cells: 4119LnPx**
Target cells: CHO transfected with cyno EGFR

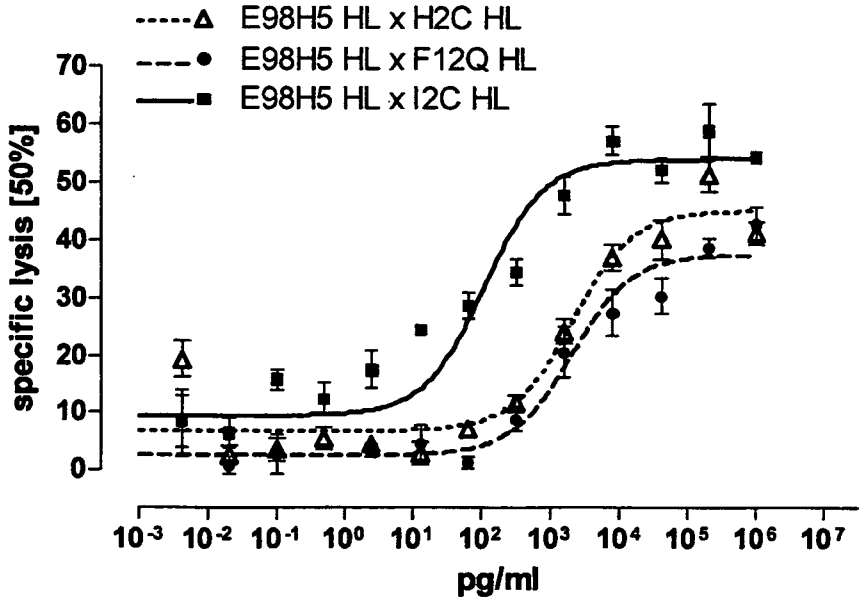
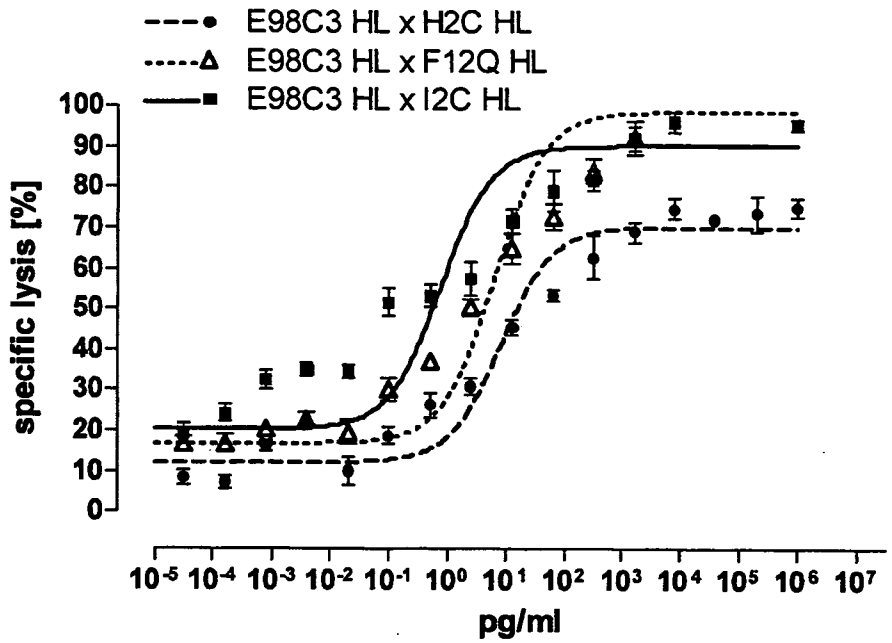


Figure 13f

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



B) **Effector cells: 4119LnPx**
Target cells: CHO transfected with cyno EGFR

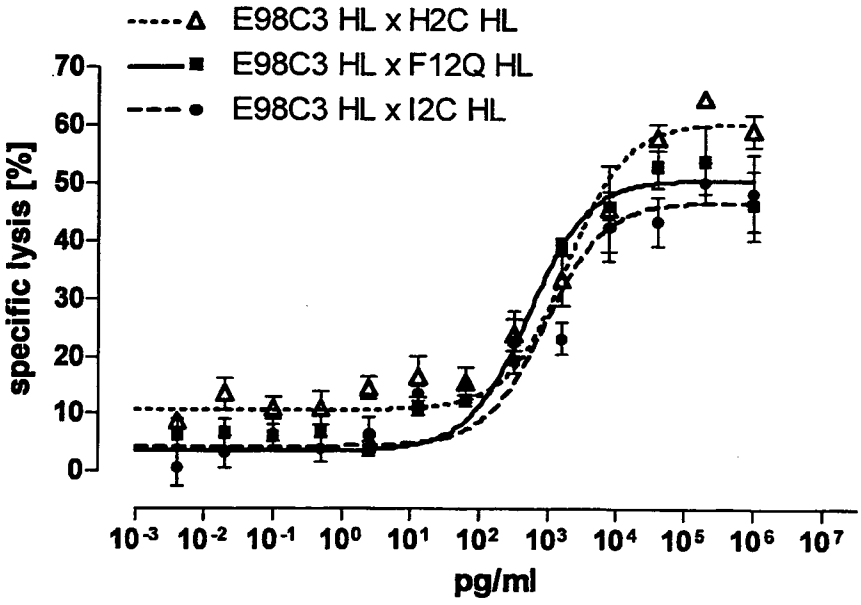
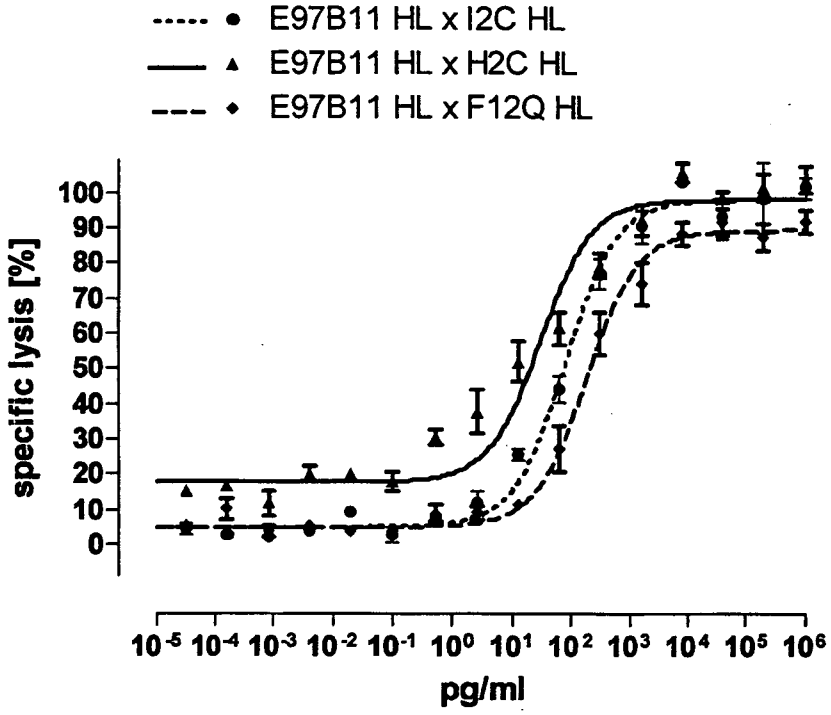


Figure 13g

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



B) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFR

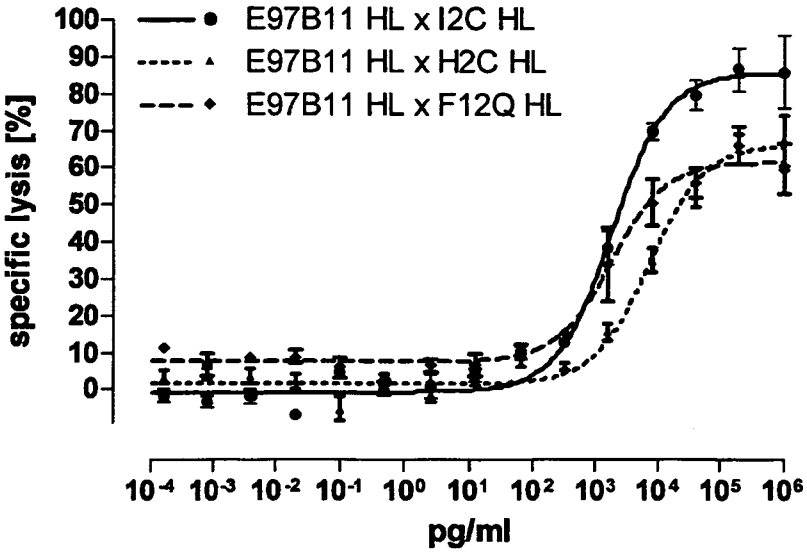
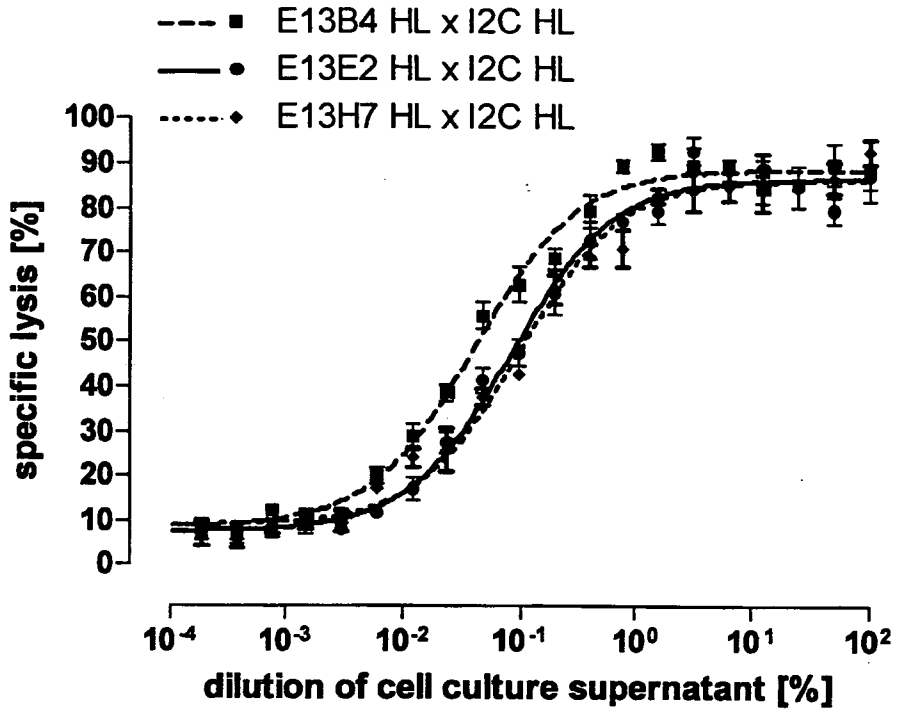


Figure 13h

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



B) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFR

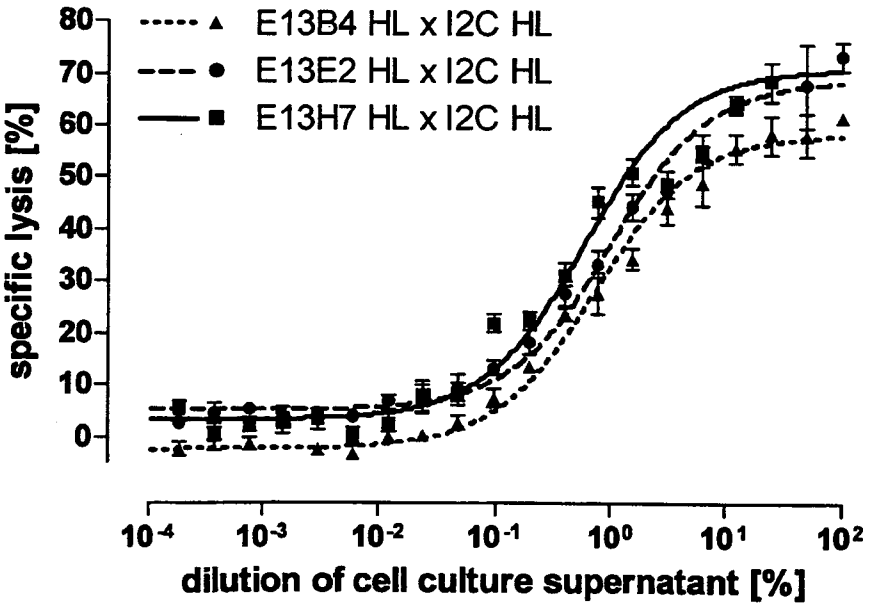
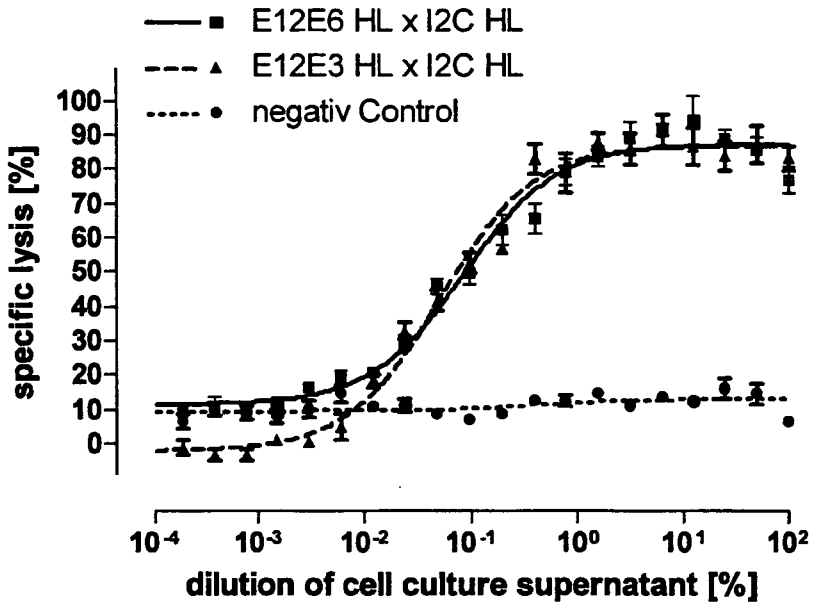


Figure 13i

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



B) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFR

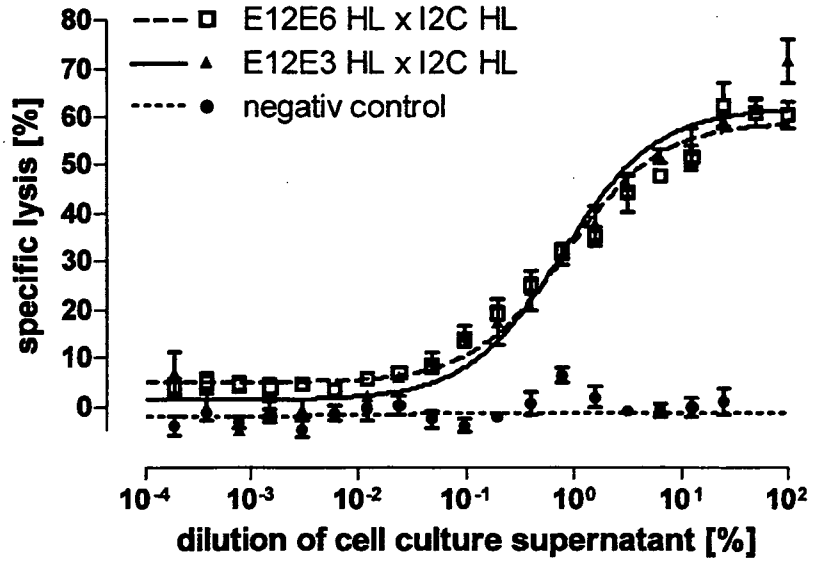
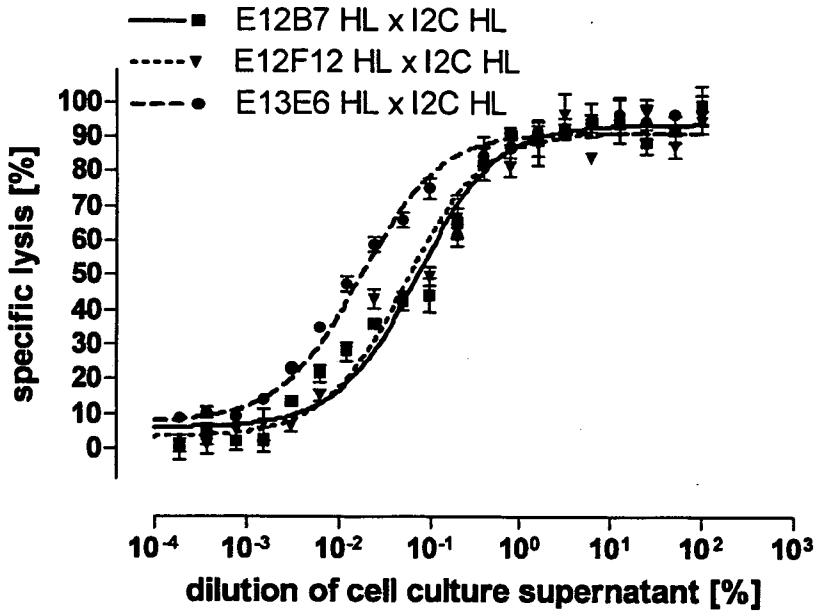


Figure 13j

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



B) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFR

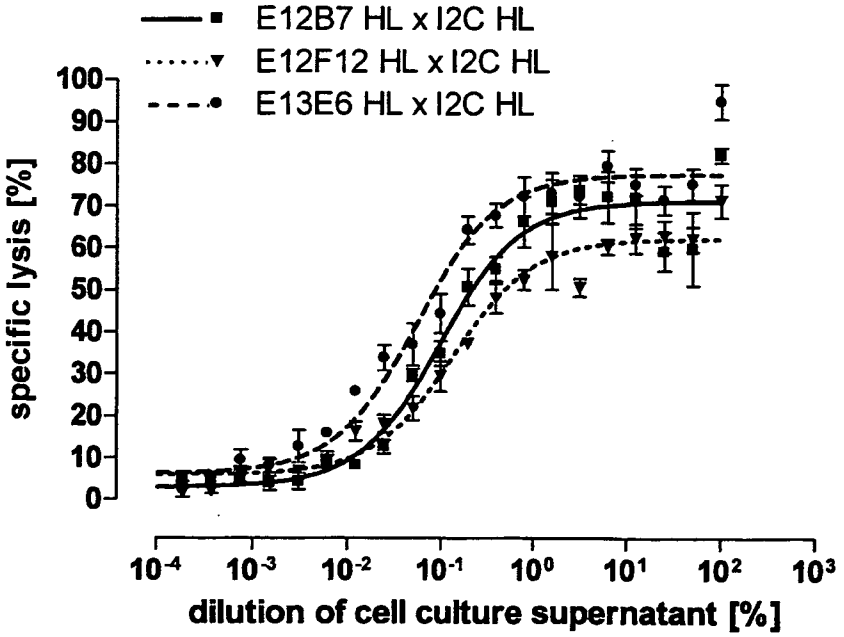


Figure 14

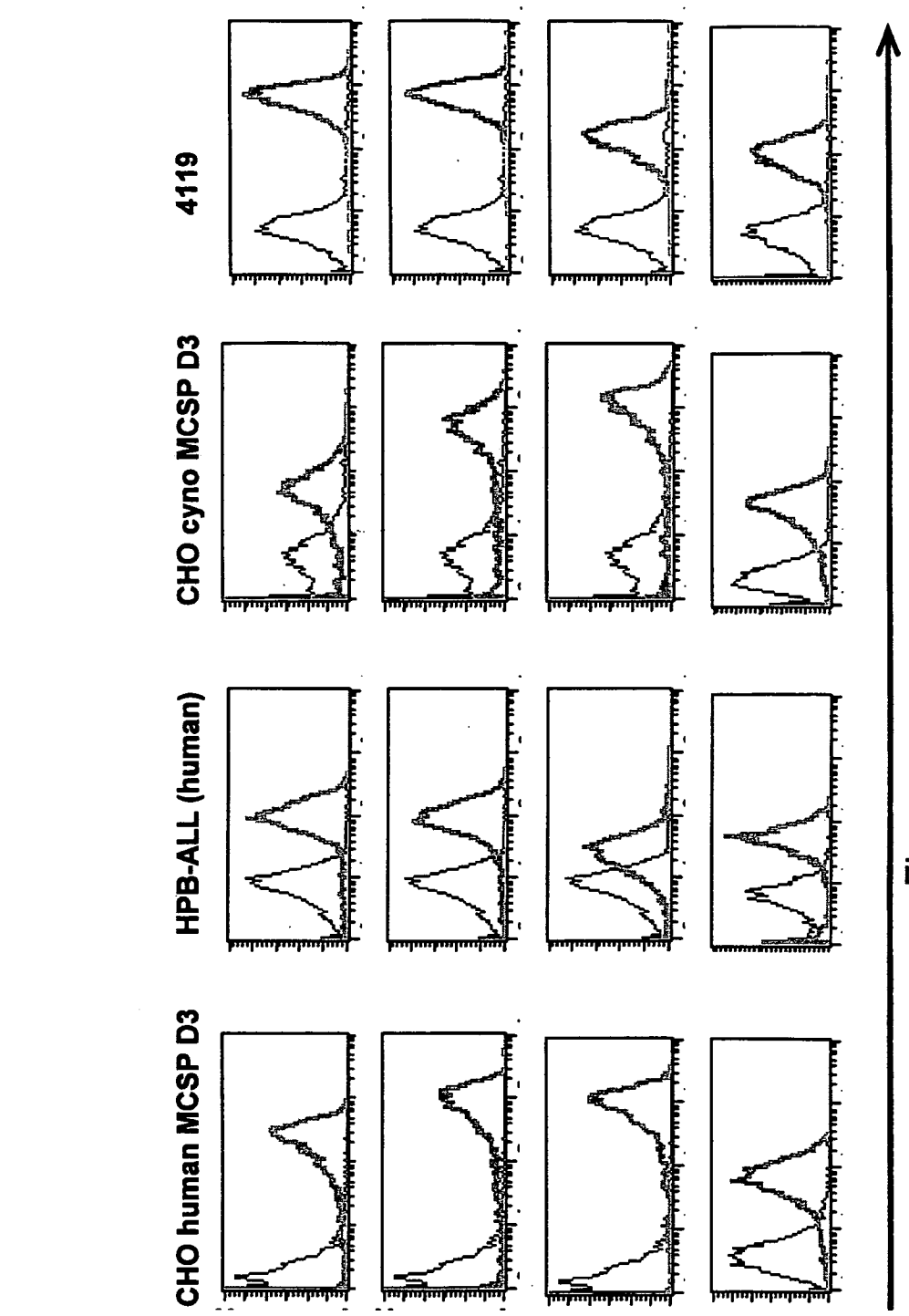

CHO human MCSP D3
HPB-ALL (human)
CHO cyno MCSP D3
4119
MCSP-D2 HLP x H2C HLP
MCSP-F9 HLP x H2C HLP
MCSP-F9 HLP x G4H HLP
MCSP-G4 HLP x I2C HL
Count
Fluorescence

Figure 15

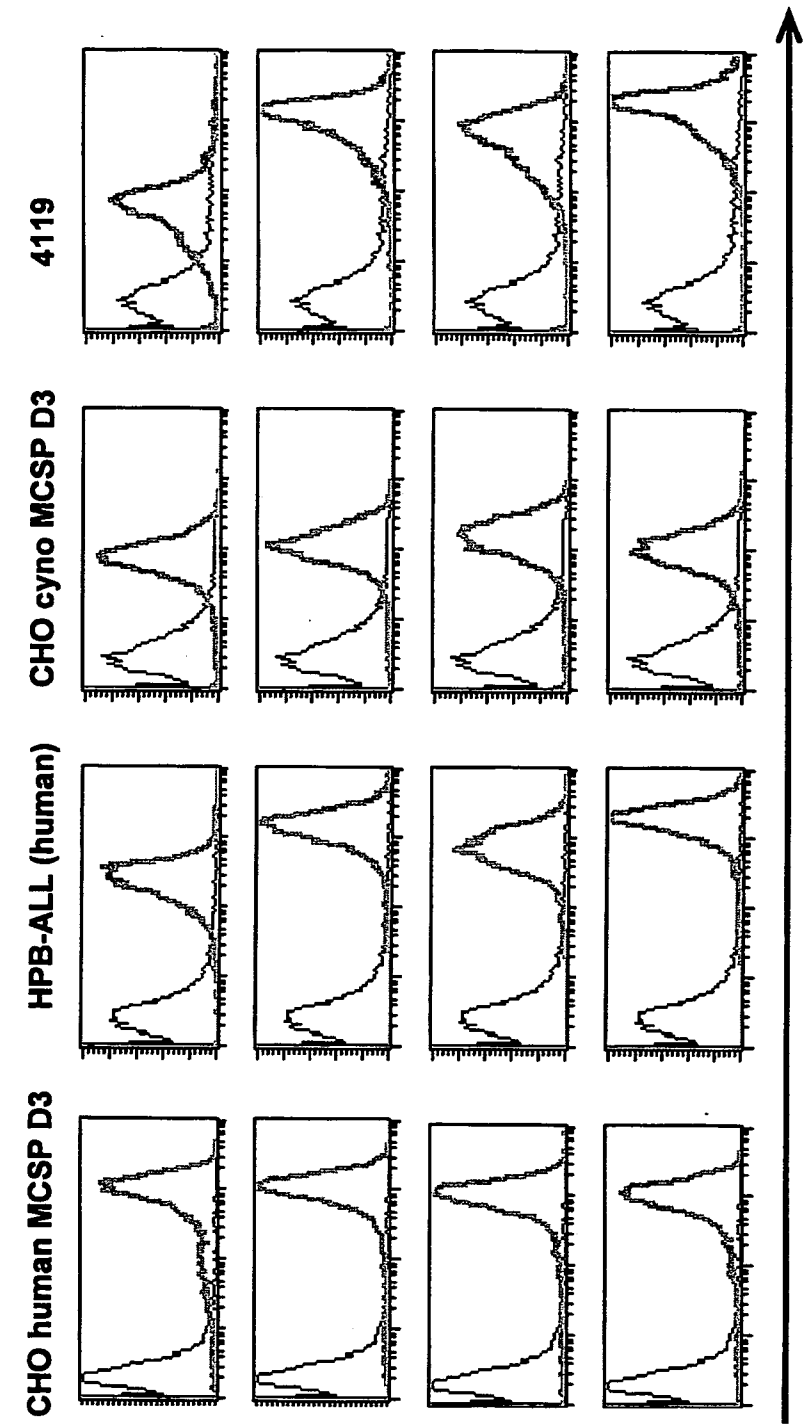

CHO human MCSP D3
HPB-ALL (human)
CHO cyno MCSP D3
4119
MCSP-G4 HLP x F6A HLP
MCSP-G4 HLP x H2C HLP
MCSP-G4 HLP x G4H HLP
MCSP-G4 HLP x F12Q HL
Count
Fluorescence

Figure 16

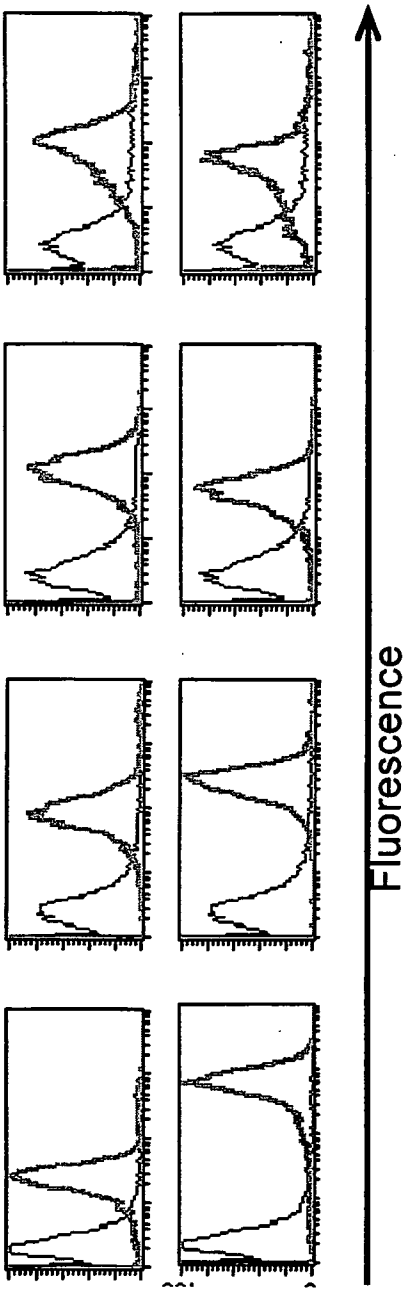
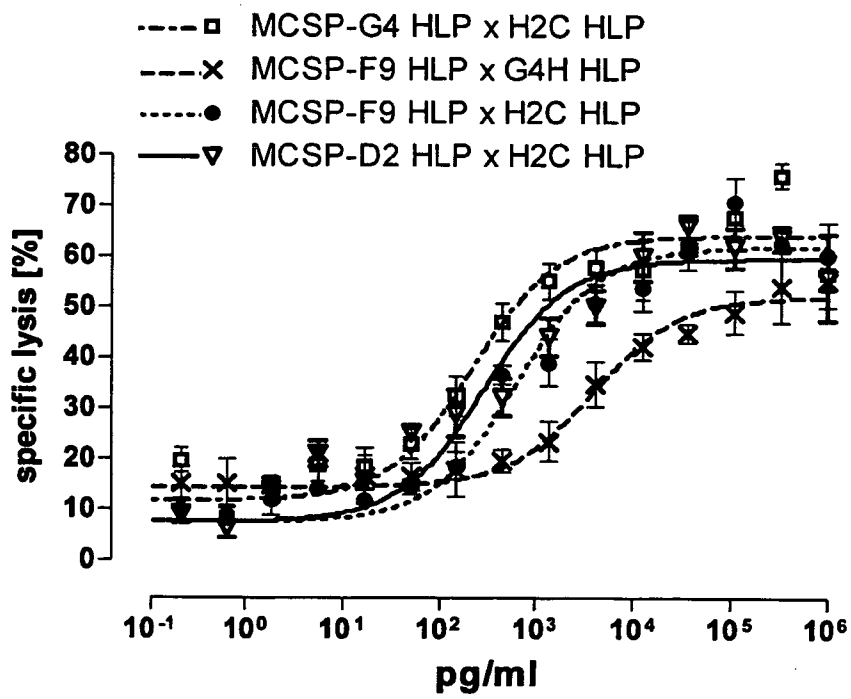

CHO human MCSP D3
HPB-ALL (human)
CHO cyno MCSP D3
4119
MCSP-G4 HLP x E1L HLP
MCSP-G4 HLP x E2M HLP
Count
Fluorescence

Figure 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

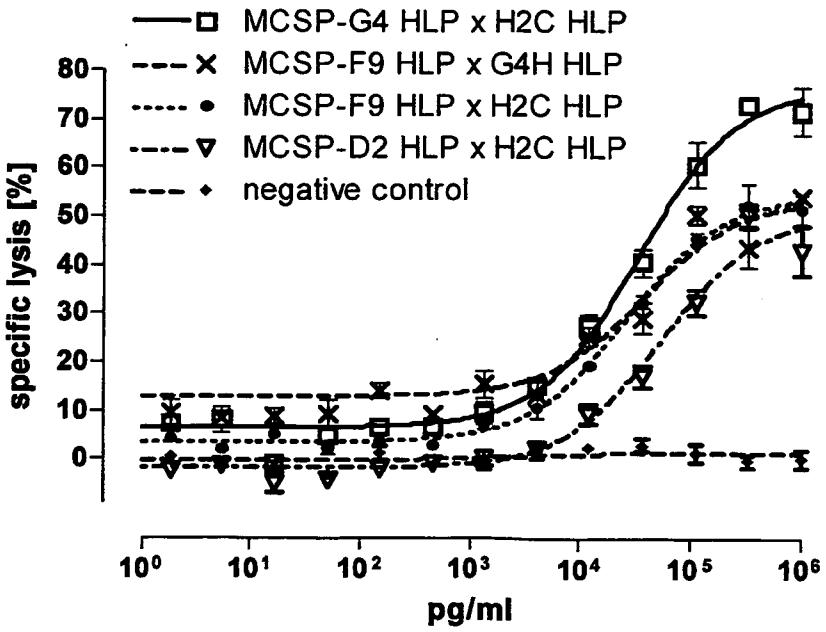
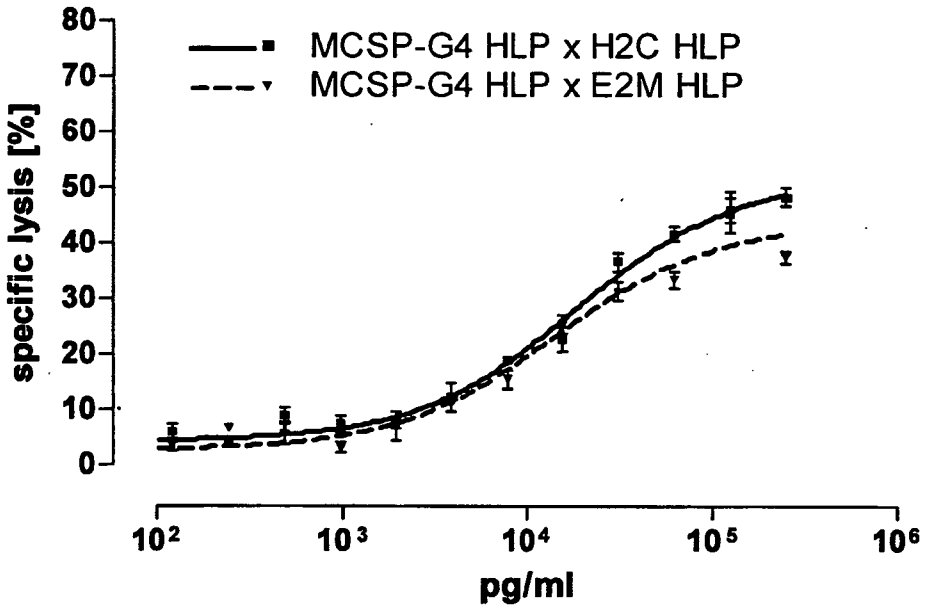


Figure 18

A)

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



B)

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

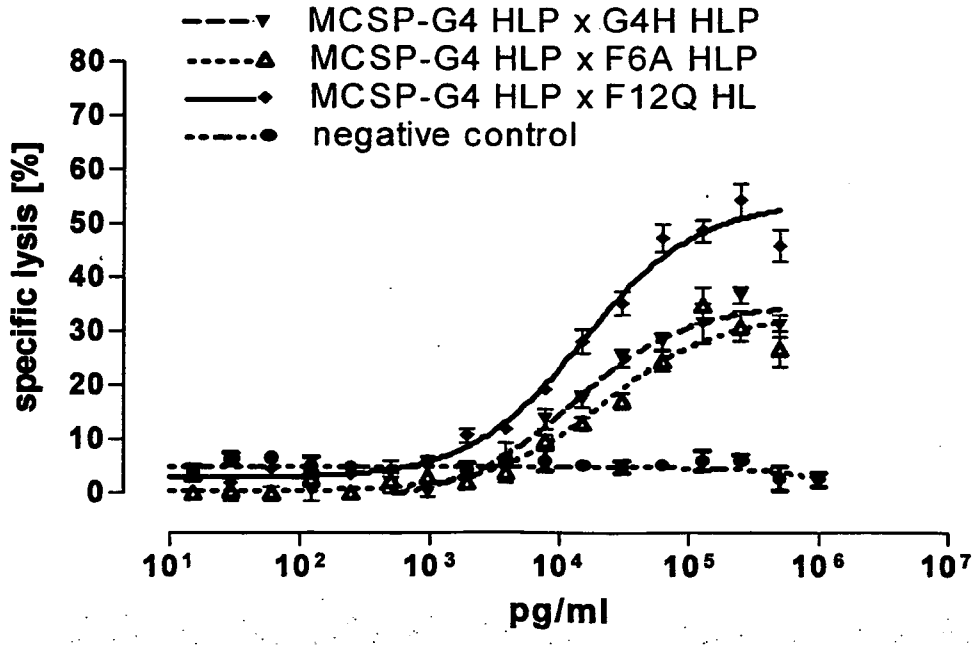
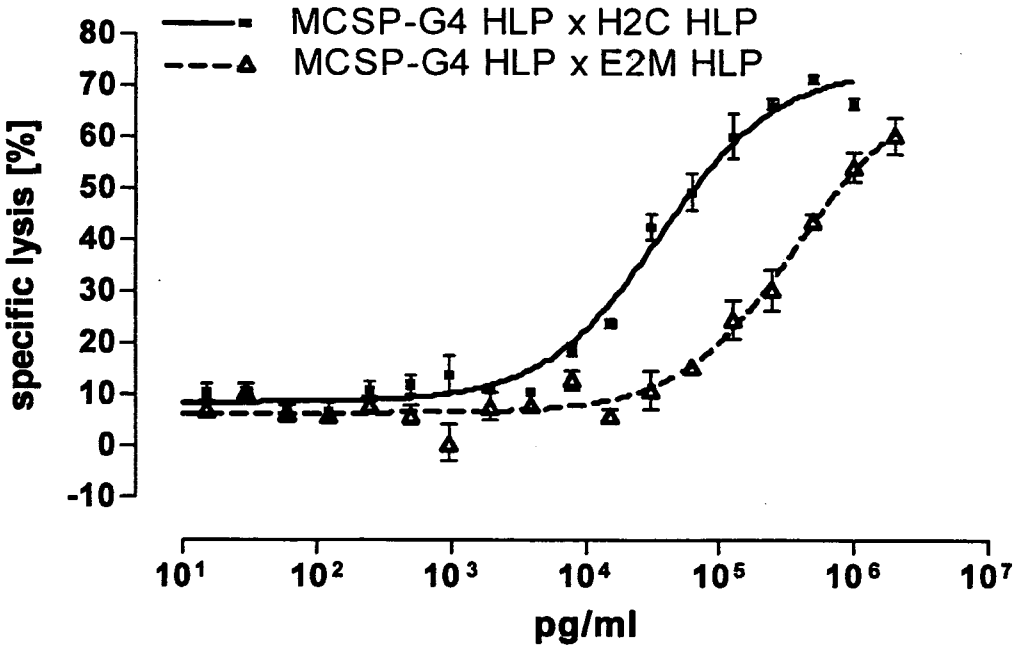


Figure 19

A)

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



B)

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

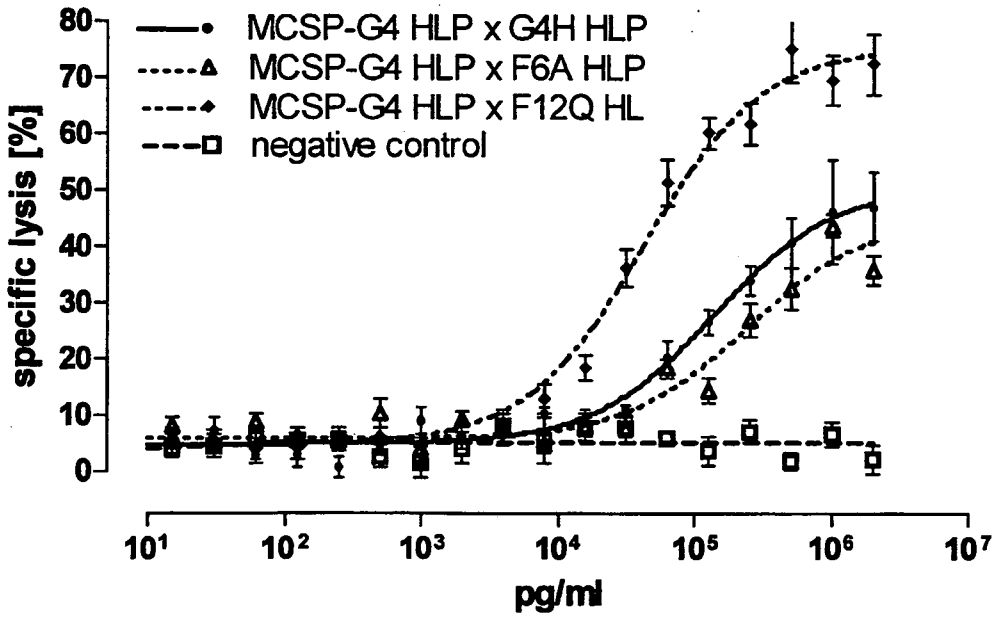
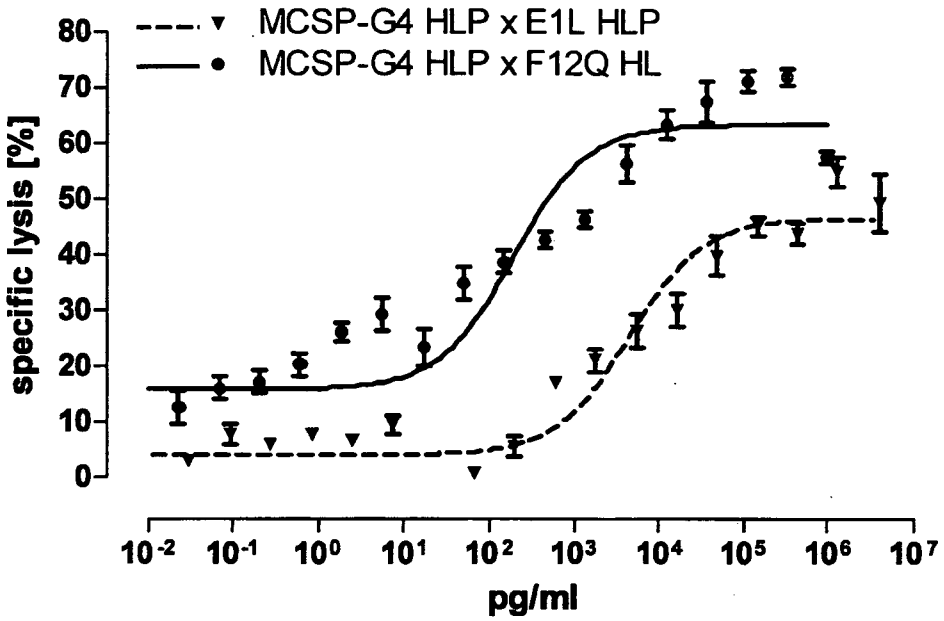


Figure 20

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

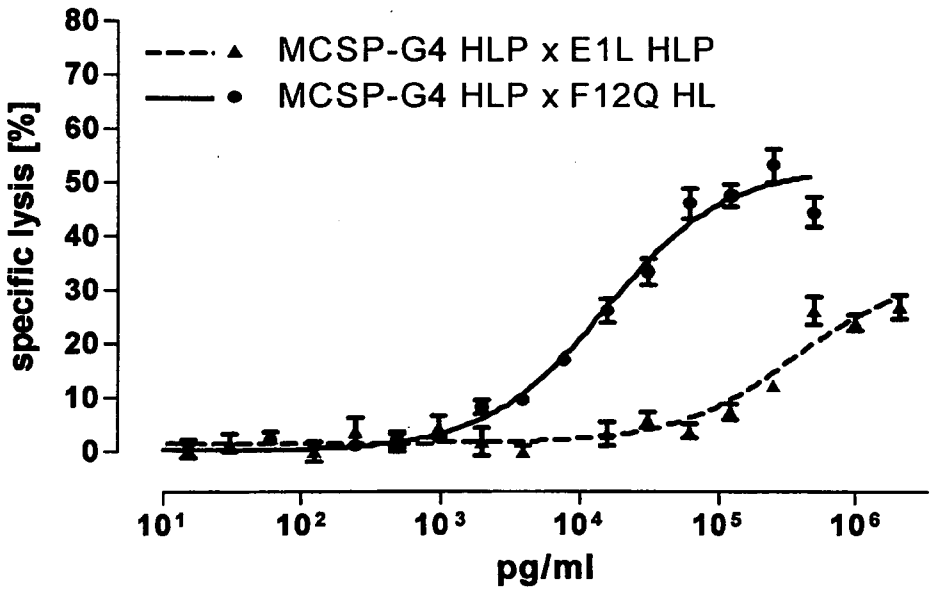
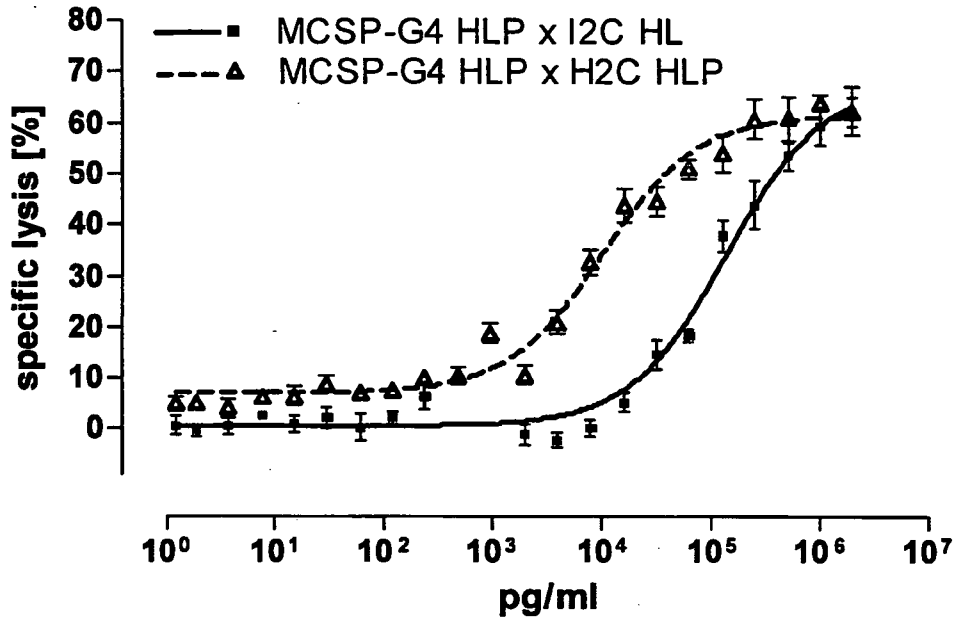


Figure 21

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

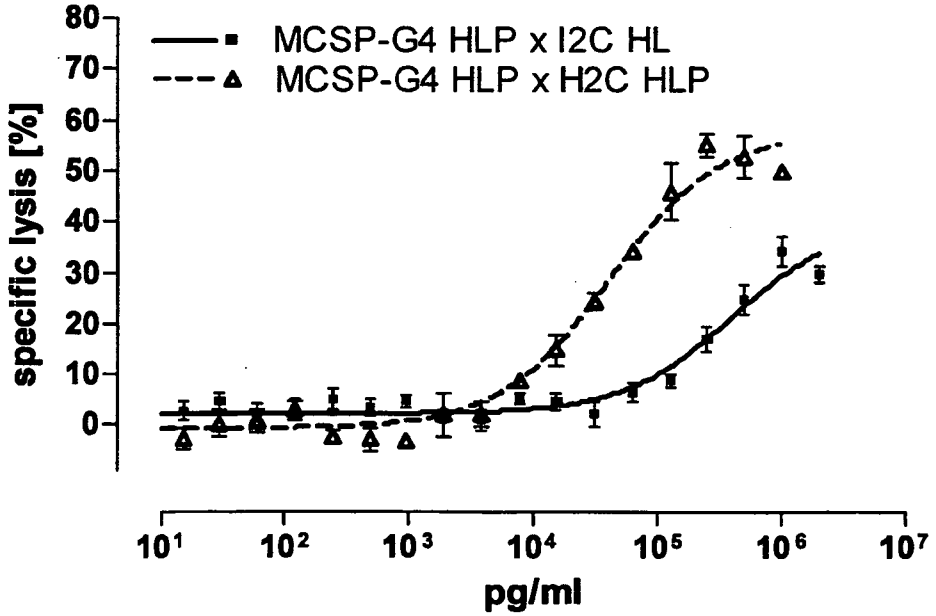


Figure 22 (1)

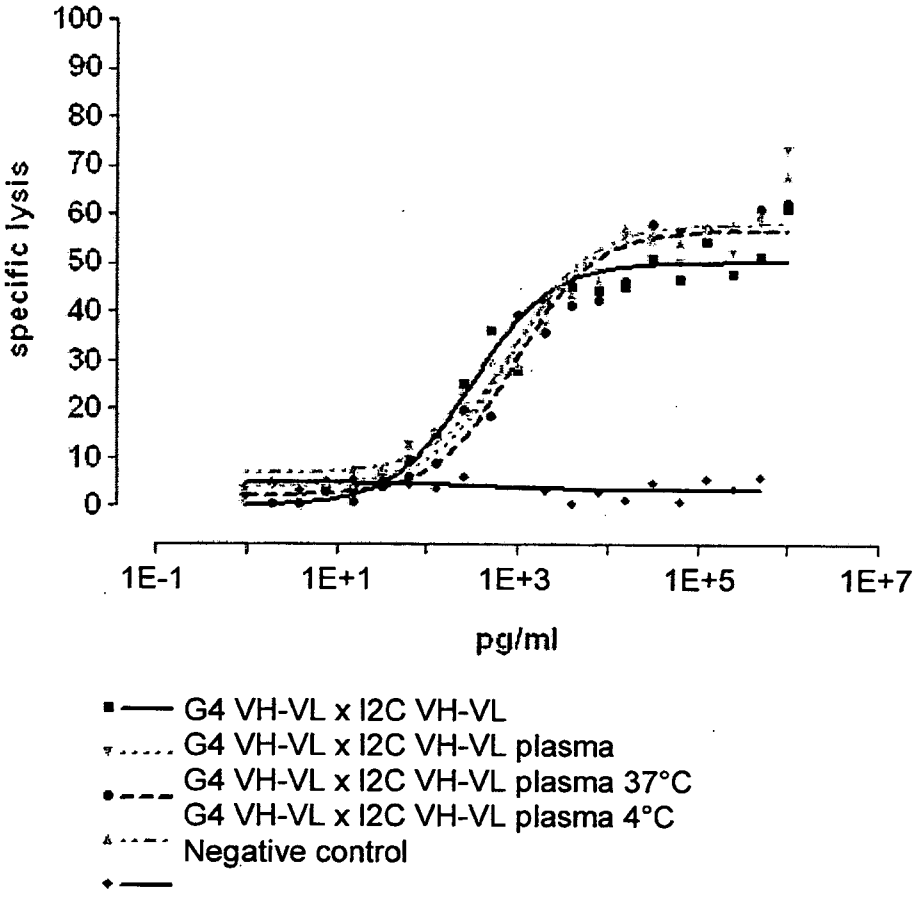
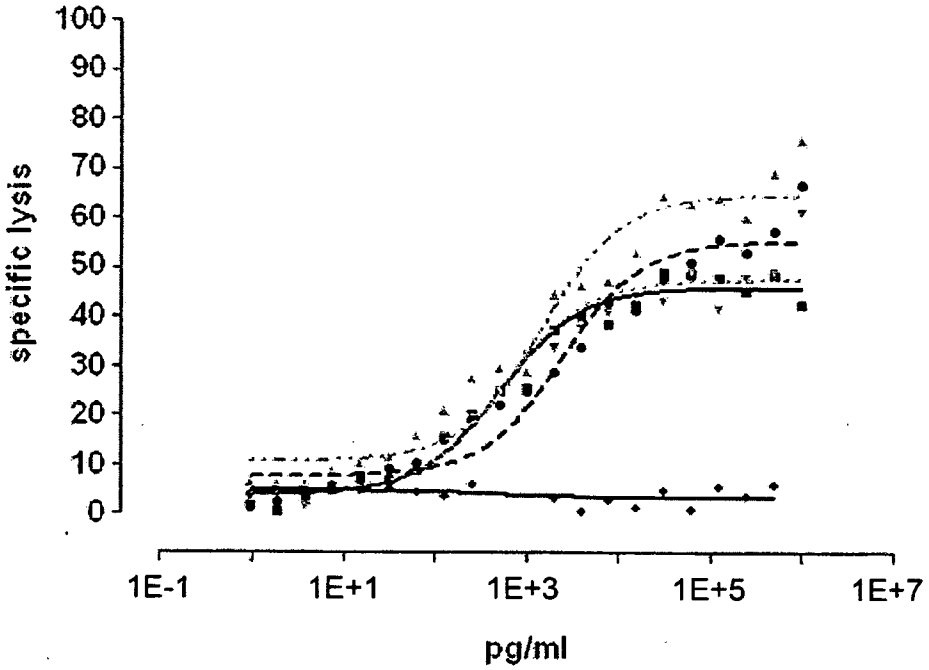
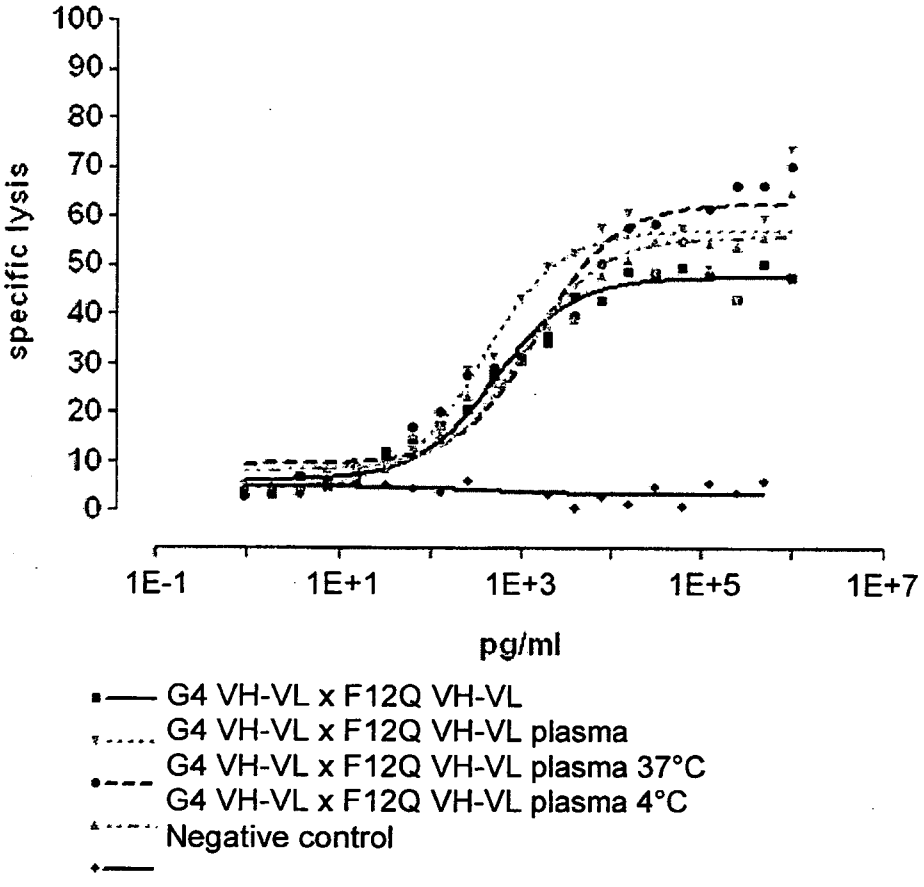

100
90
80
70
60
50
40
30
20
10
0
specific lysis
1E-1
1E+1
1E+3
1E+5
1E+7
pg/ml
G4 VH-VL x I2C VH-VL
G4 VH-VL x I2C VH-VL plasma
G4 VH-VL x I2C VH-VL plasma 37°C
G4 VH-VL x I2C VH-VL plasma 4°C
Negative control

Figure 22 (2)

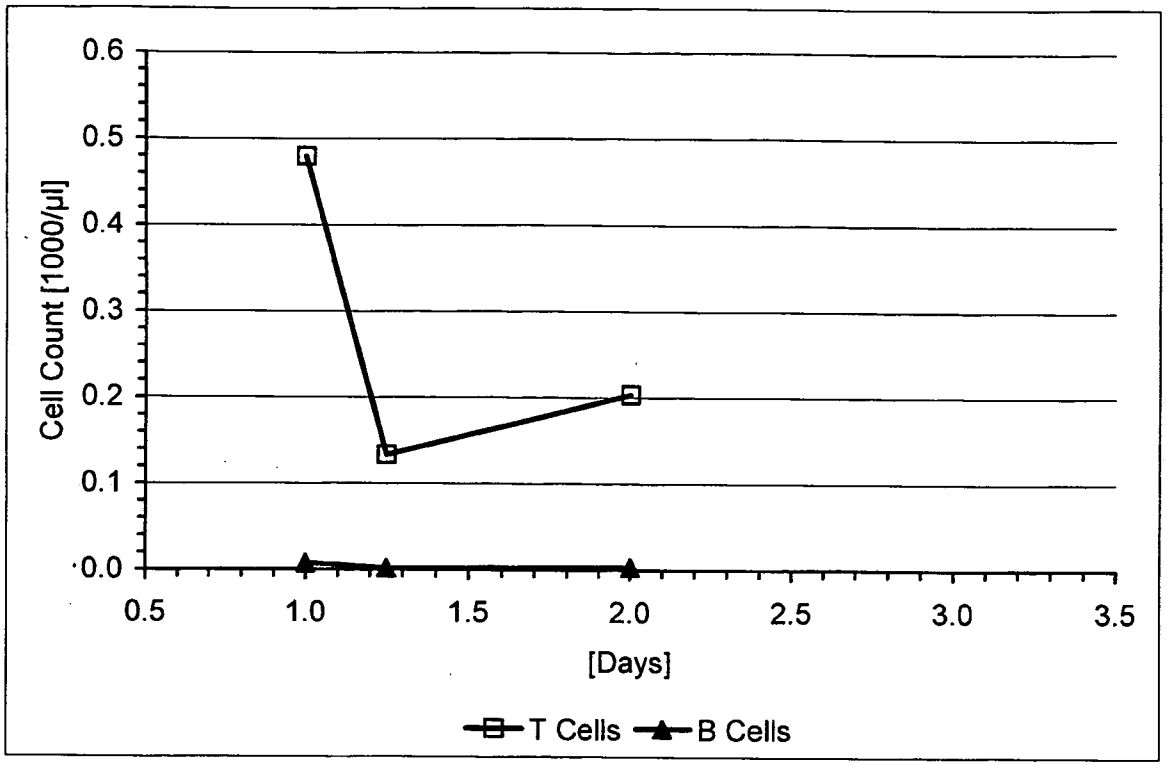


G4 VH-VL x H2C VH-VL
G4 VH-VL x H2C VH-VL plasma
G4 VH-VL x H2C VH-VL plasma 37°C
G4 VH-VL x H2C VH-VL plasma 4°C
Negative control

Figure 22 (3)

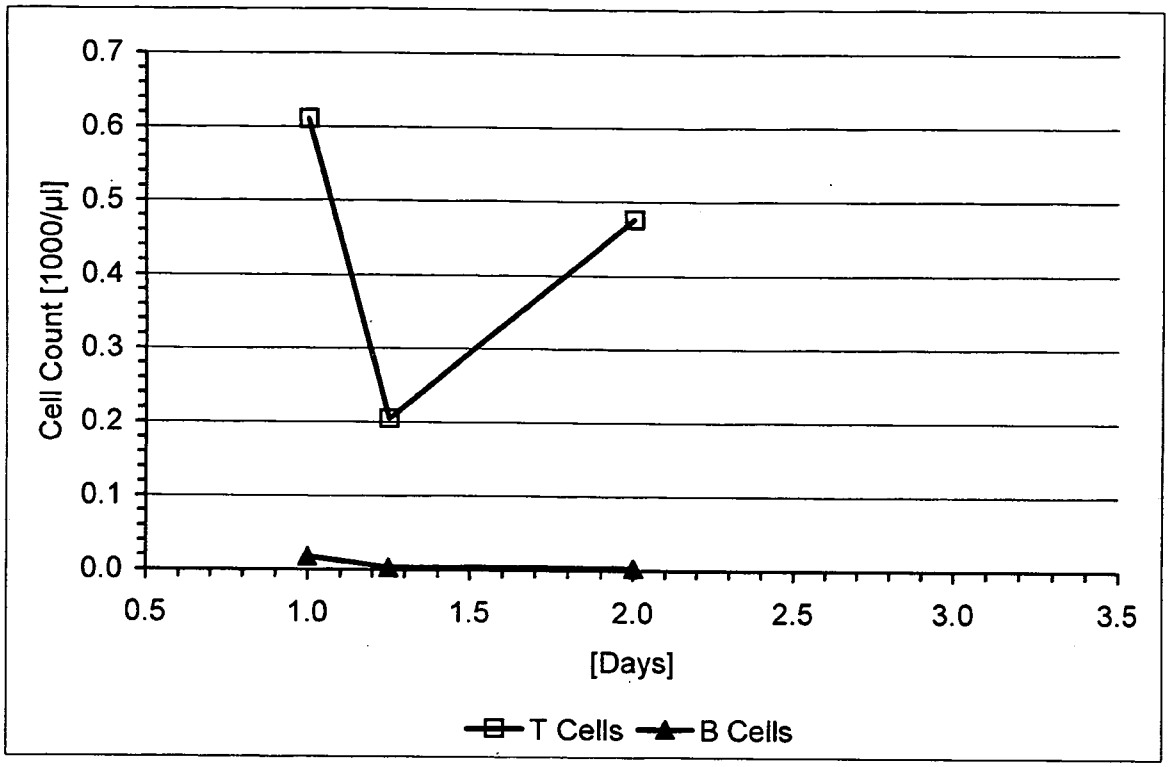

100
90
80
70
60
50
40
30
20
10
0
specific lysis
1E-1
1E+1
1E+3
1E+5
1E+7
pg/ml
G4 VH-VL x F12Q VH-VL
G4 VH-VL x F12Q VH-VL plasma
G4 VH-VL x F12Q VH-VL plasma 37°C
G4 VH-VL x F12Q VH-VL plasma 4°C
Negative control

Pat. 1 (0.5 µg/m²/24h CD19xCD3)



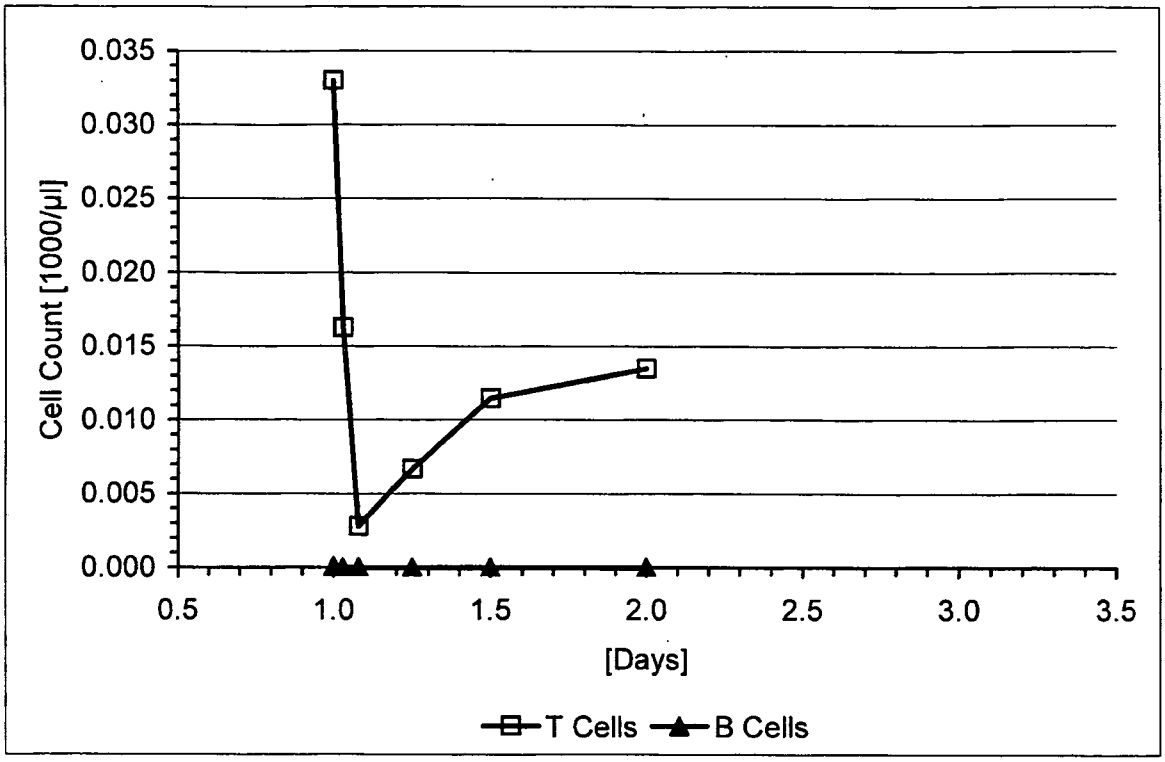
Pat. 7 (1.5 µg/m²/24h CD19xCD3)

Figure 23a



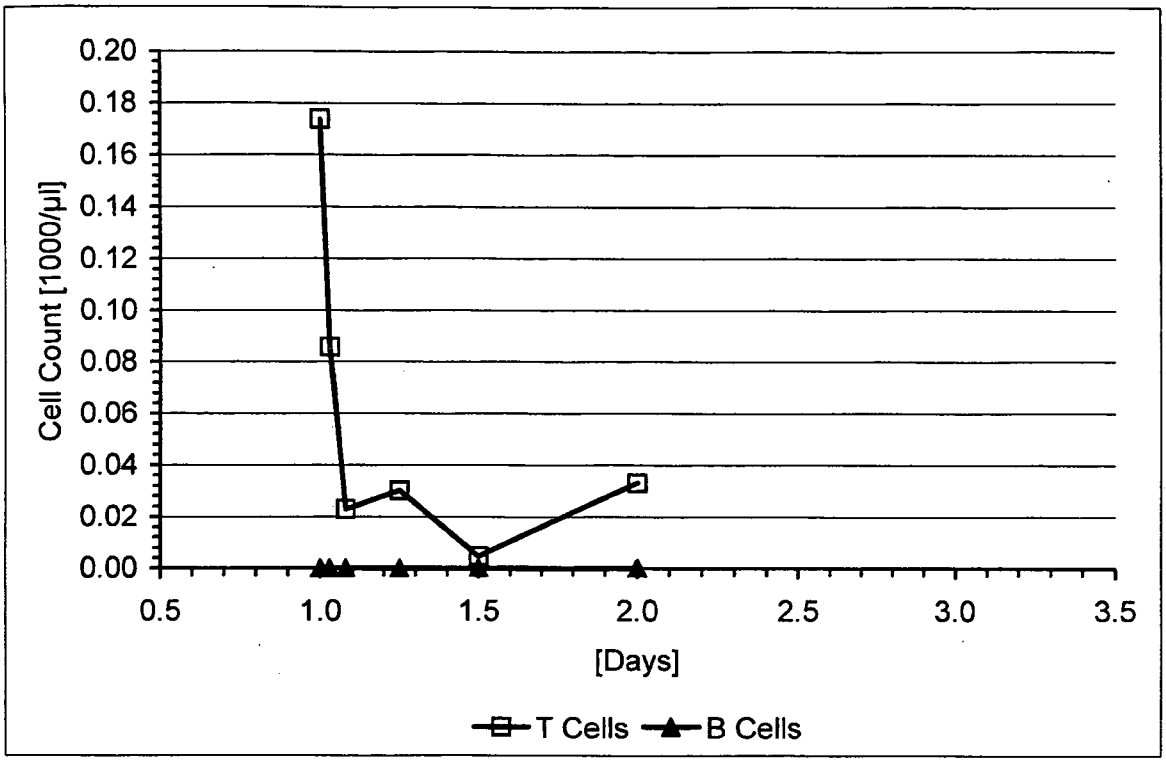
Pat. 23 (15 µg/m^2/24h CD19xCD3)

Figure 23b



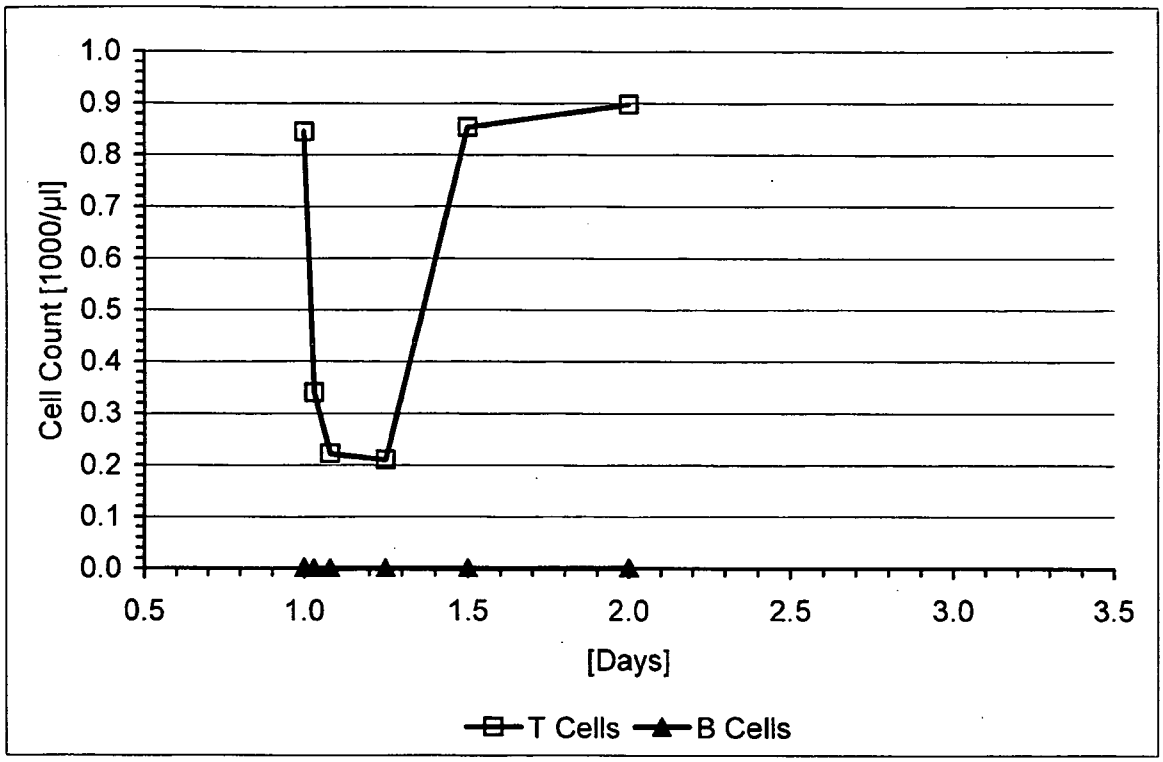
Pat. 30 (30 µg/m^2/24h CD19xCD3)

Figure 23c



Pat. 31 (30 µg/m^2/24h CD19xCD3)

Figure 23d



Pat. 33 (60 µg/m^2/24h CD19xCD3)

Figure 23e

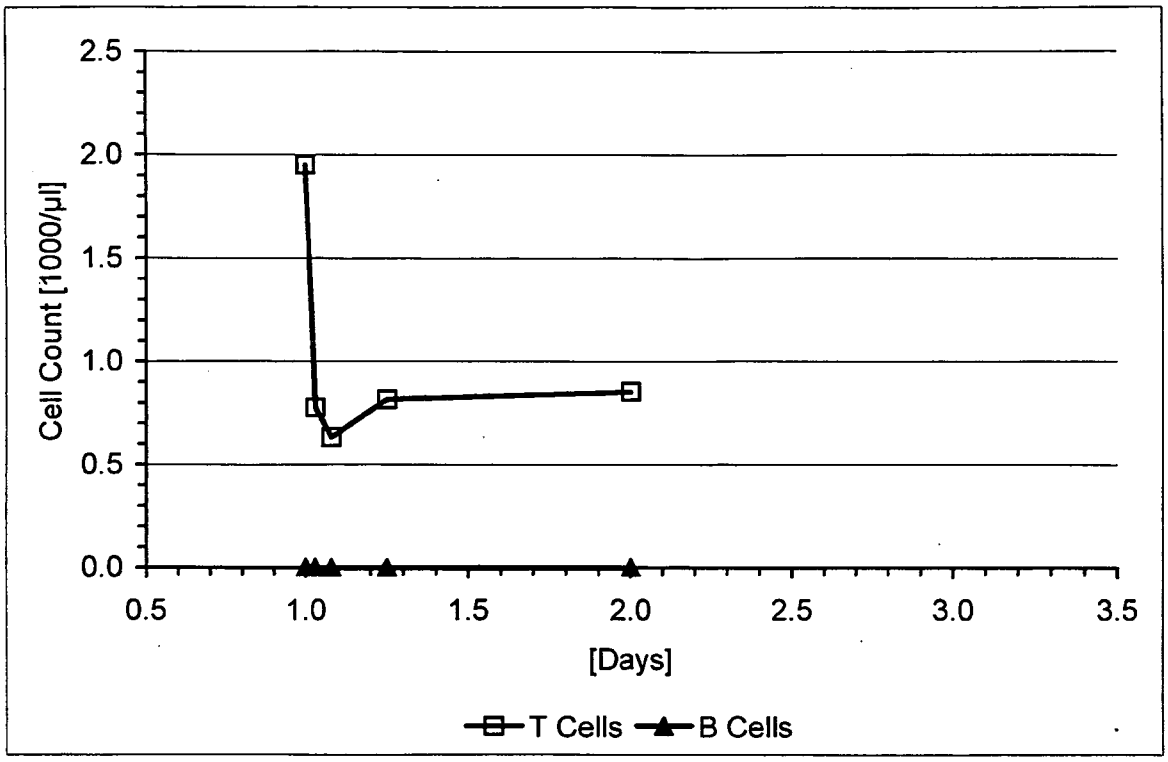
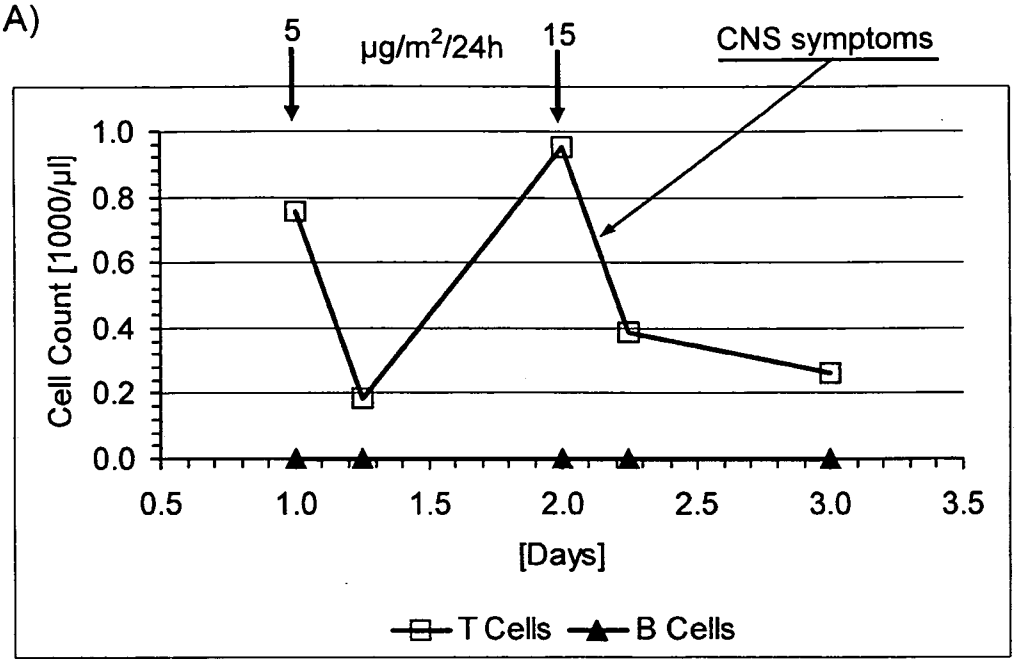

2.5
2.0
1.5
1.0
0.5
0.0
Cell Count [1000/µl]
0.5
1.0
1.5
2.0
2.5
3.0
3.5
[Days]
T Cells
B Cells

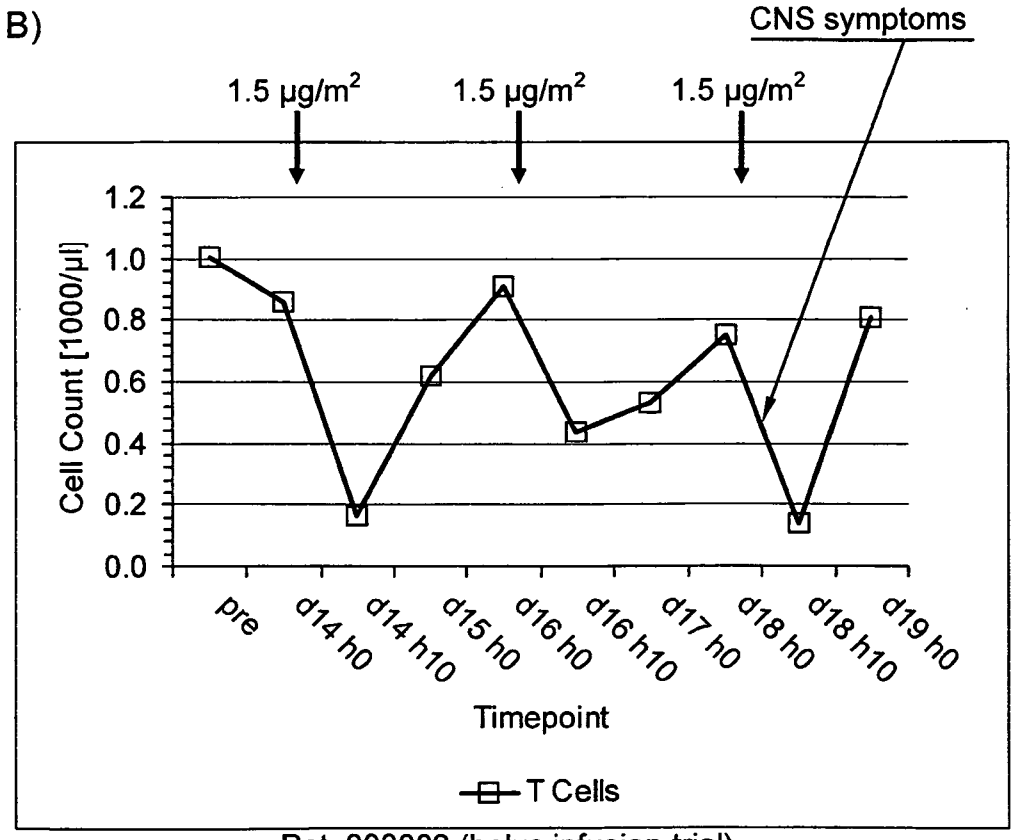
Figure 23f

A)



Pat. 19 (continuous infusion: 5 µg/m²/24h for 1 day followed by 15 µg/m²/24h CD19xCD3 maintenance)

B)



Pat. 003002 (bolus infusion trial)

Figure 24

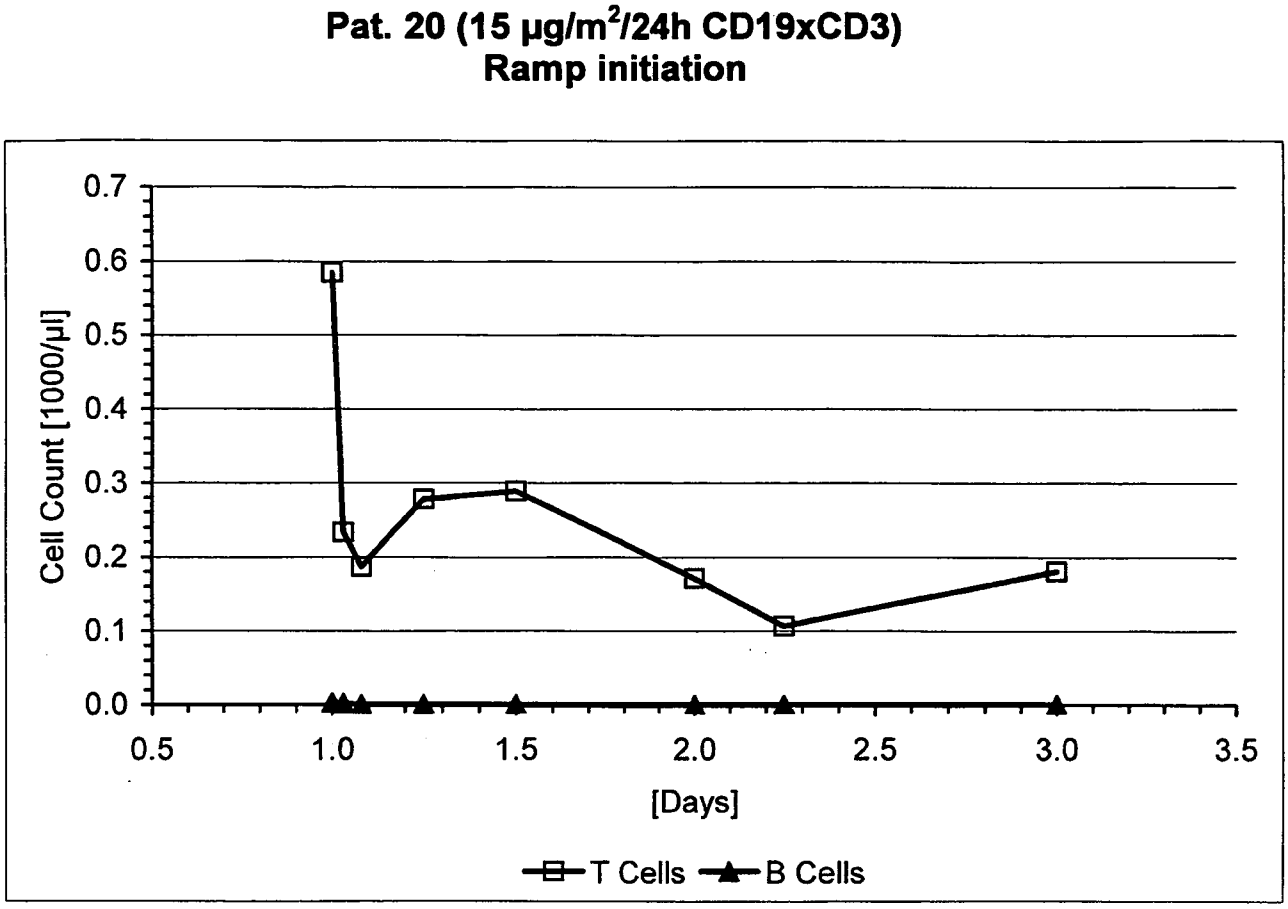

Pat. 20 (15 µg/m²/24h CD19xCD3)
Ramp initiation
Cell Count [1000/µl]
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
[Days]
T Cells
B Cells

Figure 25

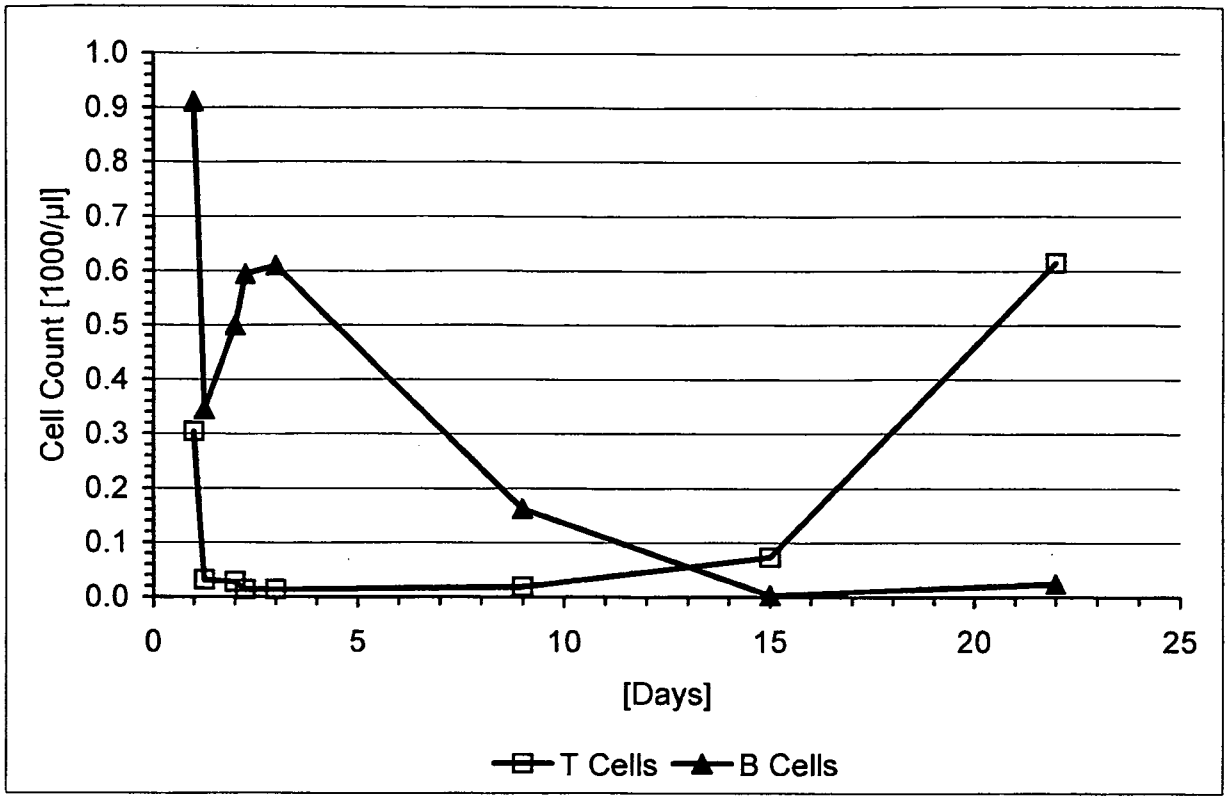
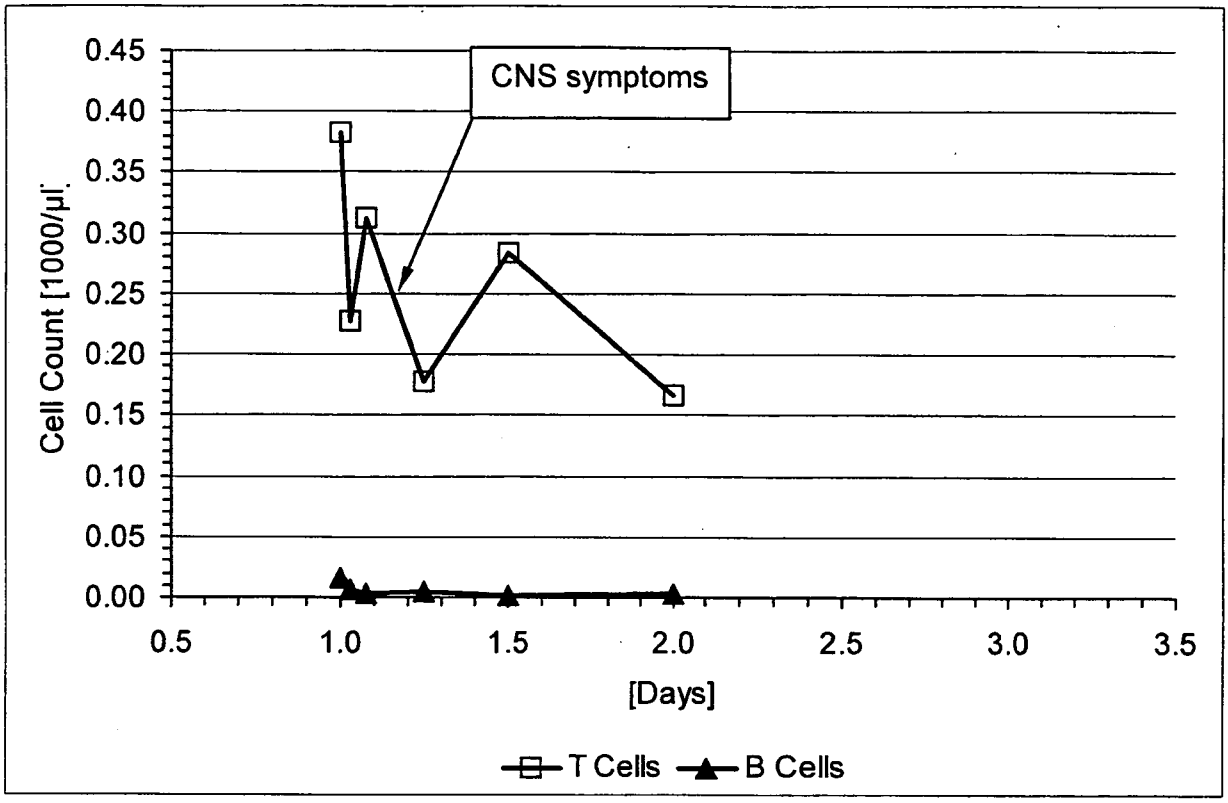

Pat. 13 (15 µg/m²/24h CD19xCD3)
Cell Count [1000/µl]
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0
5
10
15
20
25
[Days]
T Cells
B Cells

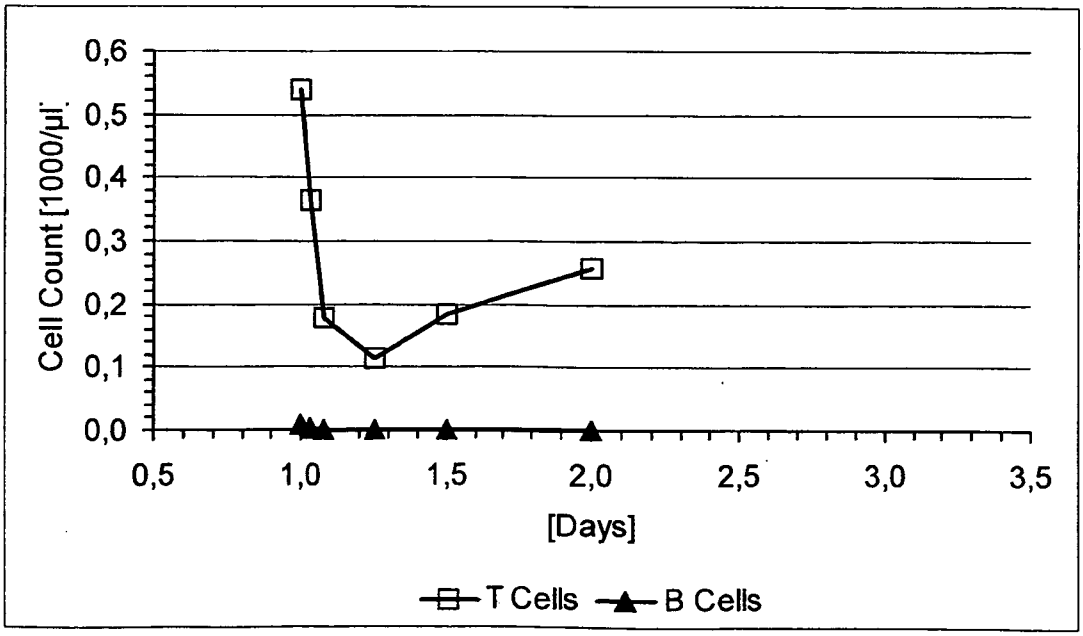
Figure 26

Figure 27

Pat. 24 (15 µg/m²/24h CD19xCD3 without HSA)
1st Treatment start



Pat. 24 (15 µg/m²/24h CD19xCD3 with HSA)
2nd Treatment start



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

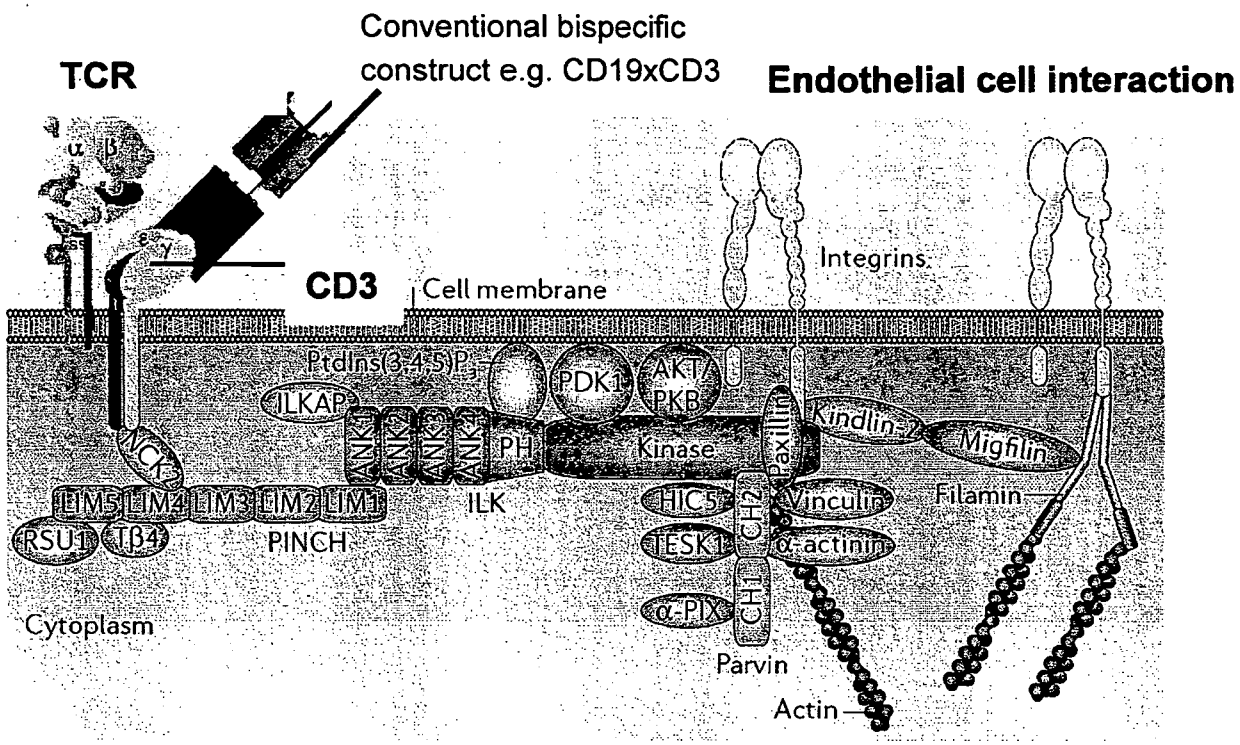
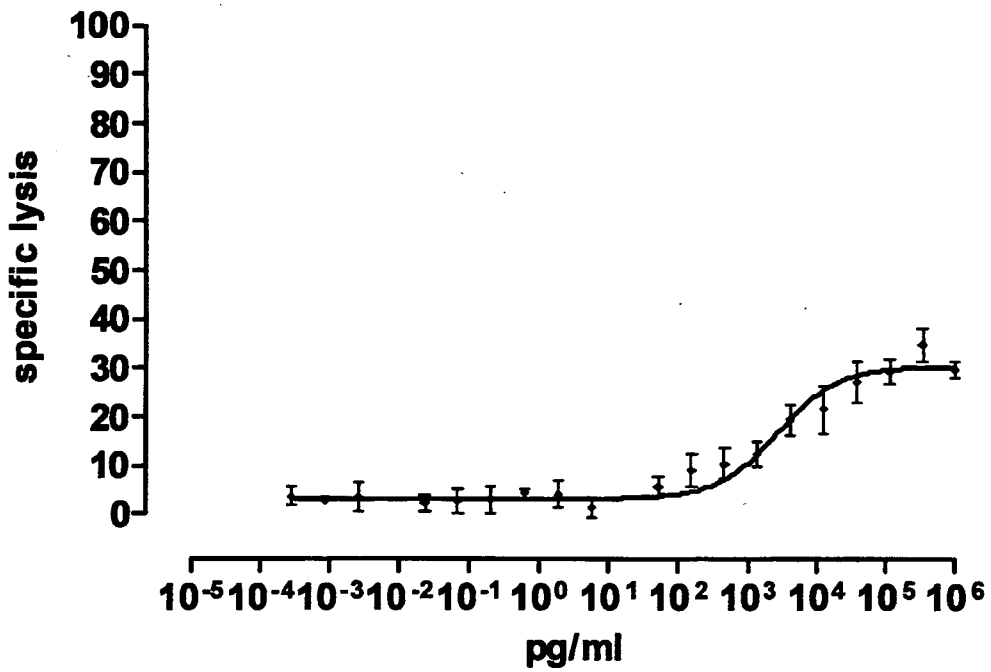


Figure 28

Figure 29

Cytotoxic activity of cynomolgus test material CD33-AF5 VH-VL x I2C VH-VL

Target cells: cyno CD33 CHO; effector cells: 4119 LnPx
E:T-ratio 10:1; assay duration: 18 h
EC50: 2.7 ng/ml



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

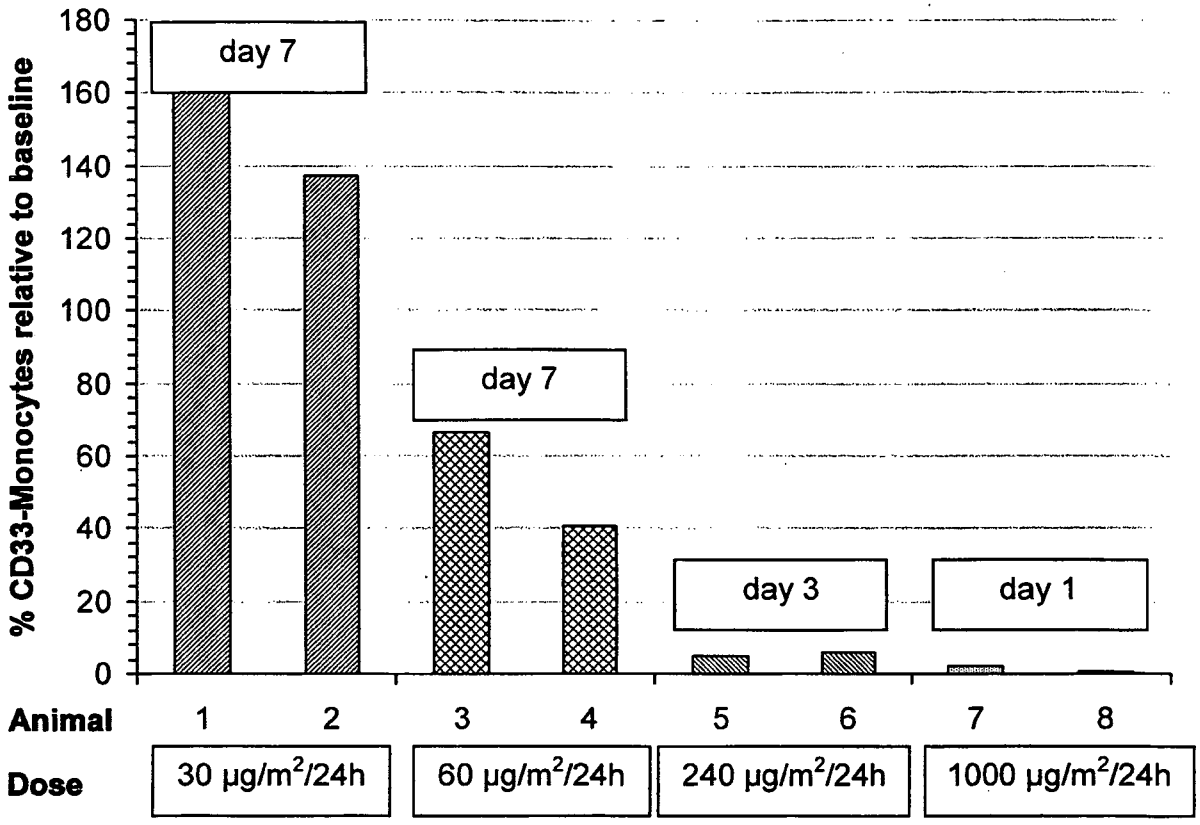
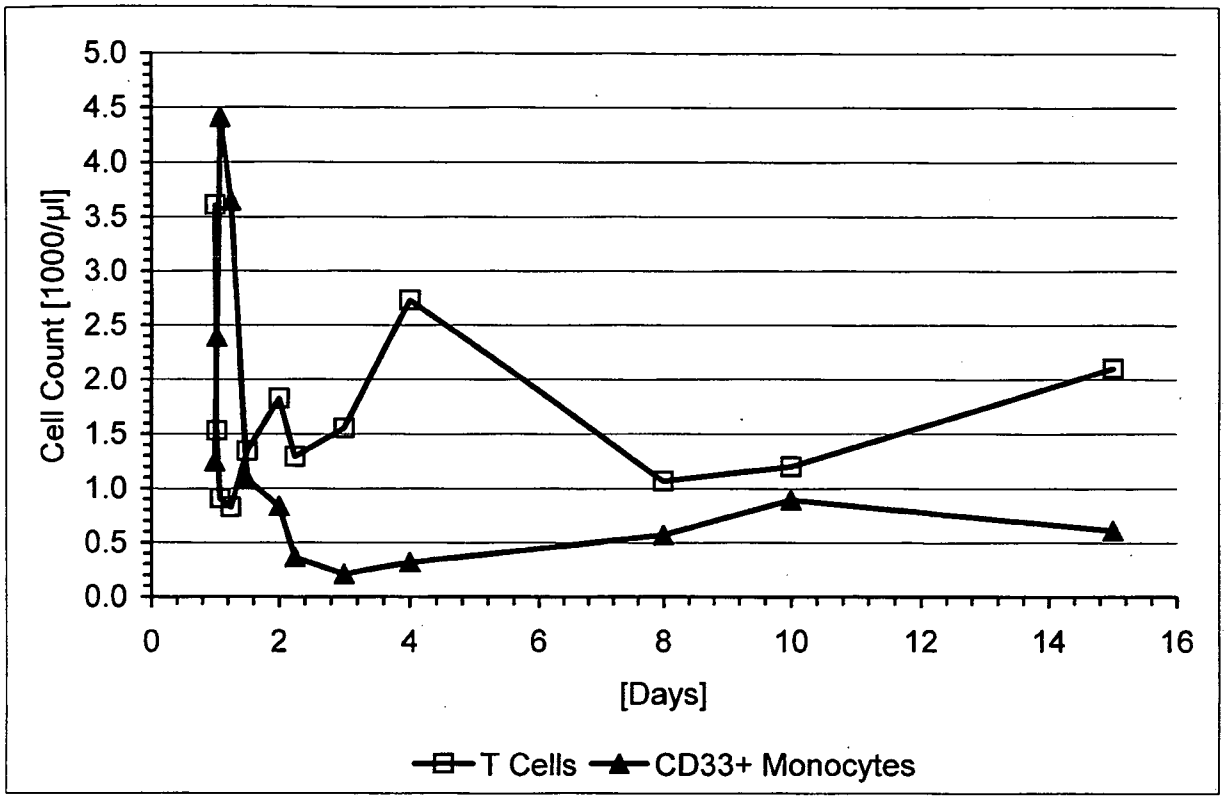


Figure 30 A

Animal 9 (120 µg/m²/24h CD33xCD3)



Animal 10 (120 µg/m²/24h CD33xCD3)

Figure 30 B (1)

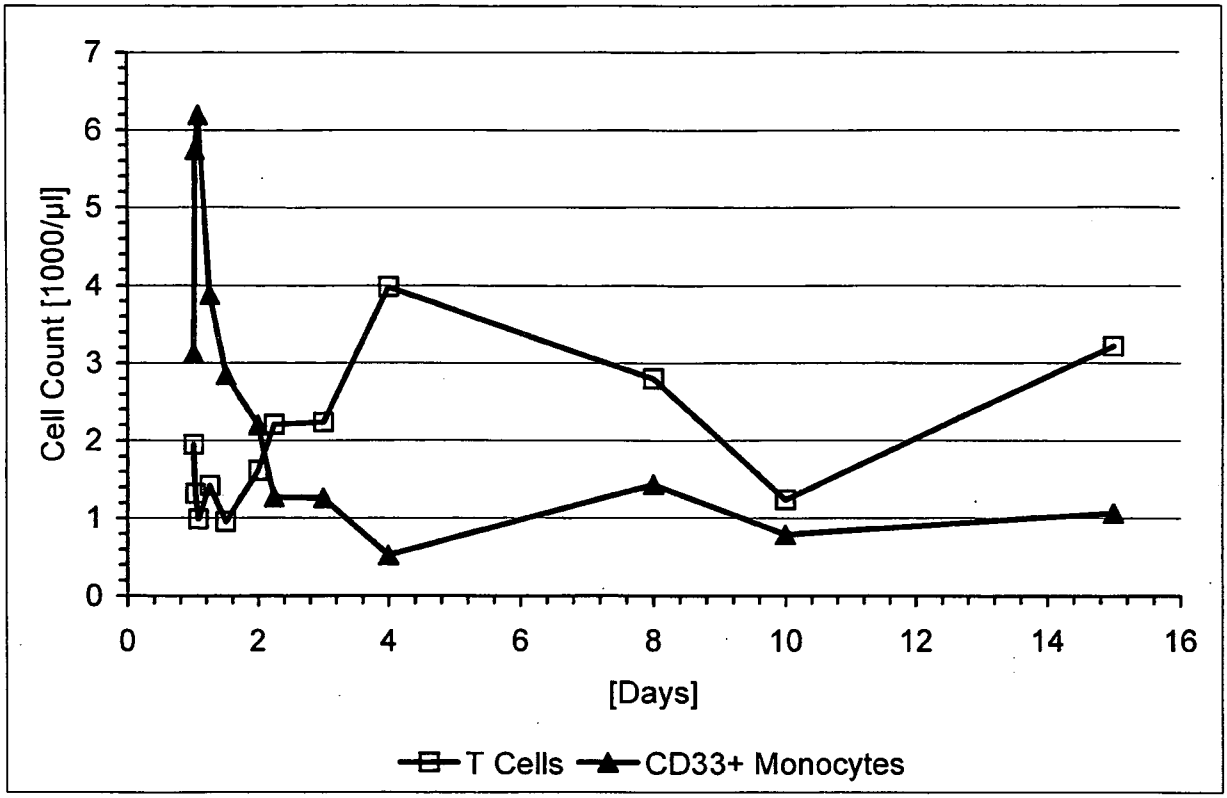

Cell Count [1000/µl]
7
6
5
4
3
2
1
0
0
2
4
6
8
10
12
14
16
[Days]
T Cells
CD33+ Monocytes

Figure 30 B (2)

Figure 31

Cytotoxic activity of cynomolgus test material MCSP-G4 VH-VL x I2C VH-VL

Target cells: cyno MCSP CHO; effector cells: 4119 LnPx
E:T-ratio 10:1; assay duration: 18 h
EC50: 1.9 ng/ml

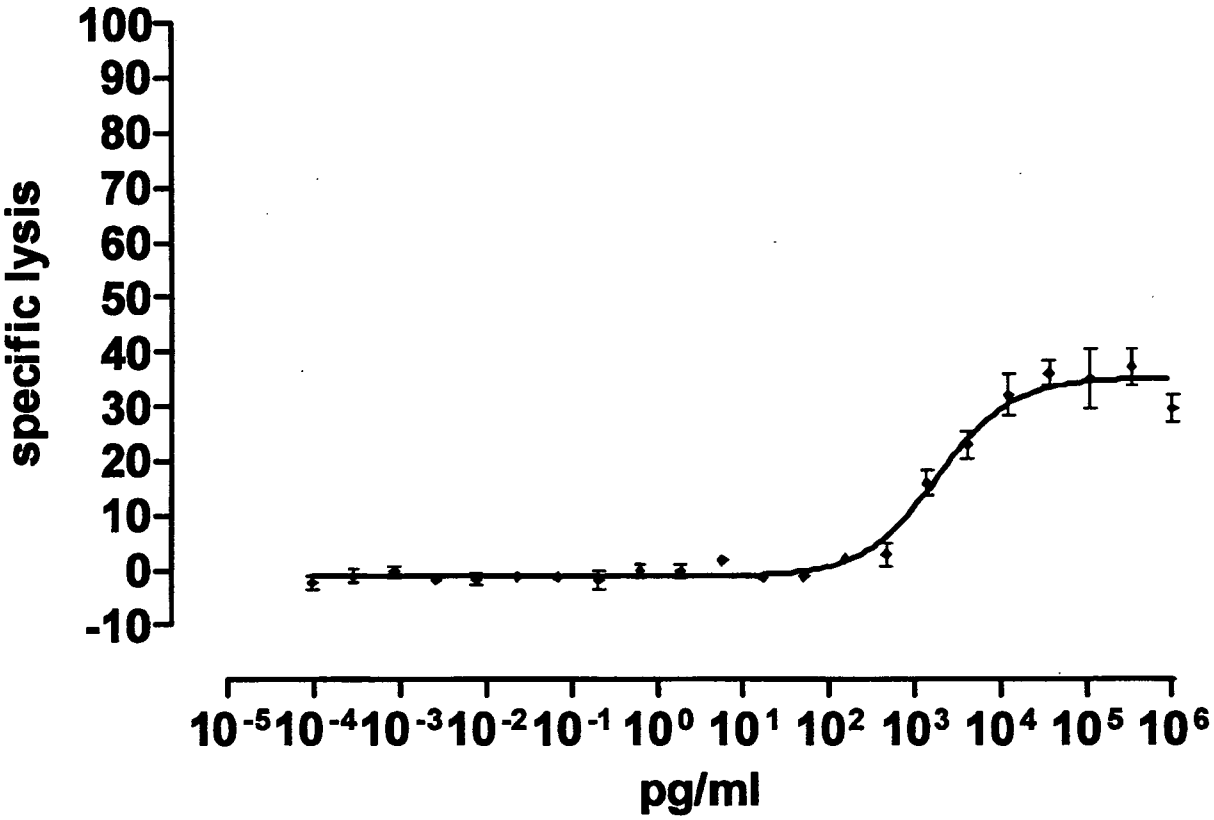
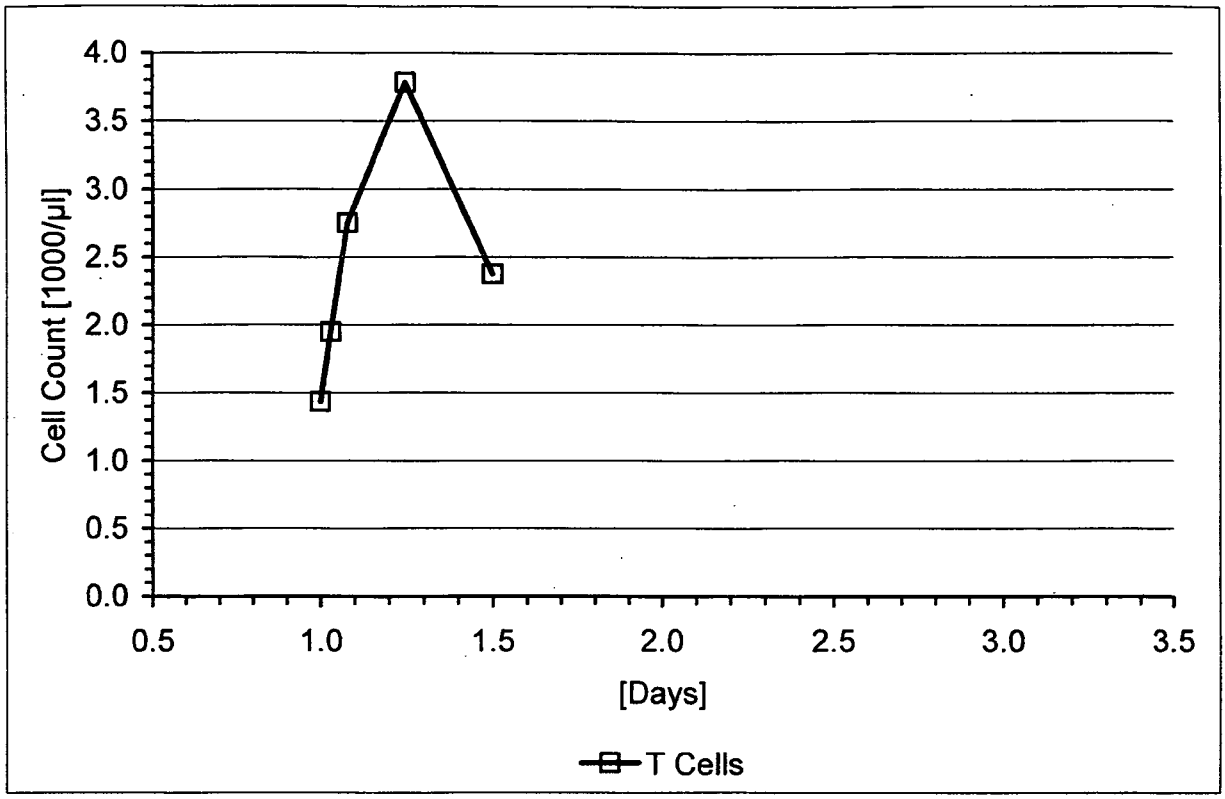


Figure 32 (1)

Animal 1 (60 µg/m²/24h MCSP-G4 VH-VL x I2C VH-VL)



Animal 2 (240 µg/m²/24h MCSP-G4 VH-VL x I2C VH-VL)

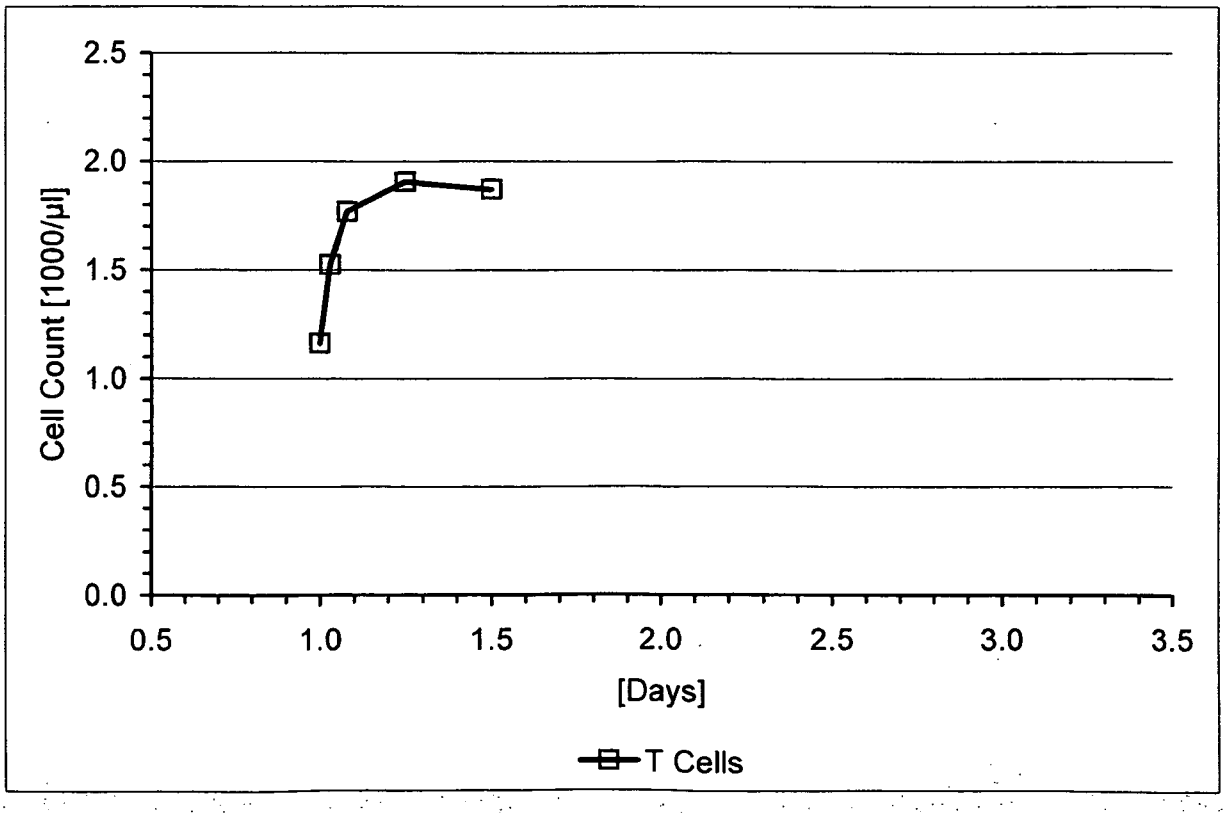
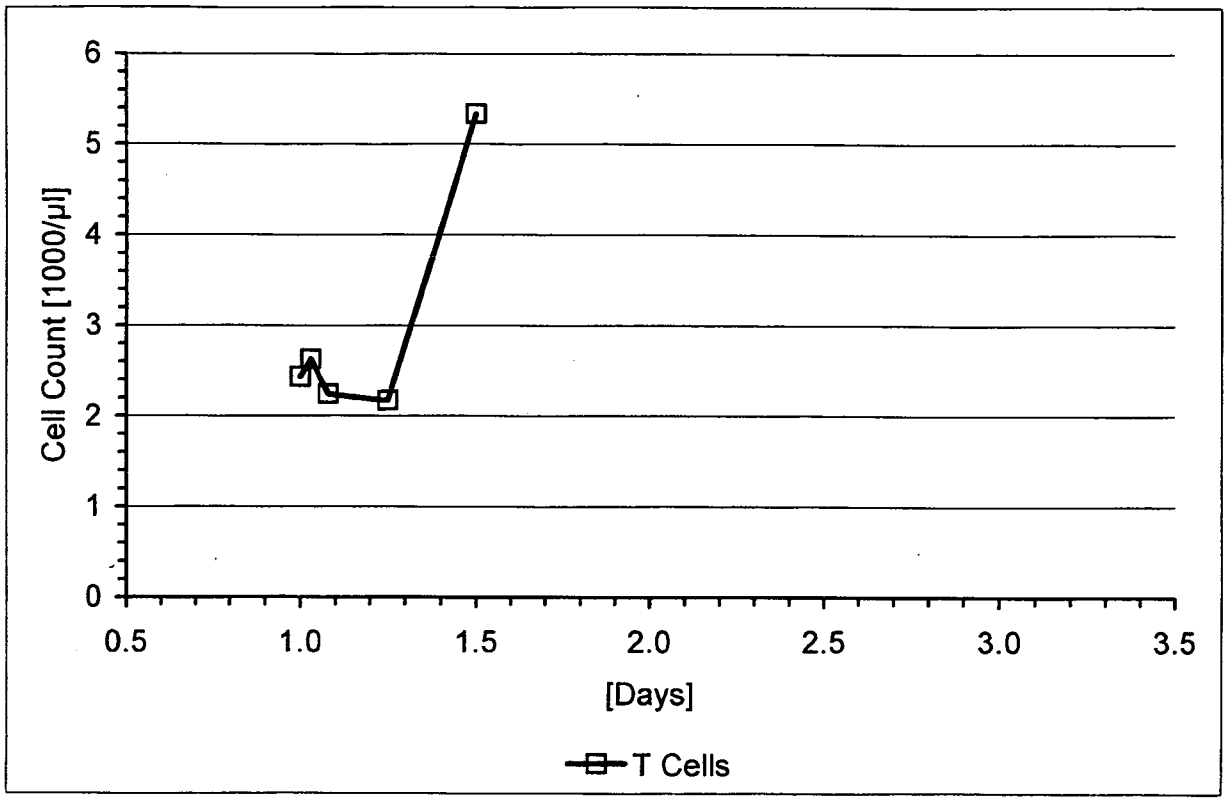
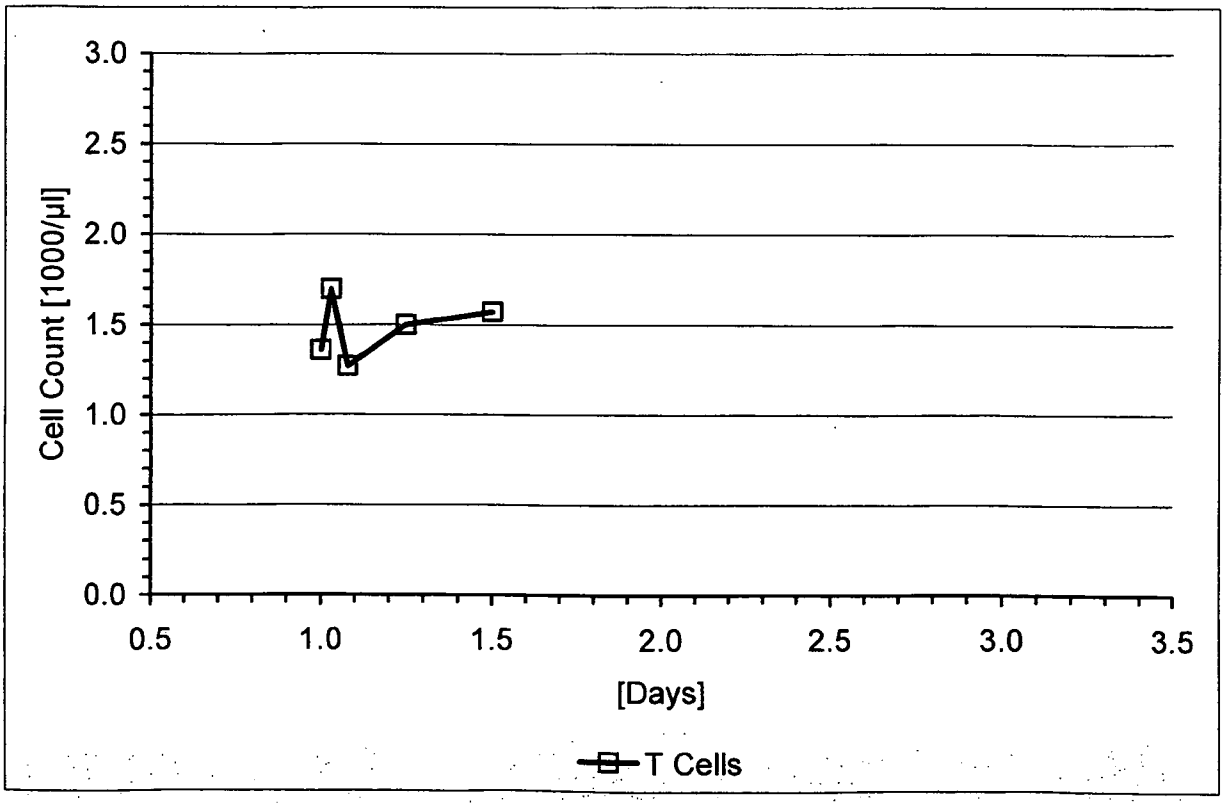


Figure 32 (2)

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

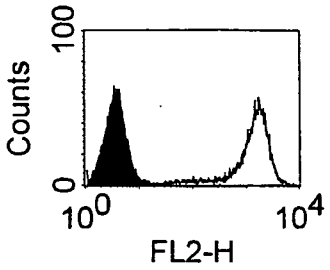


Animal 4 (1000 µg/m²/24h MCSP-G4 VH-VL x I2C VH-VL)



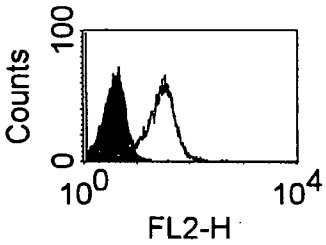
Human CD33 transfected CHO

AH11HLxF12QHL



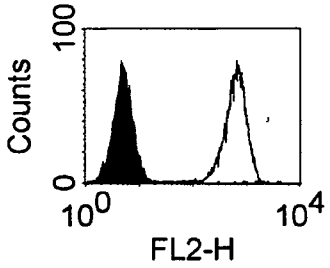
HPB-ALL

AH11HLxF12QHL



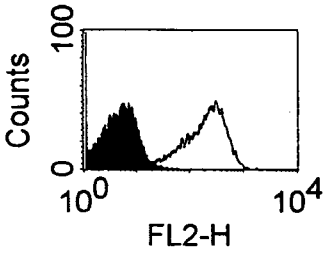
Macaque CD33 transfected CHO

AH11HLxF12QHL



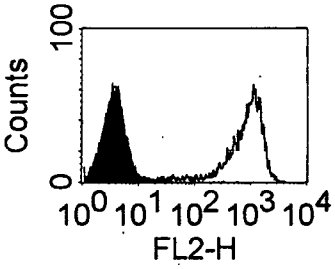
Macaque PBMC

AH11HLxF12QHL



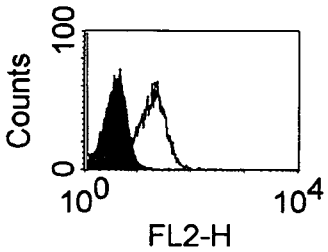
Human CD33 transfected CHO

AH11HLxH2CHL



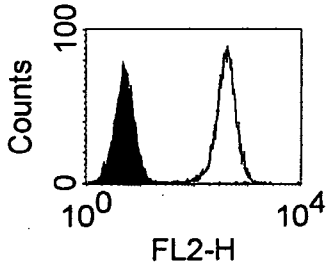
HPB-ALL

AH11HLxH2CHL



Macaque CD33 transfected CHO

AH11HLxH2CHL



Macaque PBMC

AH11HLxH2CHL

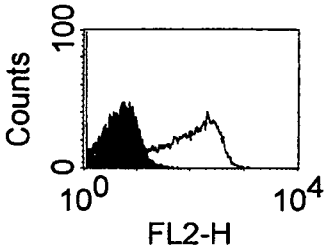
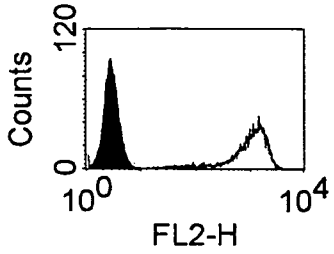


Figure 33(1)

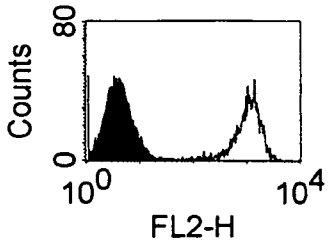
Human CD33 transfected CHO

AH11HLxl2CHL



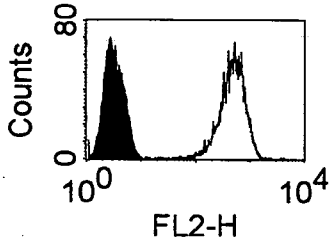
HPB-ALL

AH11HLxl2CHL



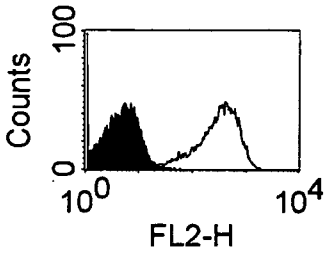
Macaque CD33 transfected CHO

AH11HLxl2CHL



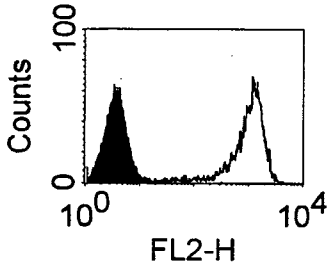
Macaque PBMC

AH11HLxl2CHL



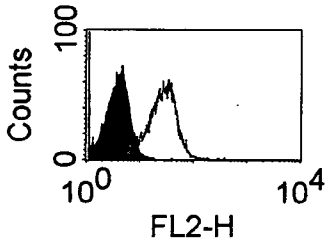
Human CD33 transfected CHO

AH3HLxF12QHL



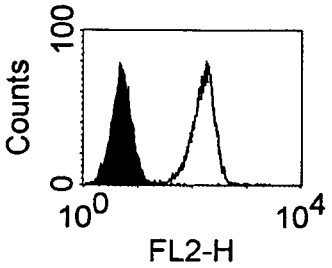
HPB-ALL

AH3HLxF12QHL



Macaque CD33 transfected CHO

AH3HLxF12QHL



Macaque PBMC

AH3HLxF12QHL

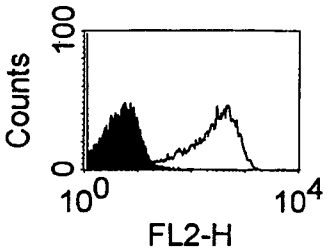
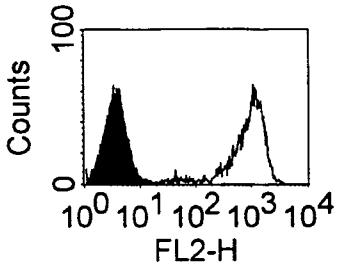


Figure 33(2)

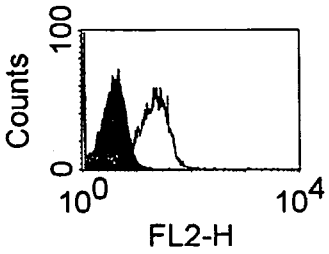
Human CD33 transfected CHO

AH3HLxH2CHL



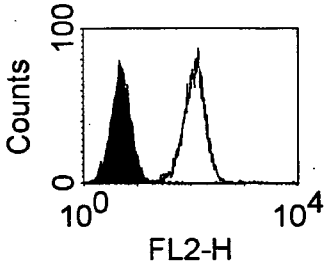
HPB-ALL

AH3HLxH2CHL



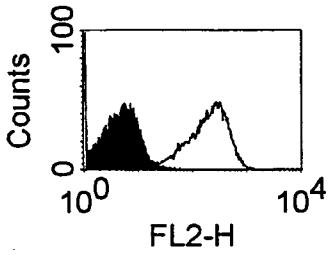
Macaque CD33 transfected CHO

AH3HLxH2CHL



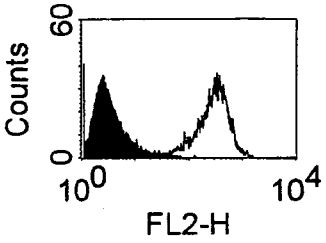
Macaque PBMC

AH3HLxH2CHL



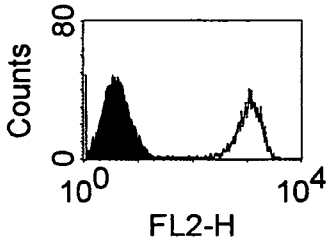
Human CD33 transfected CHO

AH3HLxI2CHL



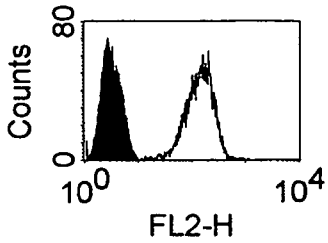
HPB-ALL

AH3HLxI2CHL



Macaque CD33 transfected CHO

AH3HLxI2CHL



Macaque PBMC

AH3HLxI2CHL

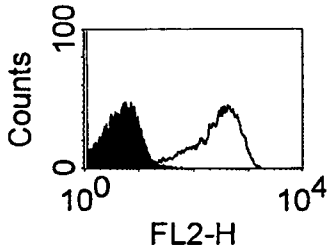
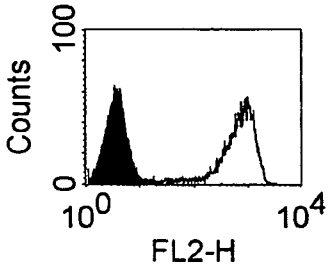
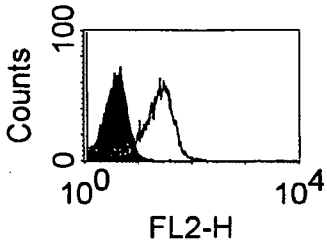


Figure 33(3)

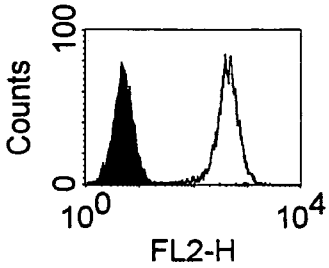
Human CD33 transfected CHO
AC8HLxF12QHL



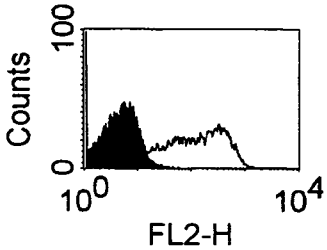
HPB-ALL
AC8HLxF12QHL



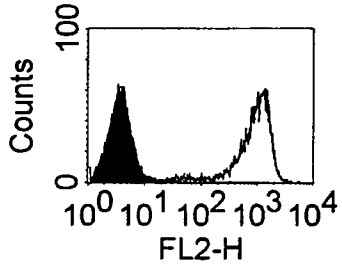
Macaque CD33 transfected CHO
AC8HLxF12QHL



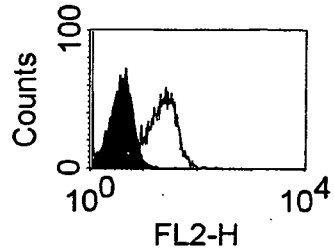
Macaque PBMC
AC8HLxF12QHL



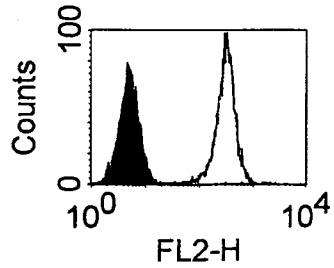
Human CD33 transfected CHO
AC8HLxH2CHL



HPB-ALL
AC8HLxH2CHL



Macaque CD33 transfected CHO
AC8HLxH2CHL



Macaque PBMC
AC8HLxH2CHL

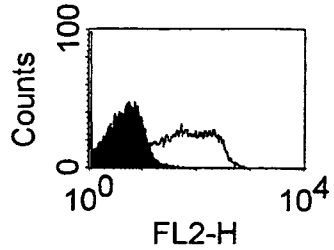
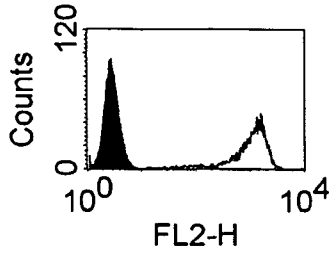


Figure 33(4)

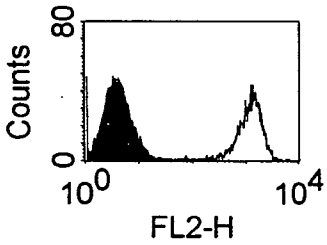
Human CD33 transfected CHO

AC8HLxI2CHL



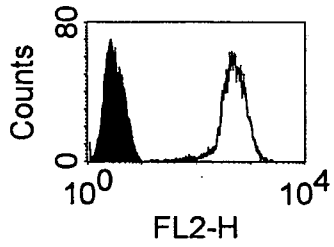
HPB-ALL

AC8HLxI2CHL



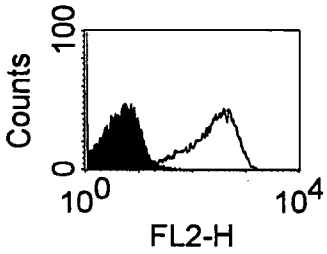
Macaque CD33 transfected CHO

AC8HLxI2CHL



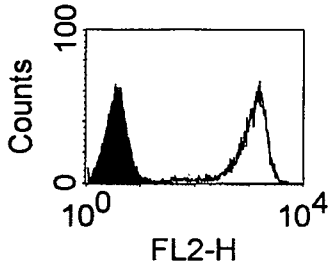
Macaque PBMC

AC8HLxI2CHL



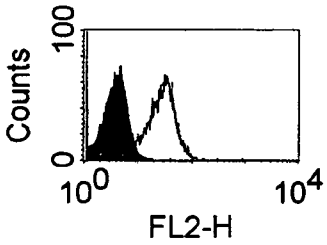
Human CD33 transfected CHO

AF5HLxF12QHL



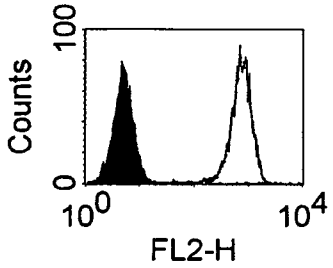
HPB-ALL

AF5HLxF12QHL



Macaque CD33 transfected CHO

AF5HLxF12QHL



Macaque PBMC

AF5HLxF12QHL

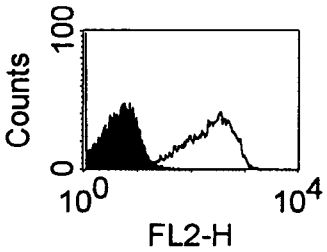
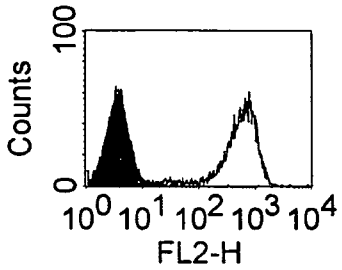


Figure 33(5)

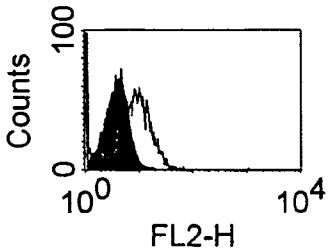
Human CD33 transfected CHO

AF5HLxH2CHL



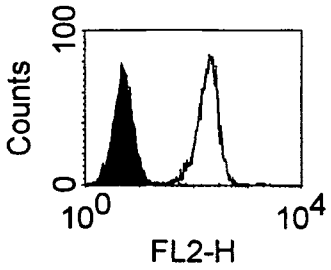
HPB-ALL

AF5HLxH2CHL



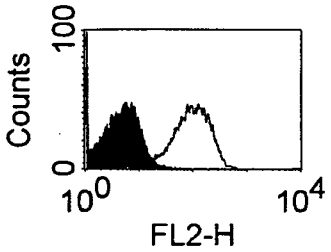
Macaque CD33 transfected CHO

AF5HLxH2CHL



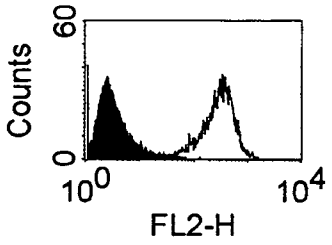
Macaque PBMC

AF5HLxH2CHL



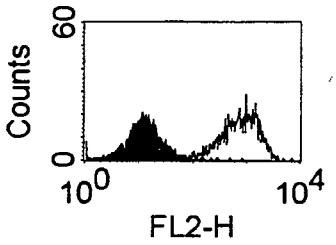
Human CD33 transfected CHO

AF5HLxI2CHL



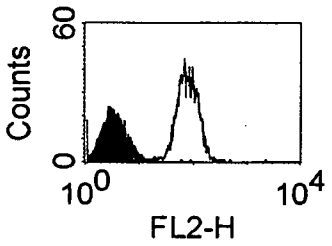
HPB-ALL

AF5HLxI2CHL



Macaque CD33 transfected CHO

AF5HLxI2CHL



Macaque PBMC

AF5HLxI2CHL

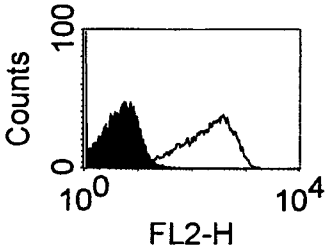
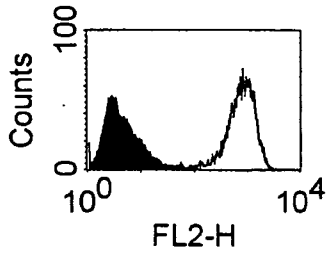


Figure 33(6)

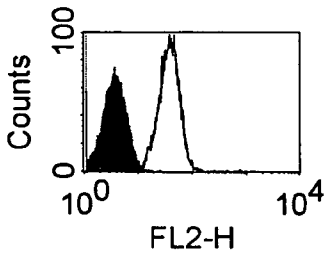
Human CD33 transfected CHO

B10HLxF12QHL



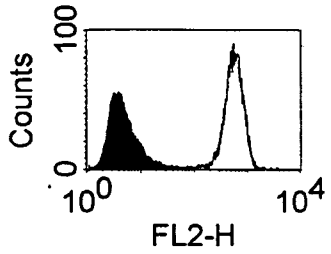
HPB-ALL

B10HLxF12QHL



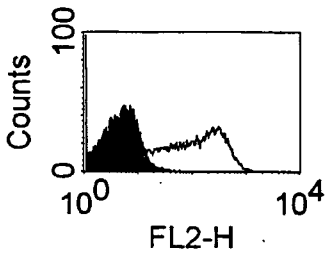
Macaque CD33 transfected CHO

B10HLxF12QHL



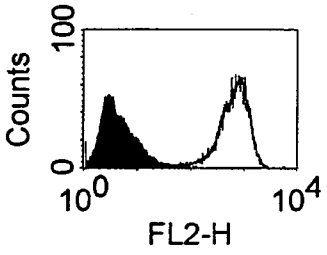
Macaque PBMC

B10HLxF12QHL



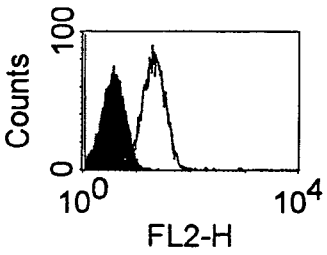
Human CD33 transfected CHO

B10HLxH2CHL



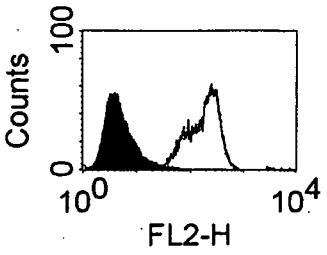
HPB-ALL

B10HLxH2CHL



Macaque CD33 transfected CHO

B10HLxH2CHL



Macaque PBMC

B10HLxH2CHL

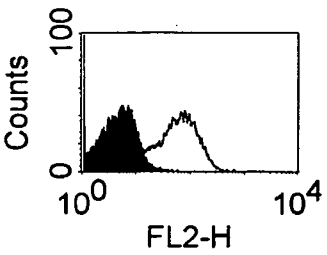
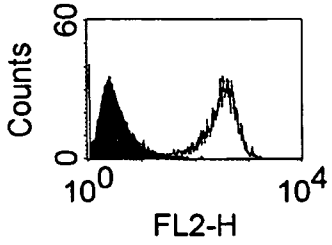


Figure 33(7)

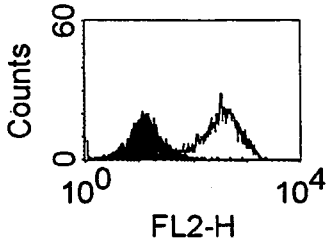
Human CD33 transfected CHO

B10HLxI2CHL



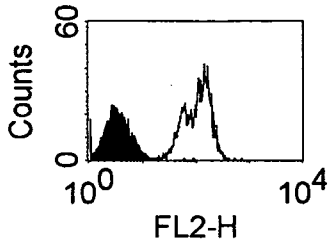
HPB-ALL

B10HLxI2CHL



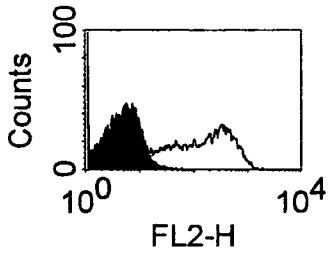
Macaque CD33 transfected CHO

B10HLxI2CHL



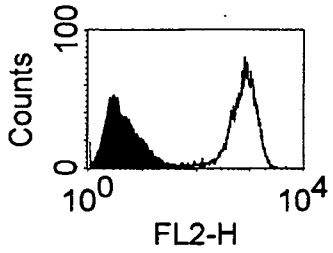
Macaque PBMC

B10HLxI2CHL



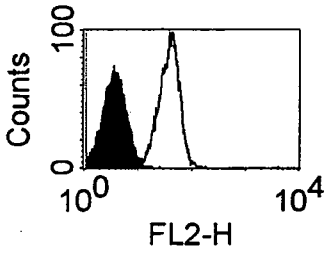
Human CD33 transfected CHO

B3HLxF12QHL



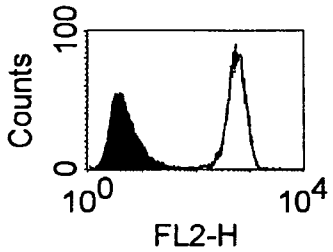
HPB-ALL

B3HLxF12QHL



Macaque CD33 transfected CHO

B3HLxF12QHL



Macaque PBMC

B3HLxF12QHL

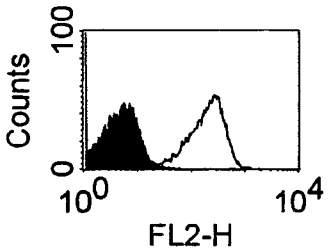
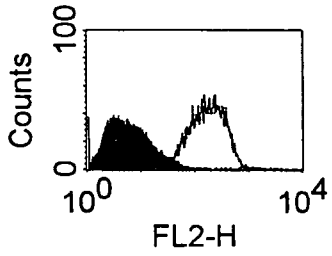


Figure 33(8)

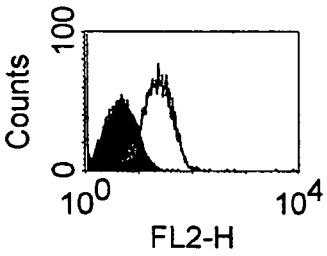
Human CD33 transfected CHO

B3HLxH2CHL



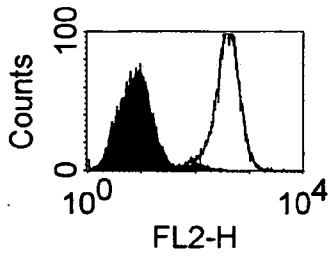
HPB-ALL

B3HLxH2CHL



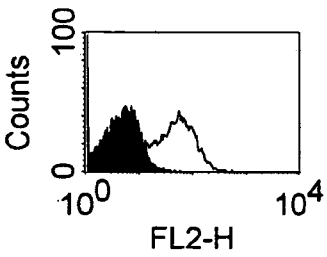
Macaque CD33 transfected CHO

B3HLxH2CHL



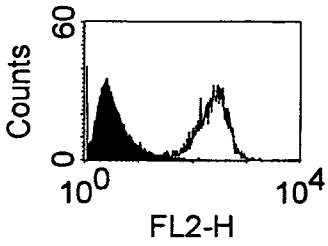
Macaque PBMC

B3HLxH2CHL



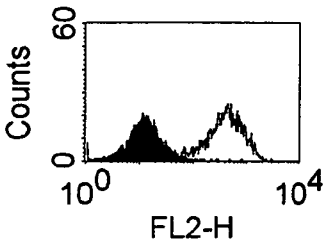
Human CD33 transfected CHO

B3HLxI2CHL



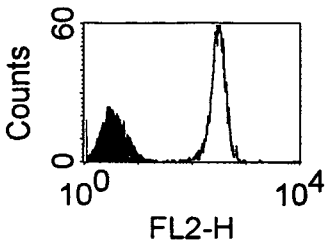
HPB-ALL

B3HLxI2CHL



Macaque CD33 transfected CHO

B3HLxI2CHL



Macaque PBMC

B3HLxI2CHL

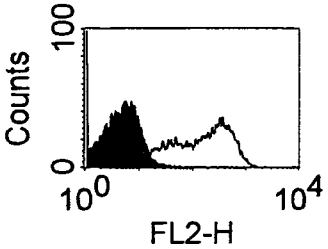
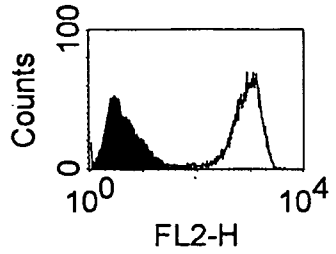


Figure 33(9)

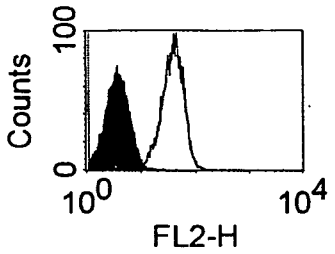
Human CD33 transfected CHO

E11HLxF12QHL



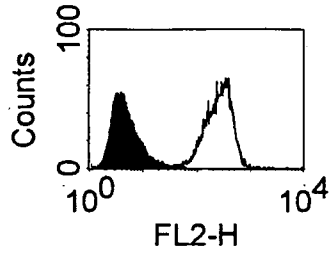
HPB-ALL

E11HLxF12QHL



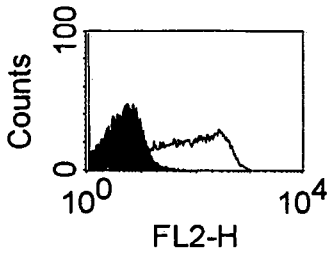
Macaque CD33 transfected CHO

E11HLxF12QHL



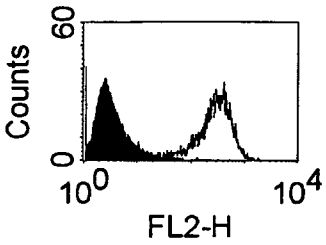
Macaque PBMC

E11HLxF12QHL



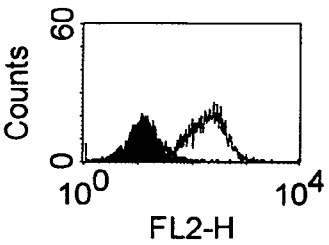
Human CD33 transfected CHO

E11HLxH2CHL



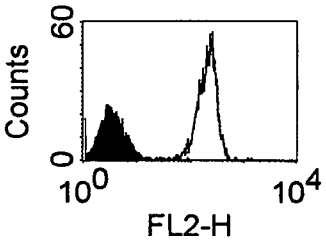
HPB-ALL

E11HLxH2CHL



Macaque CD33 transfected CHO

E11HLxH2CHL



Macaque PBMC

E11HLxH2CHL

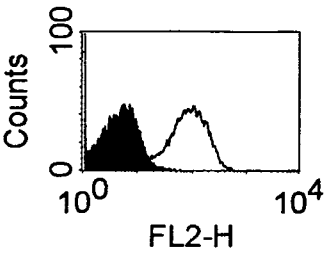
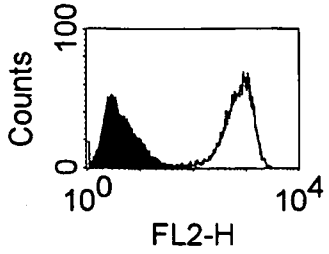


Figure 33(10)

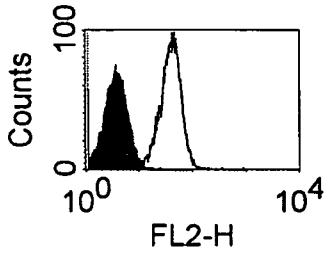
Human CD33 transfected CHO

E11HLxI2CHL



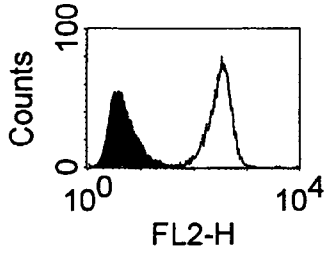
HPB-ALL

E11HLxI2CHL



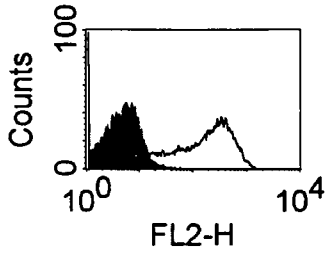
Macaque CD33 transfected CHO

E11HLxI2CHL



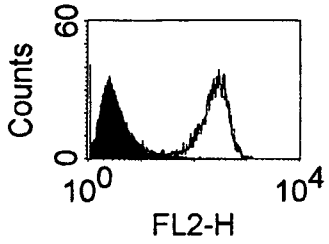
Macaque PBMC

E11HLxI2CHL



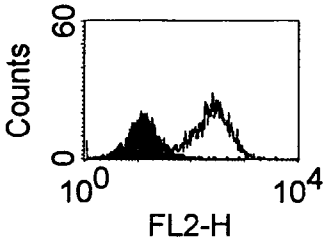
Human CD33 transfected CHO

F2HLxF12QHL



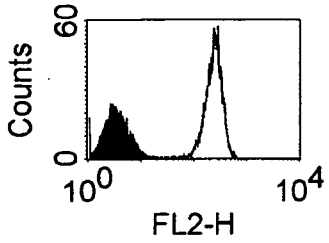
HPB-ALL

F2HLxF12QHL



Macaque CD33 transfected CHO

F2HLxF12QHL



Macaque PBMC

F2HLxF12QHL

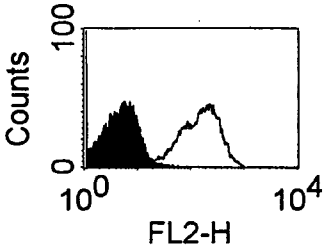
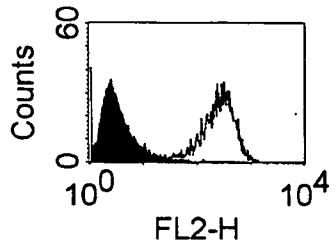


Figure 33(11)

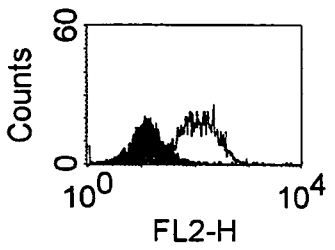
Human CD33 transfected CHO

F2HLxH2CHL



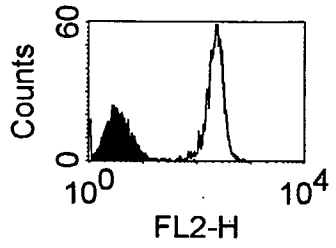
HPB-ALL

F2HLxH2CHL



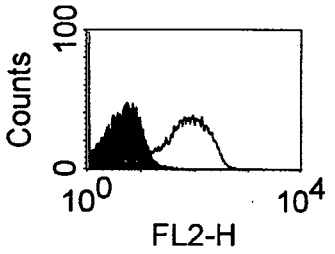
Macaque CD33 transfected CHO

F2HLxH2CHL



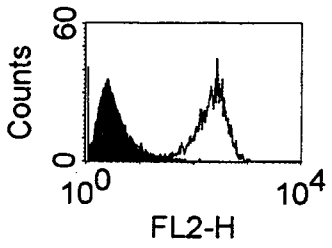
Macaque PBMC

F2HLxH2CHL



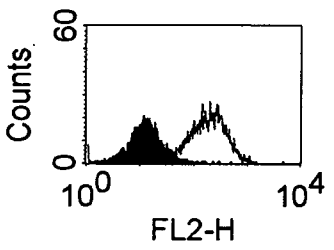
Human CD33 transfected CHO

F2HLxI2CHL



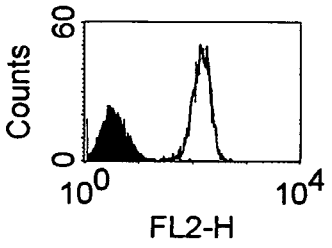
HPB-ALL

F2HLxI2CHL



Macaque CD33 transfected CHO

F2HLxI2CHL



Macaque PBMC

F2HLxI2CHL

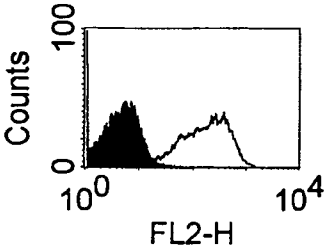
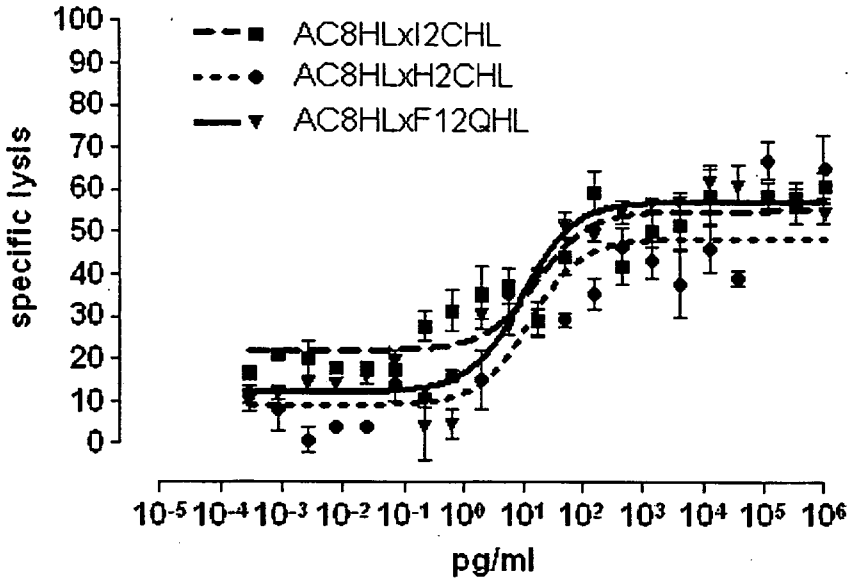


Figure 33(12)

Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CD33



Effector cells: macaque 4119 LnPx

Target cells: CHO transfected with macaque CD33

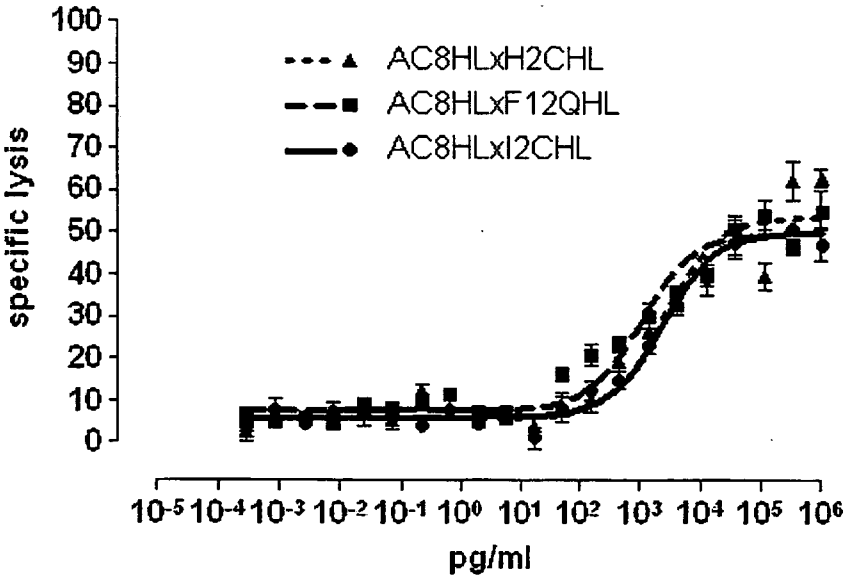
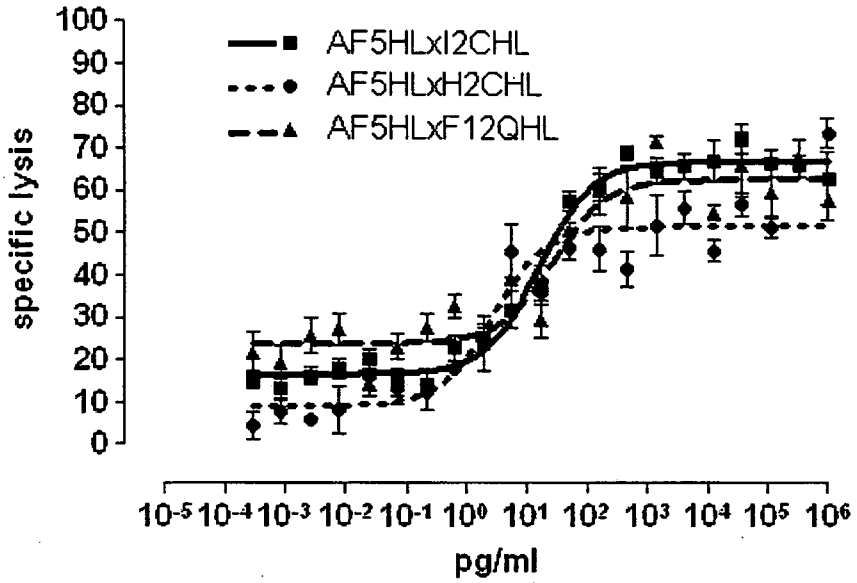


Figure 34(1)

Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CD33



Effector cells: macaque 4119 LnPx

Target cells: CHO transfected with macaque CD33

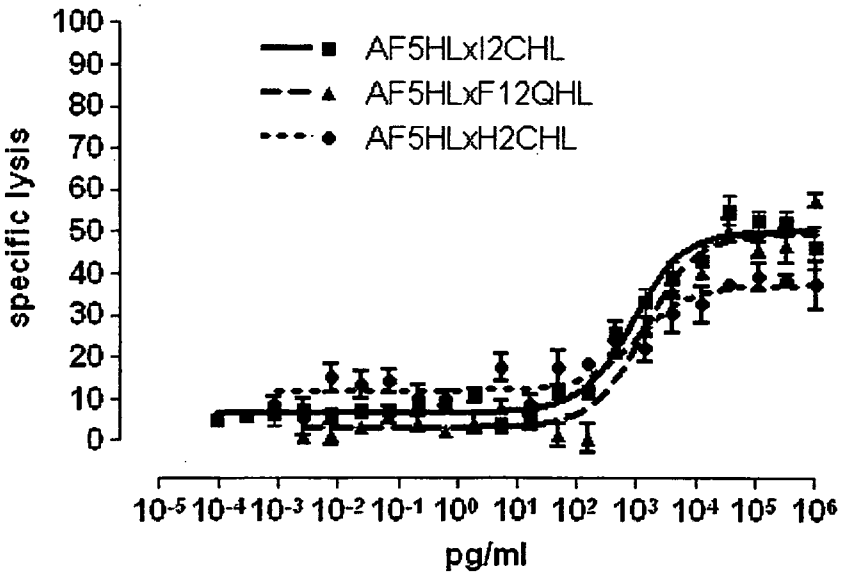
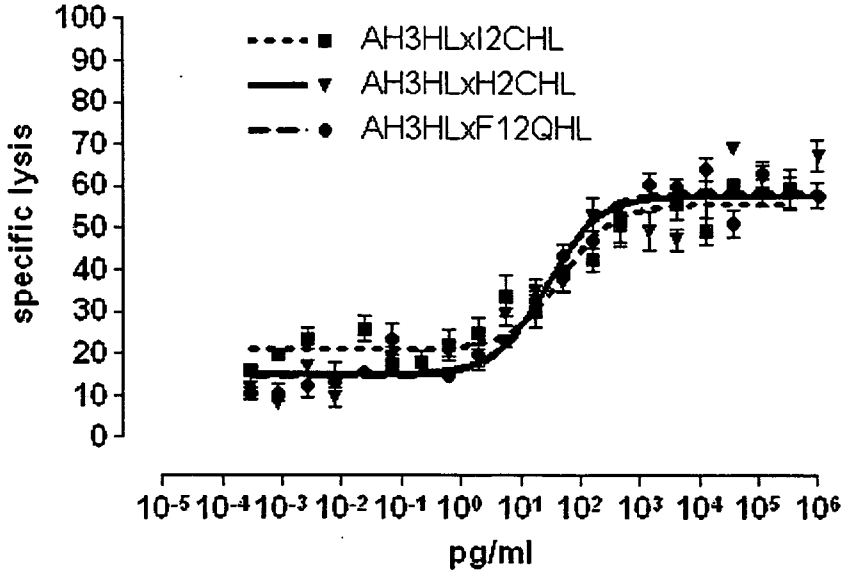


Figure 34(2)

Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CD33



Effector cells: macaque 4119 LnPx

Target cells: CHO transfected with macaque CD33

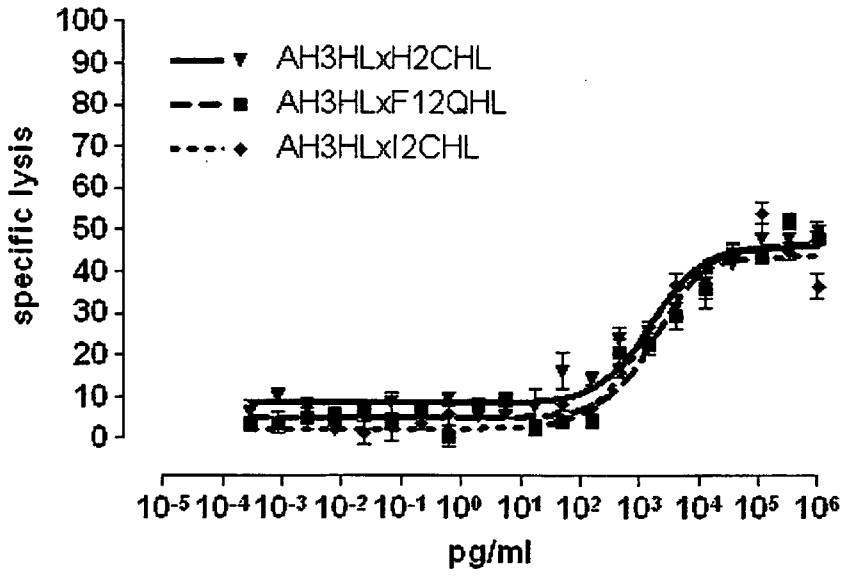
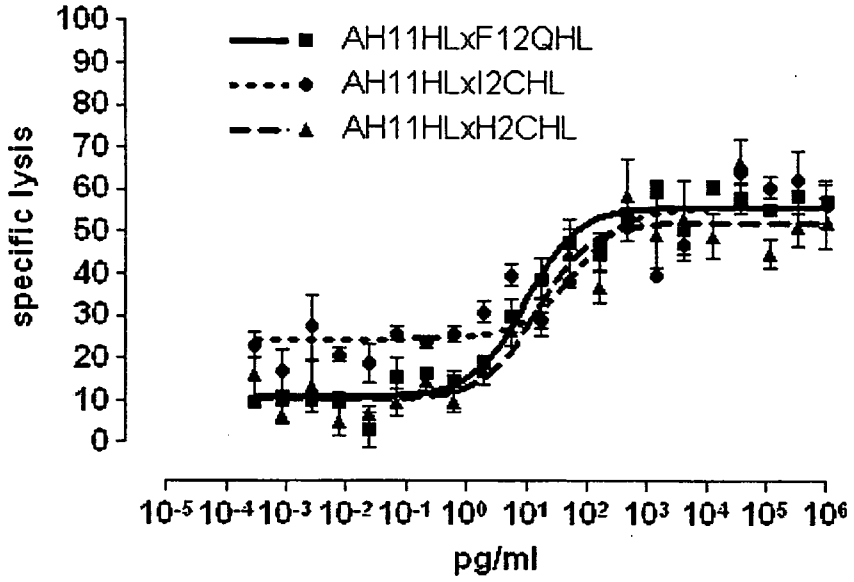


Figure 34(3)

Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CD33



Effector cells: macaque 4119 LnPx

Target cells: CHO transfected with macaque CD33

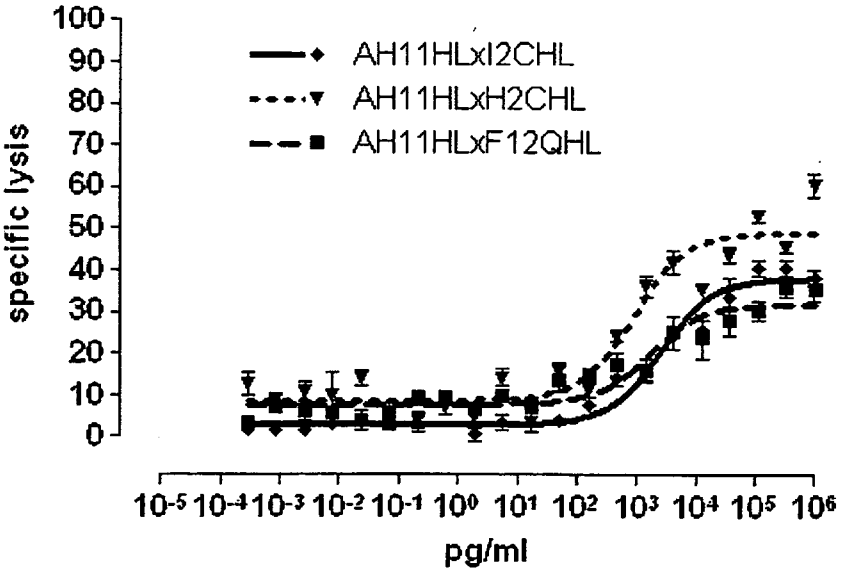
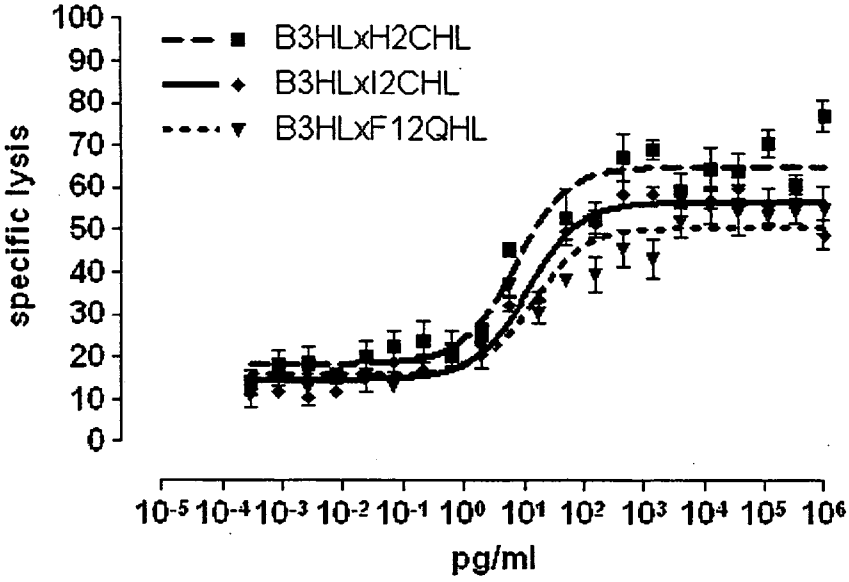


Figure 34(4)

Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CD33



Effector cells: macaque 4119 LnPx

Target cells: CHO transfected with macaque CD33

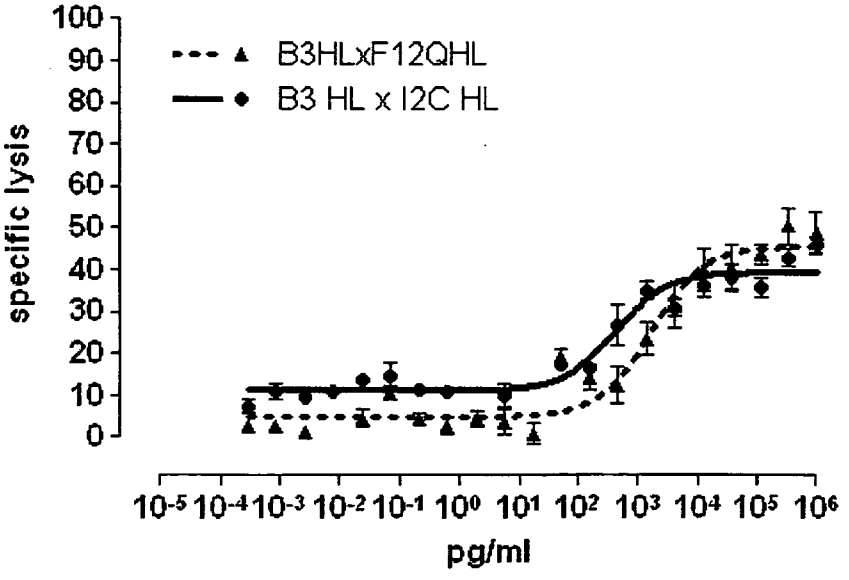
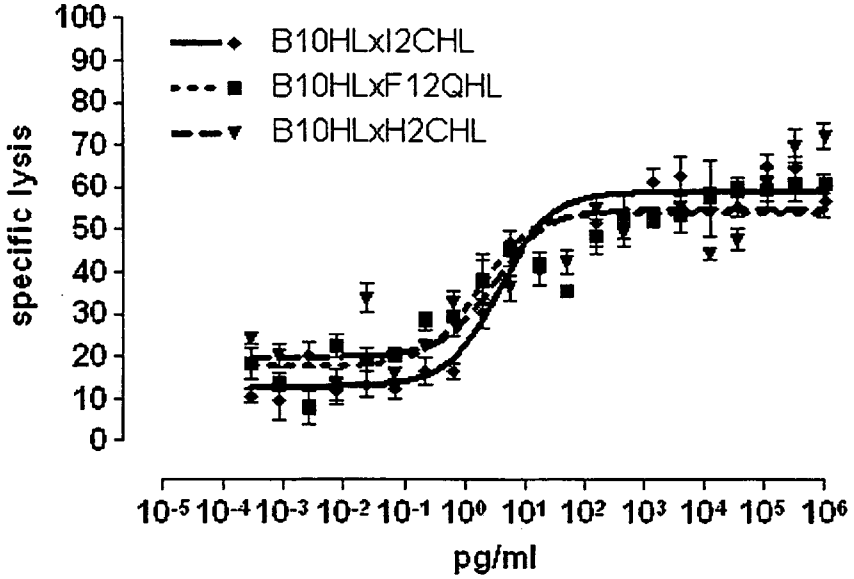


Figure 34(5)

Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CD33



Effector cells: macaque 4119 LnPx

Target cells: CHO transfected with macaque CD33

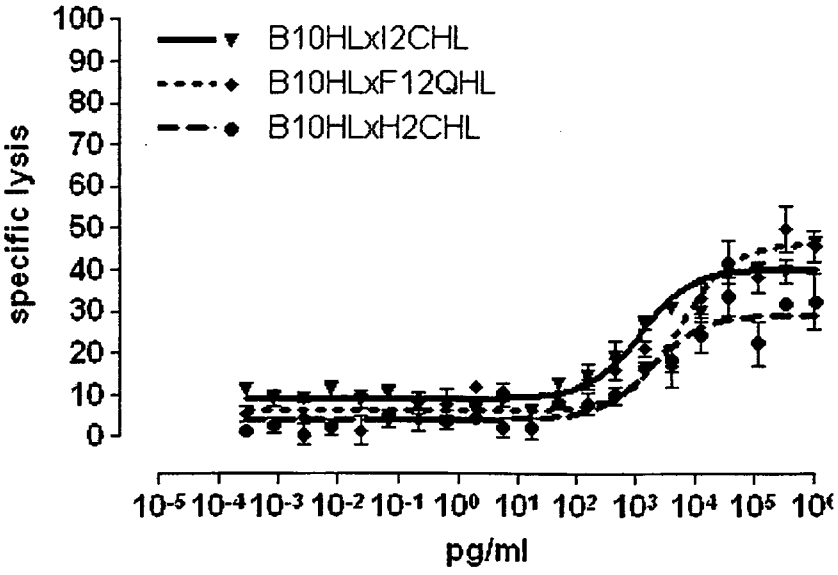
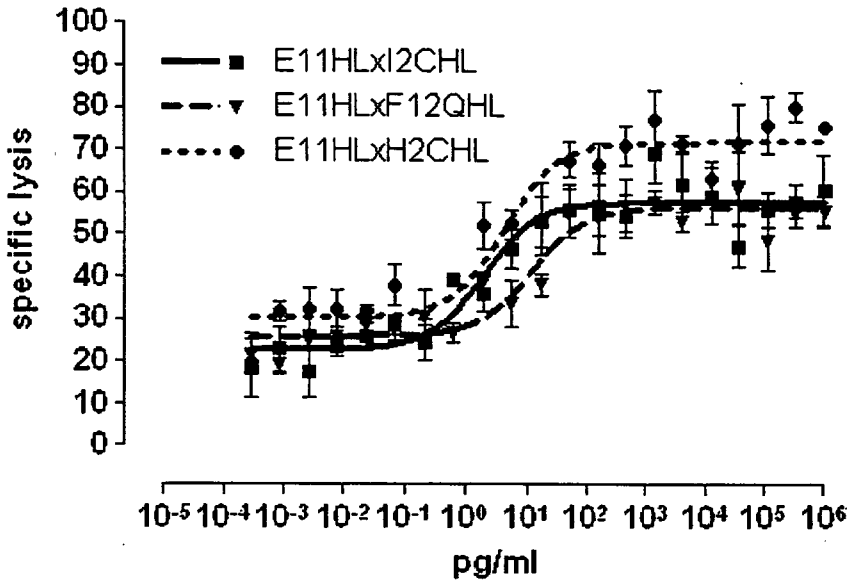


Figure 34(6)

Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CD33



Effector cells: macaque 4119 LnPx

Target cells: CHO transfected with macaque CD33

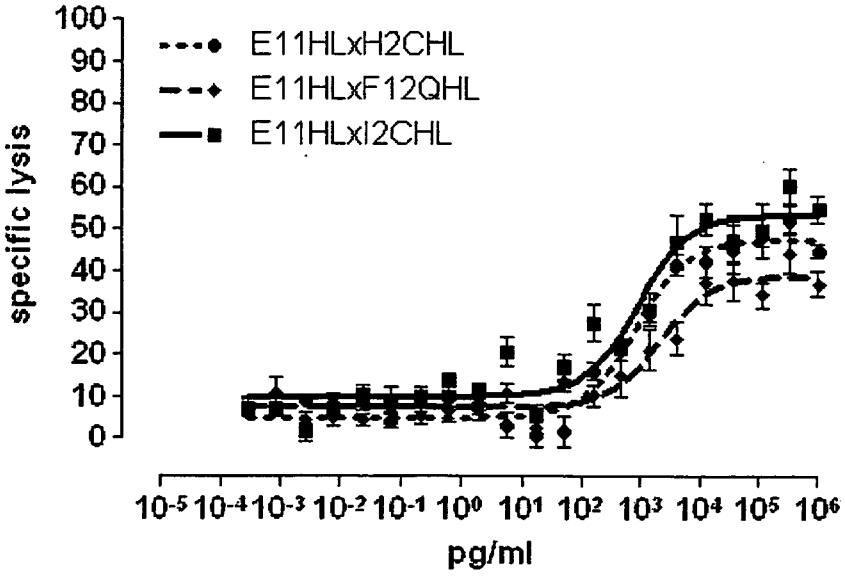
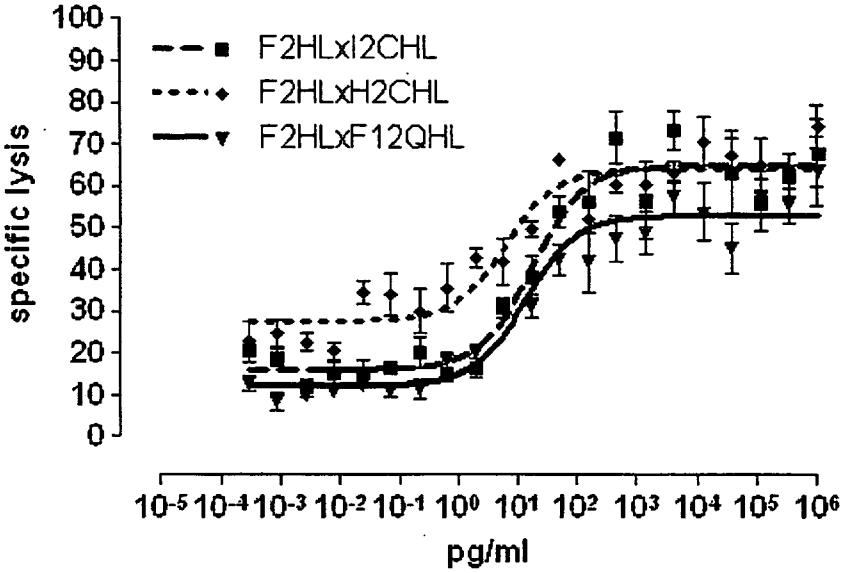


Figure 34(7)

Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CD33



Effector cells: macaque 4119 LnPx

Target cells: CHO transfected with macaque CD33

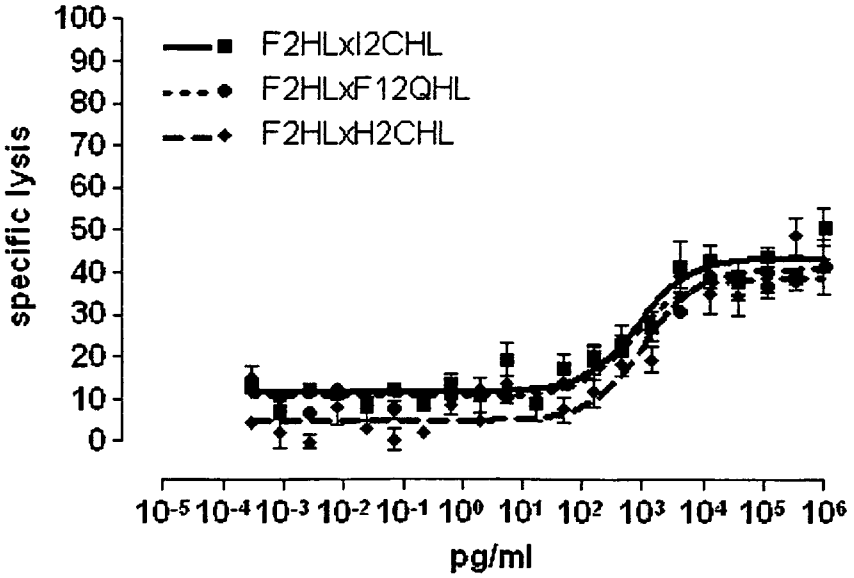


Figure 34(8)

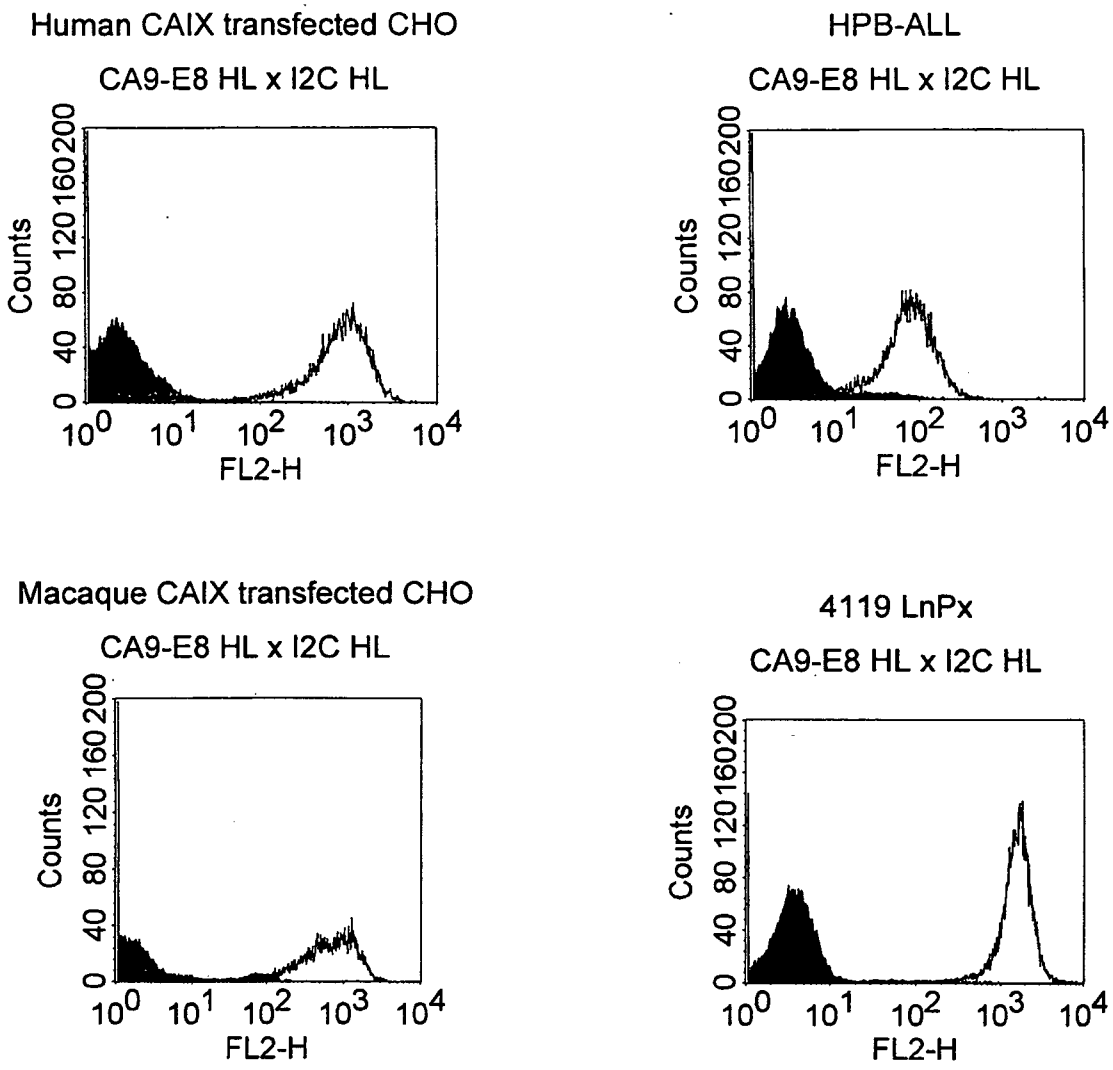

Human CAIX transfected CHO
CA9-E8 HL x I2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
HPB-ALL
CA9-E8 HL x I2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
Macaque CAIX transfected CHO
CA9-E8 HL x I2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
4119 LnPx
CA9-E8 HL x I2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H

Figure 35a

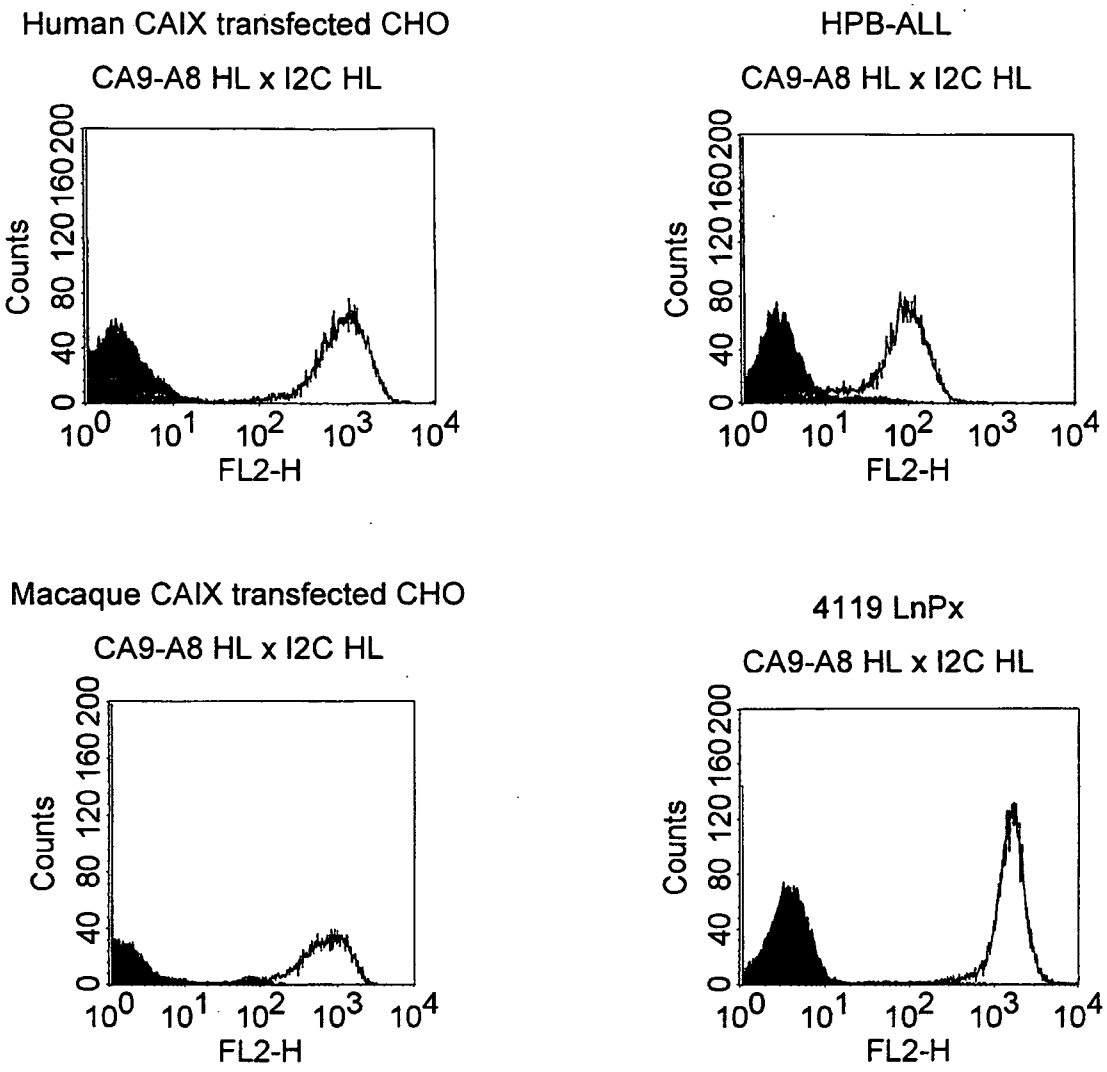

Human CAIX transfected CHO
CA9-A8 HL x I2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
HPB-ALL
CA9-A8 HL x I2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
Macaque CAIX transfected CHO
CA9-A8 HL x I2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
4119 LnPx
CA9-A8 HL x I2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H

Figure 35b

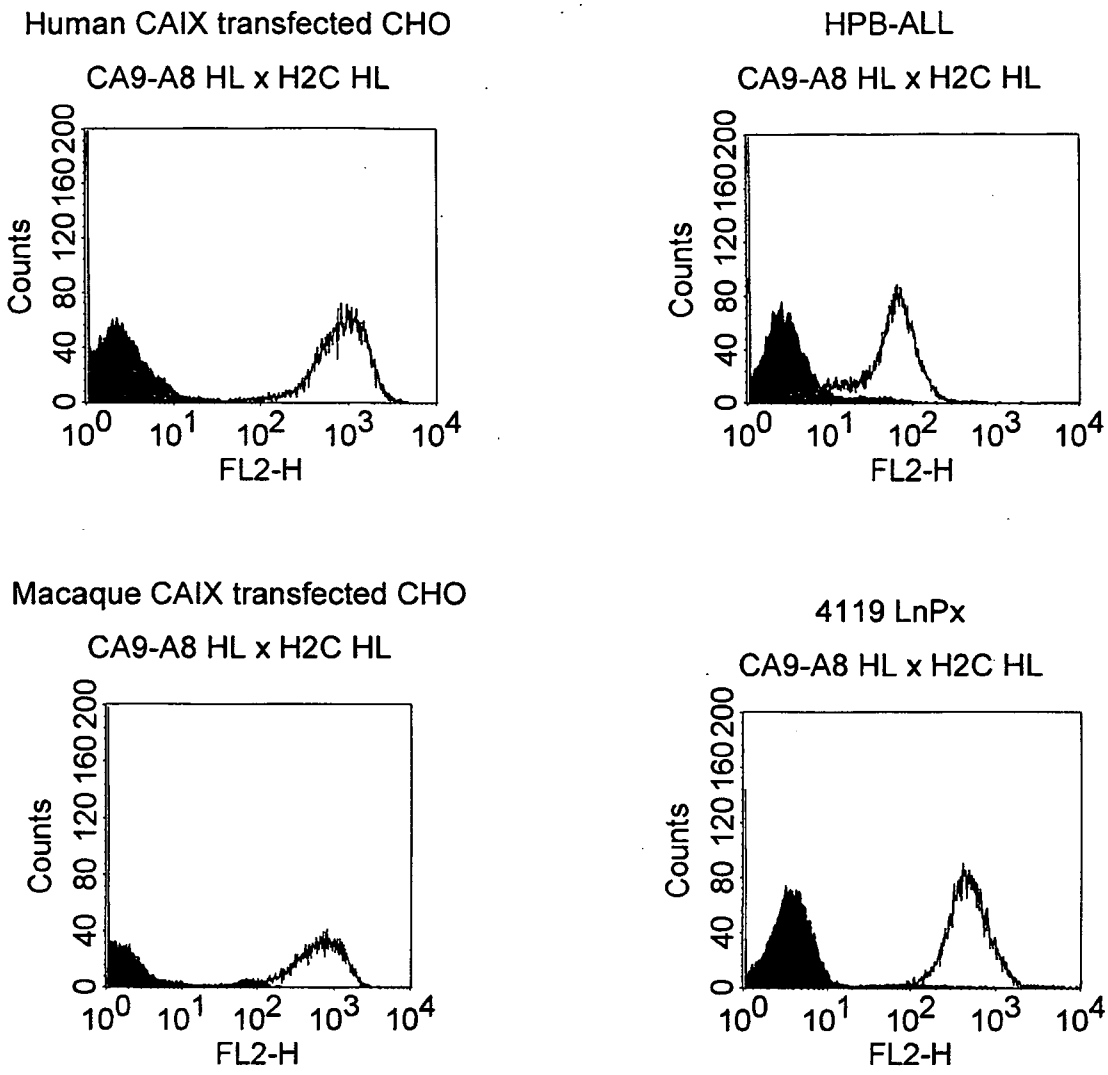

Human CAIX transfected CHO
CA9-A8 HL x H2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
HPB-ALL
CA9-A8 HL x H2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
Macaque CAIX transfected CHO
CA9-A8 HL x H2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
4119 LnPx
CA9-A8 HL x H2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H

Figure 35c

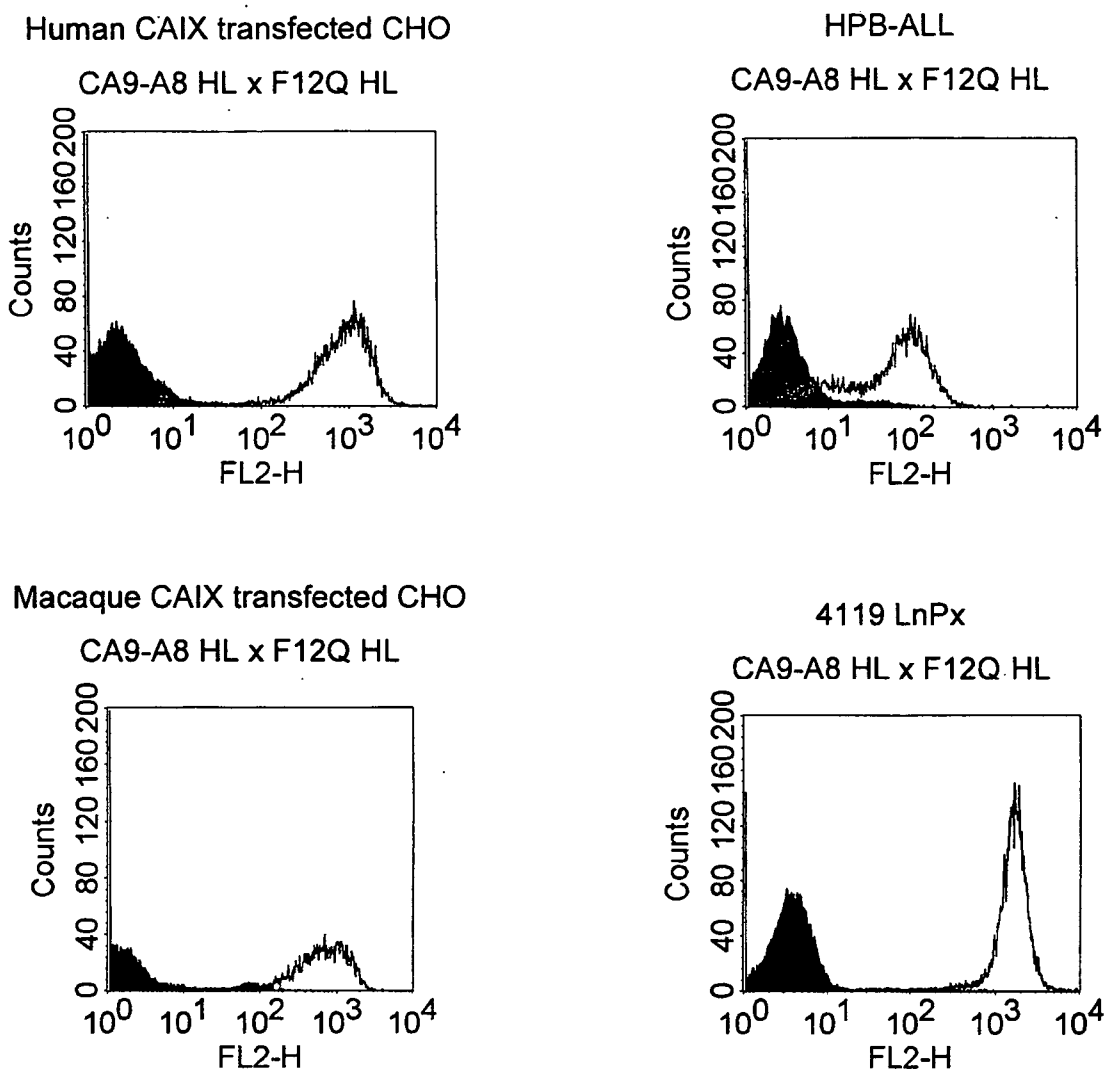

Human CAIX transfected CHO
CA9-A8 HL x F12Q HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
HPB-ALL
CA9-A8 HL x F12Q HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
Macaque CAIX transfected CHO
CA9-A8 HL x F12Q HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
4119 LnPx
CA9-A8 HL x F12Q HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H

Figure 35d

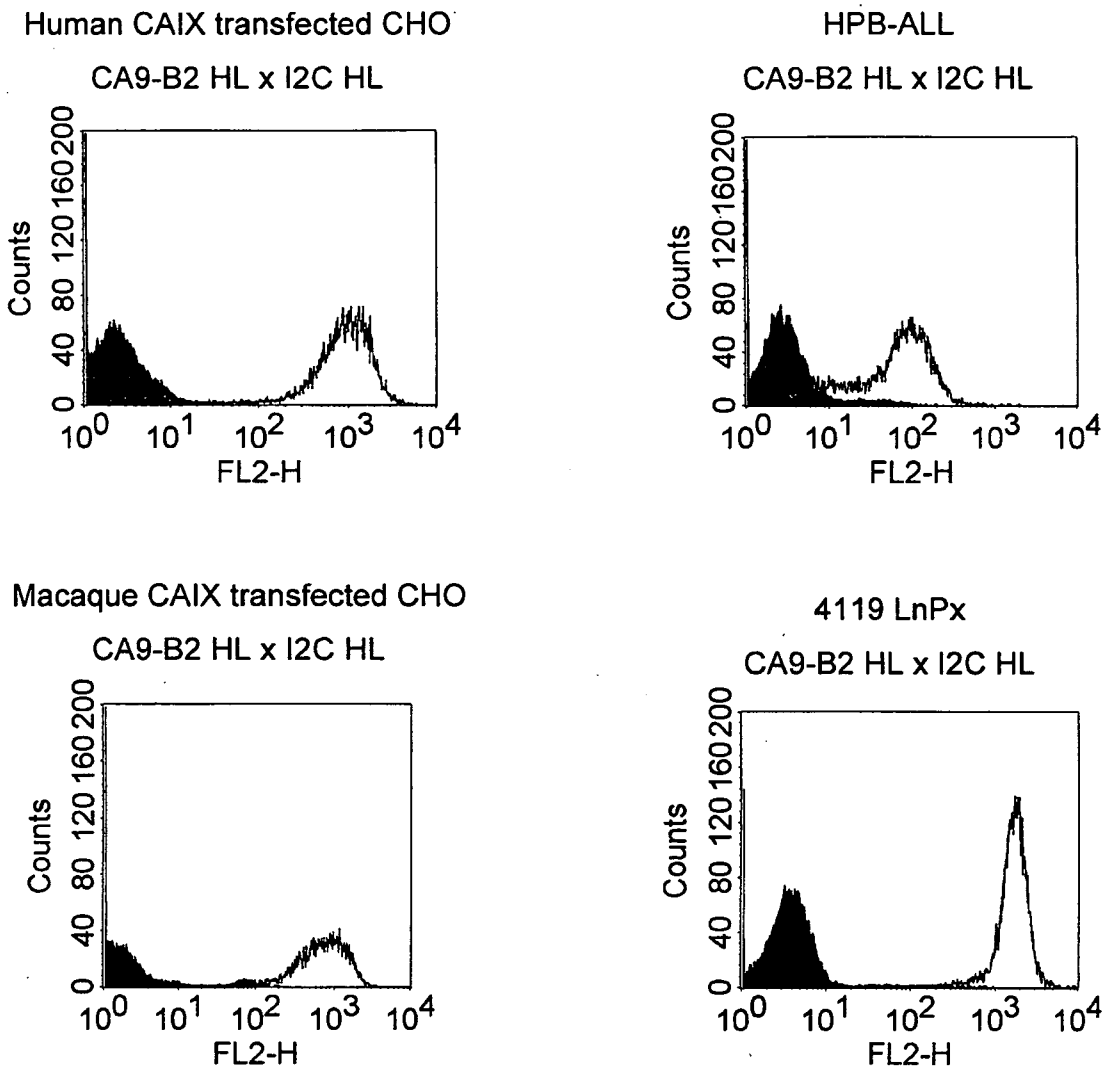

Human CAIX transfected CHO
CA9-B2 HL x I2C HL
HPB-ALL
CA9-B2 HL x I2C HL
Macaque CAIX transfected CHO
CA9-B2 HL x I2C HL
4119 LnPx
CA9-B2 HL x I2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H

Figure 35e

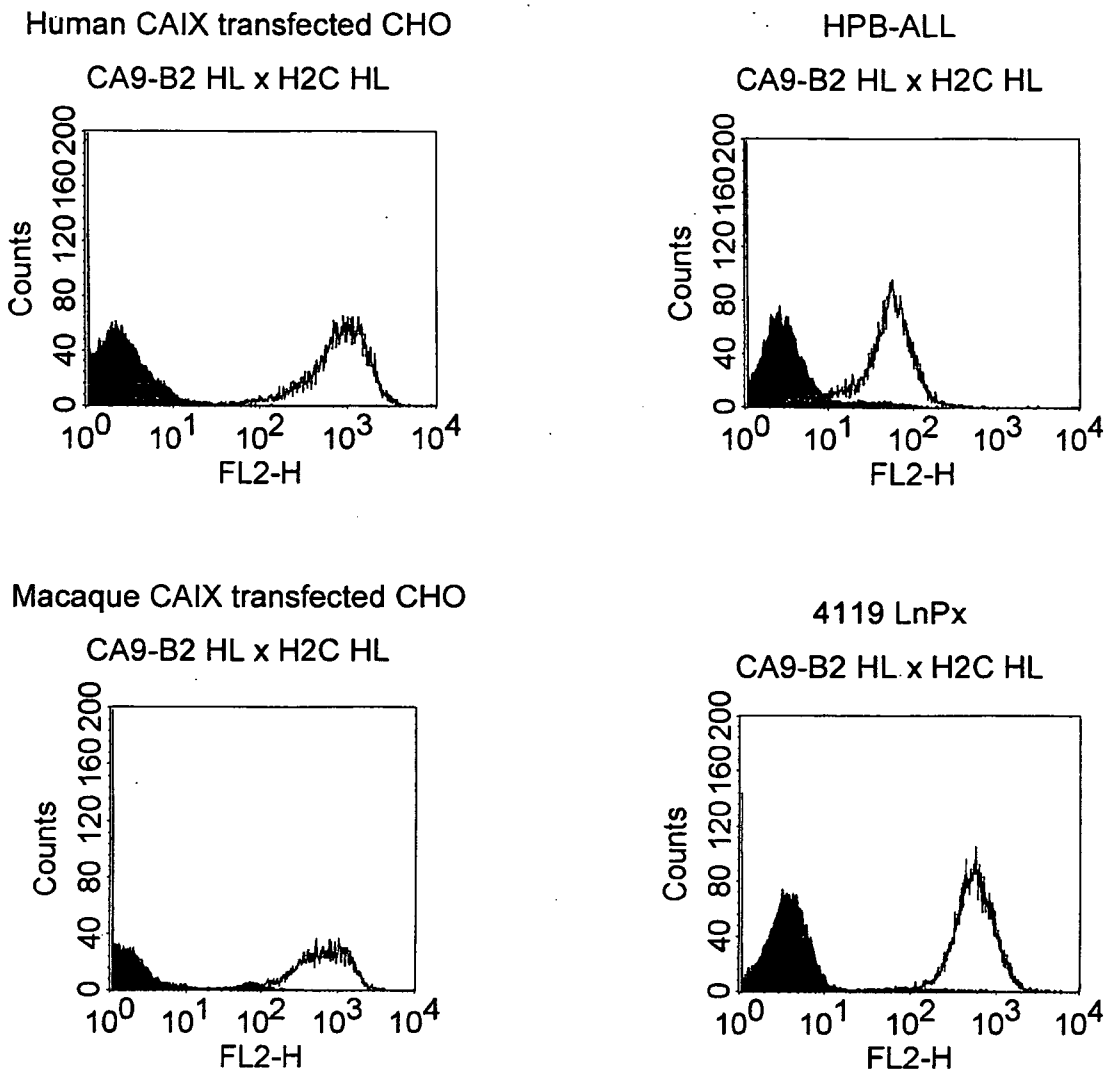

Human CAIX transfected CHO
CA9-B2 HL x H2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
HPB-ALL
CA9-B2 HL x H2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
Macaque CAIX transfected CHO
CA9-B2 HL x H2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
4119 LnPx
CA9-B2 HL x H2C HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H

Figure 35f

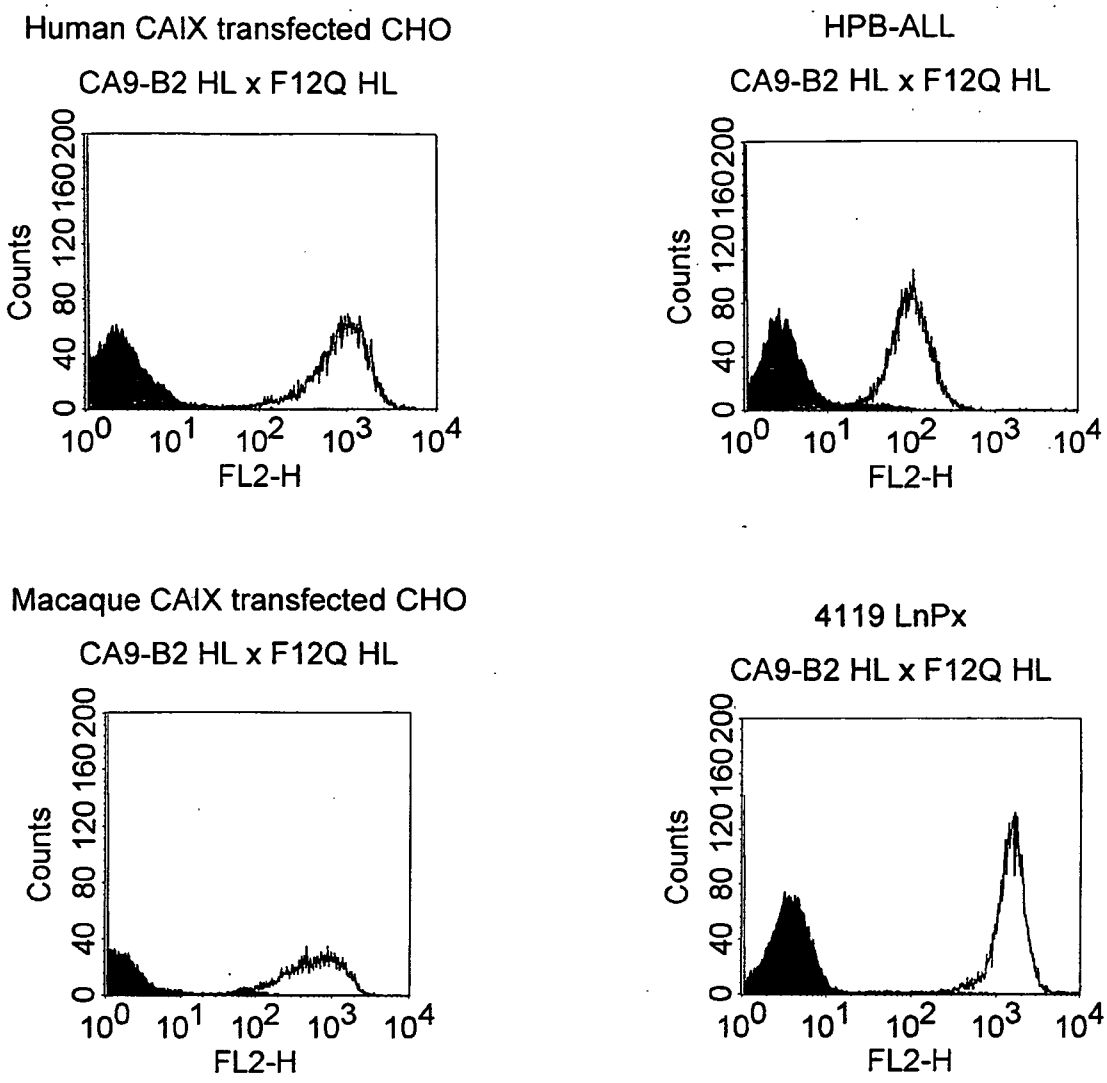
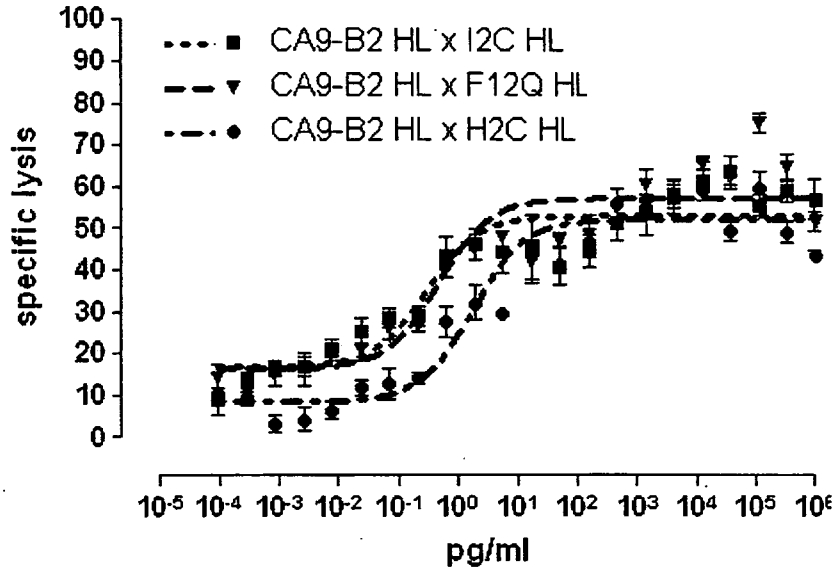

Human CAIX transfected CHO
CA9-B2 HL x F12Q HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
HPB-ALL
CA9-B2 HL x F12Q HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
Macaque CAIX transfected CHO
CA9-B2 HL x F12Q HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H
4119 LnPx
CA9-B2 HL x F12Q HL
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL2-H

Figure 35g

Effector cells: stimulated human CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CAIX

E:T ratio: 10:1



Effector cells: 4119 LnPx

Target cells: CHO transfected with macaque CAIX

E:T ratio: 50:1

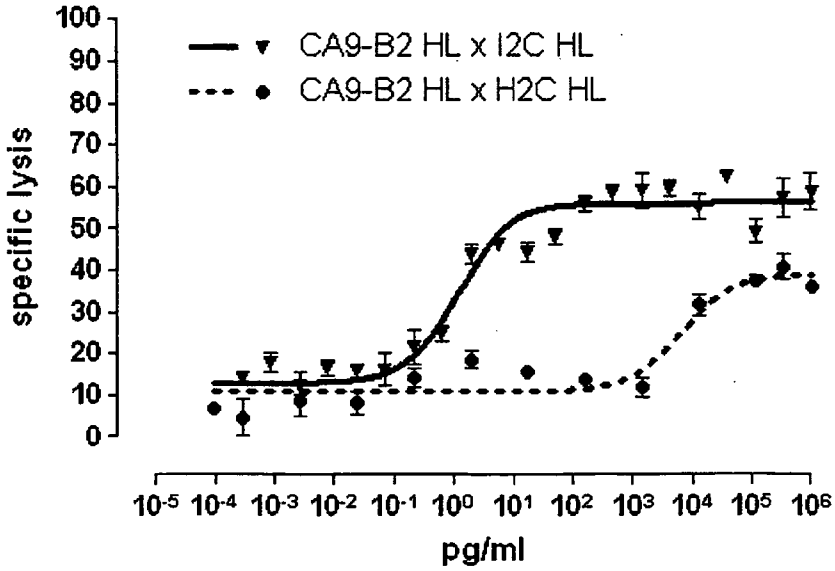
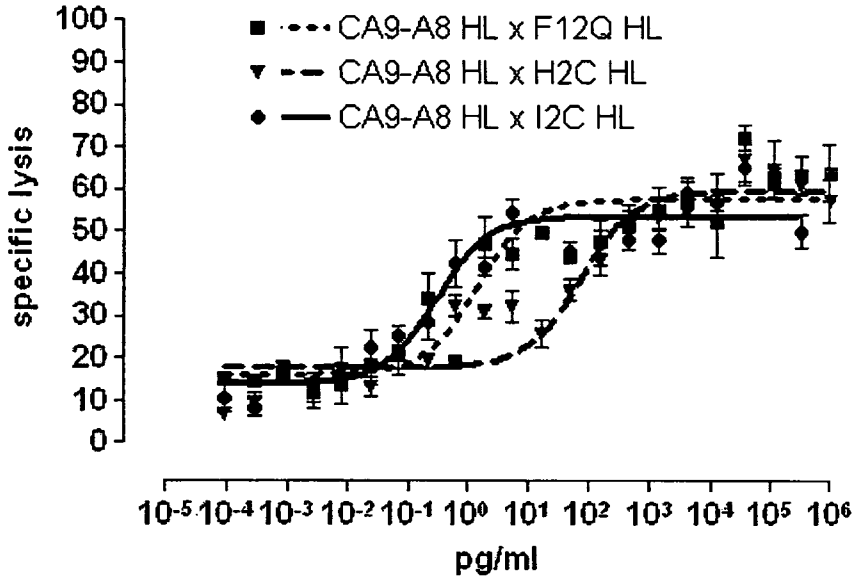


Figure 36a

Effector cells: stimulated human CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CAIX

E:T ratio: 10:1



Effector cells: 4119 LnPx

Target cells: CHO transfected with macaque CAIX

E:T ratio: 50:1

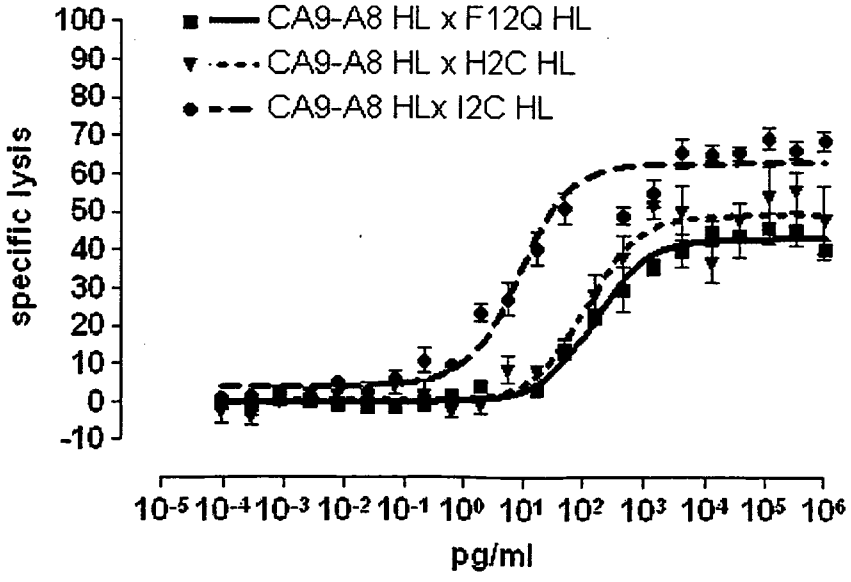
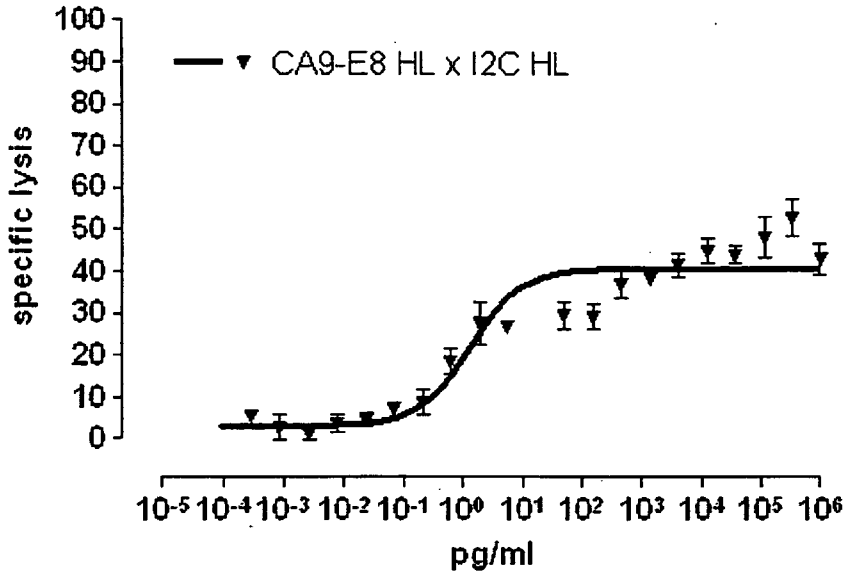


Figure 36b

Effector cells: stimulated human CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CAIX

E:T ratio: 5:1



Effector cells: 4119 LnPx

Target cells: CHO transfected with macaque CAIX

E:T ratio: 50:1

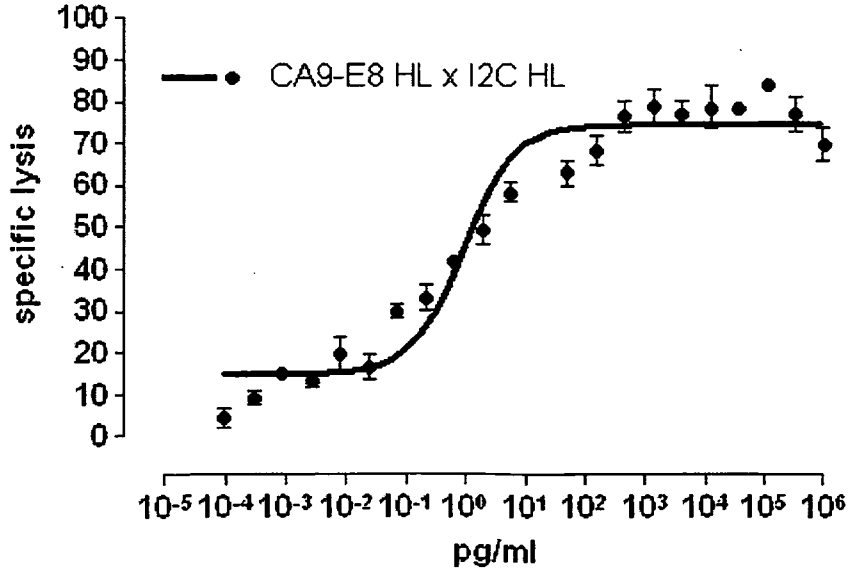


Figure 36c

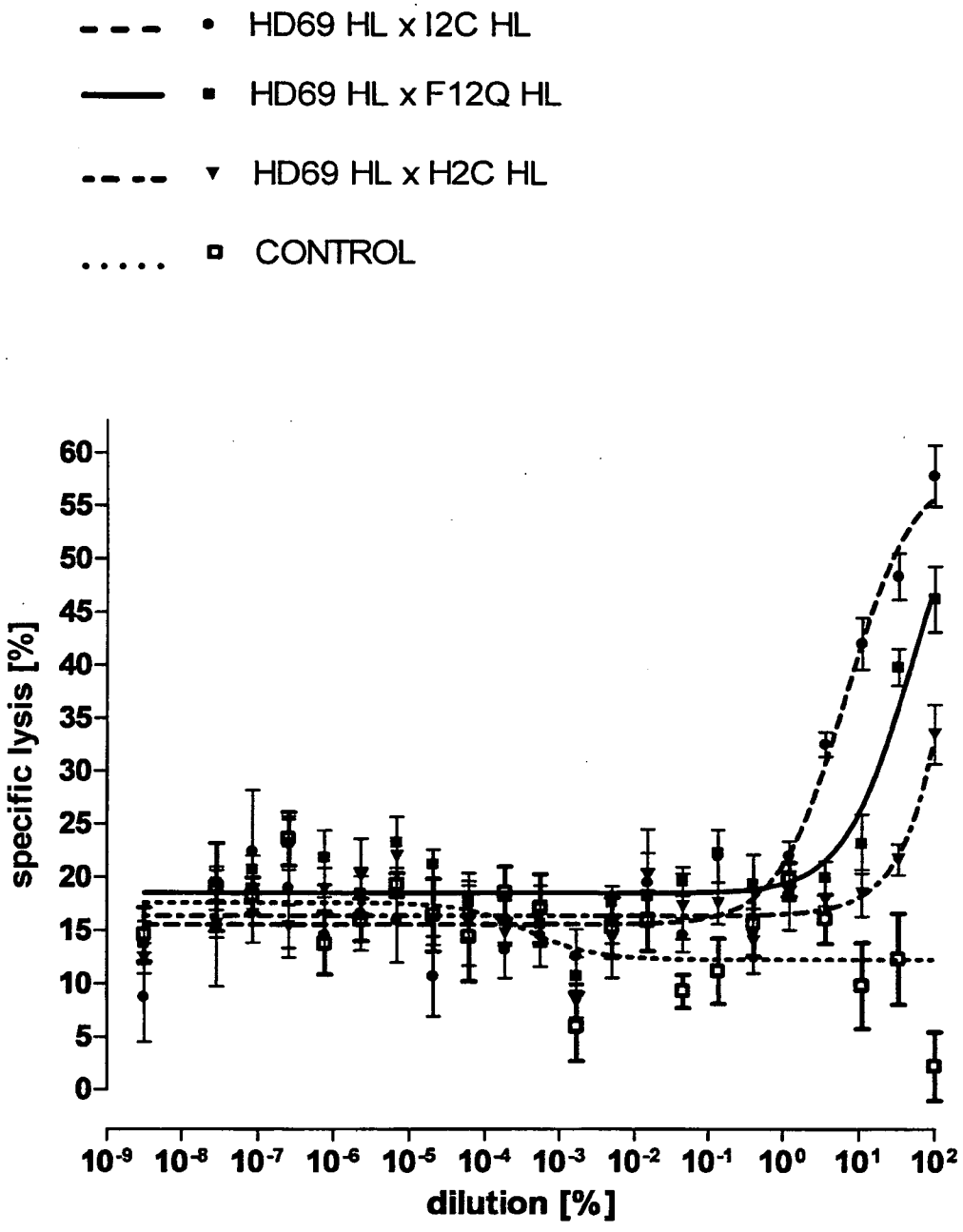

HD69 HL x I2C HL
HD69 HL x F12Q HL
HD69 HL x H2C HL
CONTROL
specific lysis [%]
60
55
50
45
40
35
30
25
20
15
10
5
0
10-9 10-8 10-7 10-6 10-5 10-4 10-3 10-2 10-1 100 101 102
dilution [%]

Figure 37

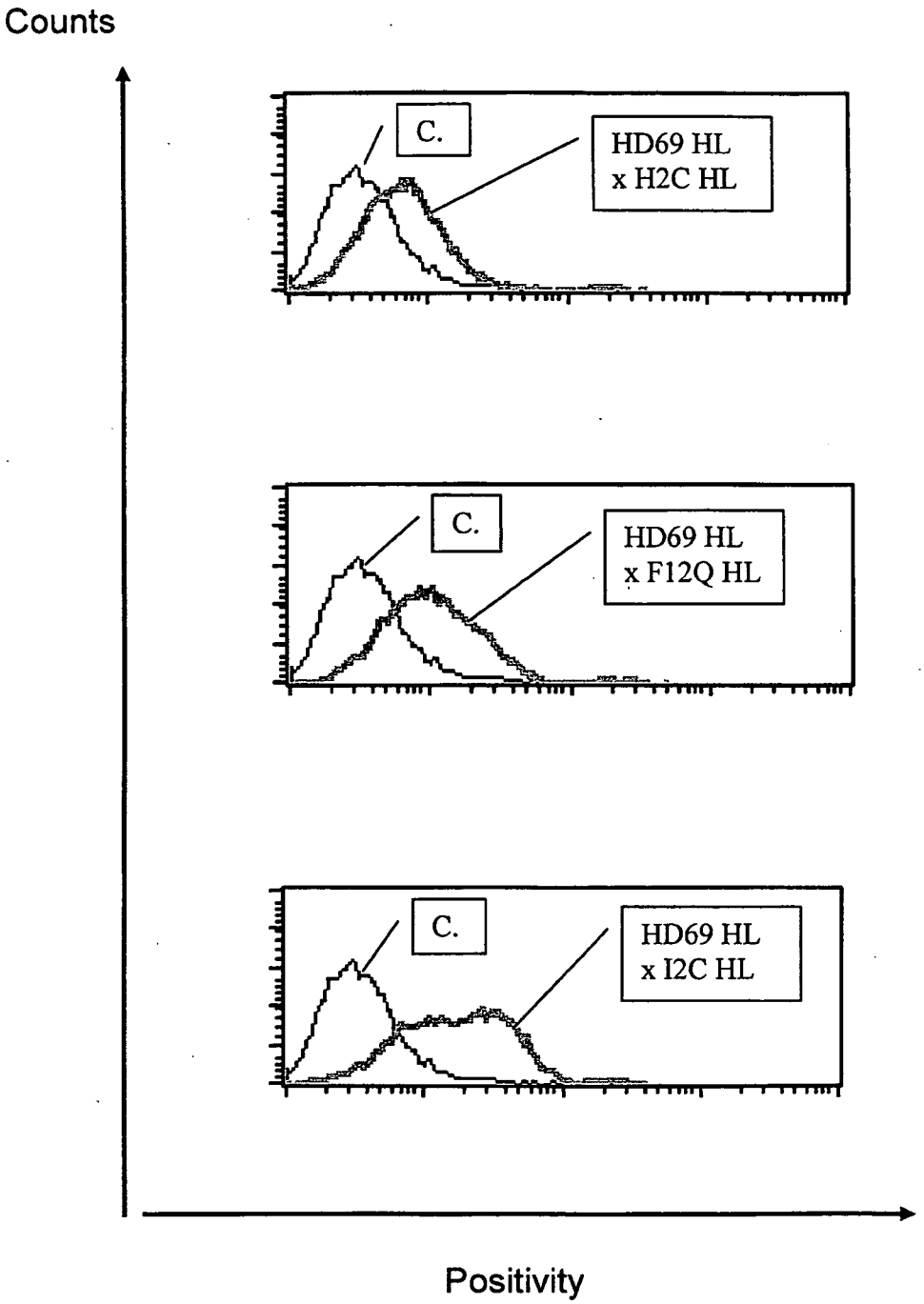


Figure 38a: CHO-EpCAM (human)

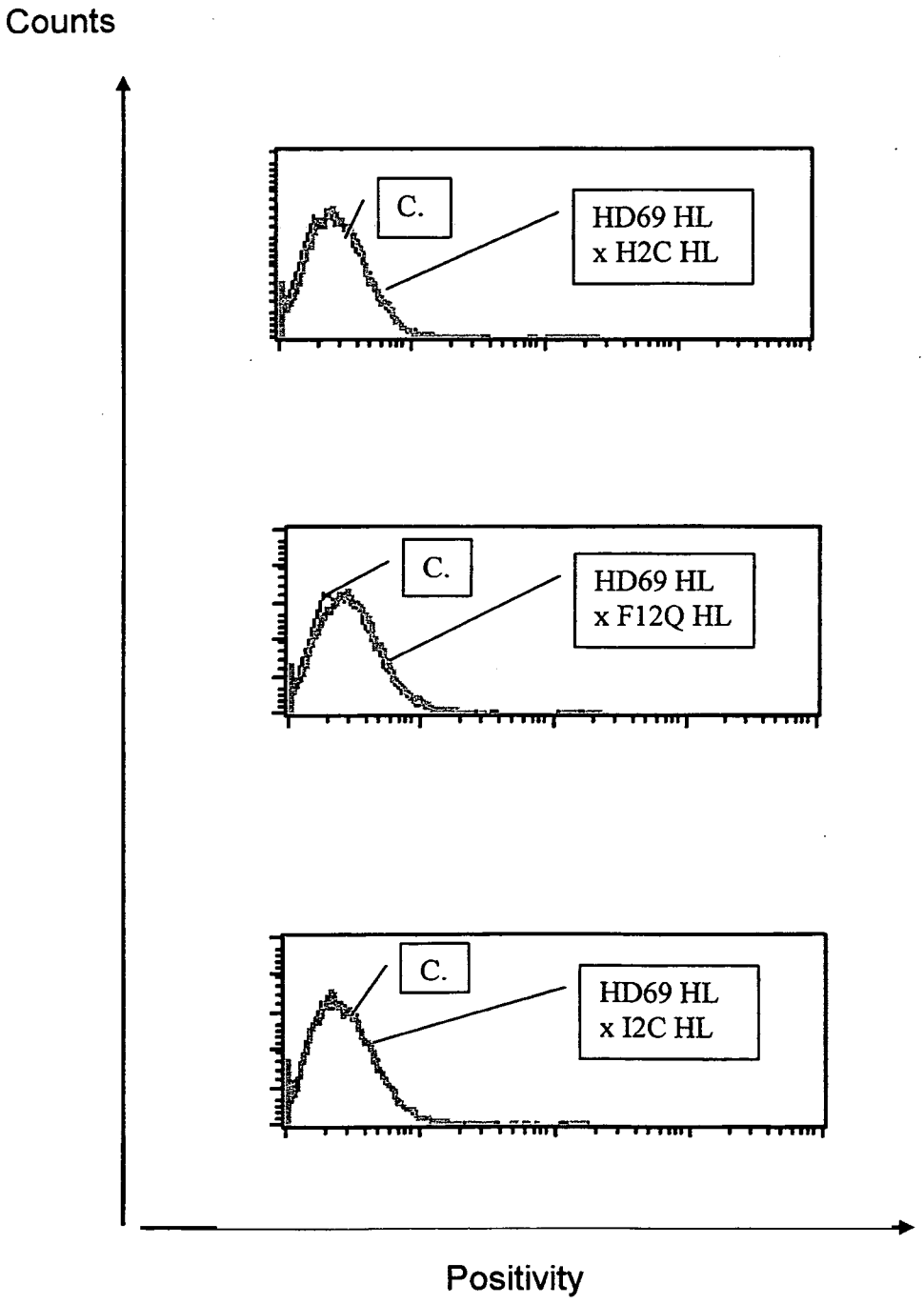


Figure 38b: CHO (untransfected)

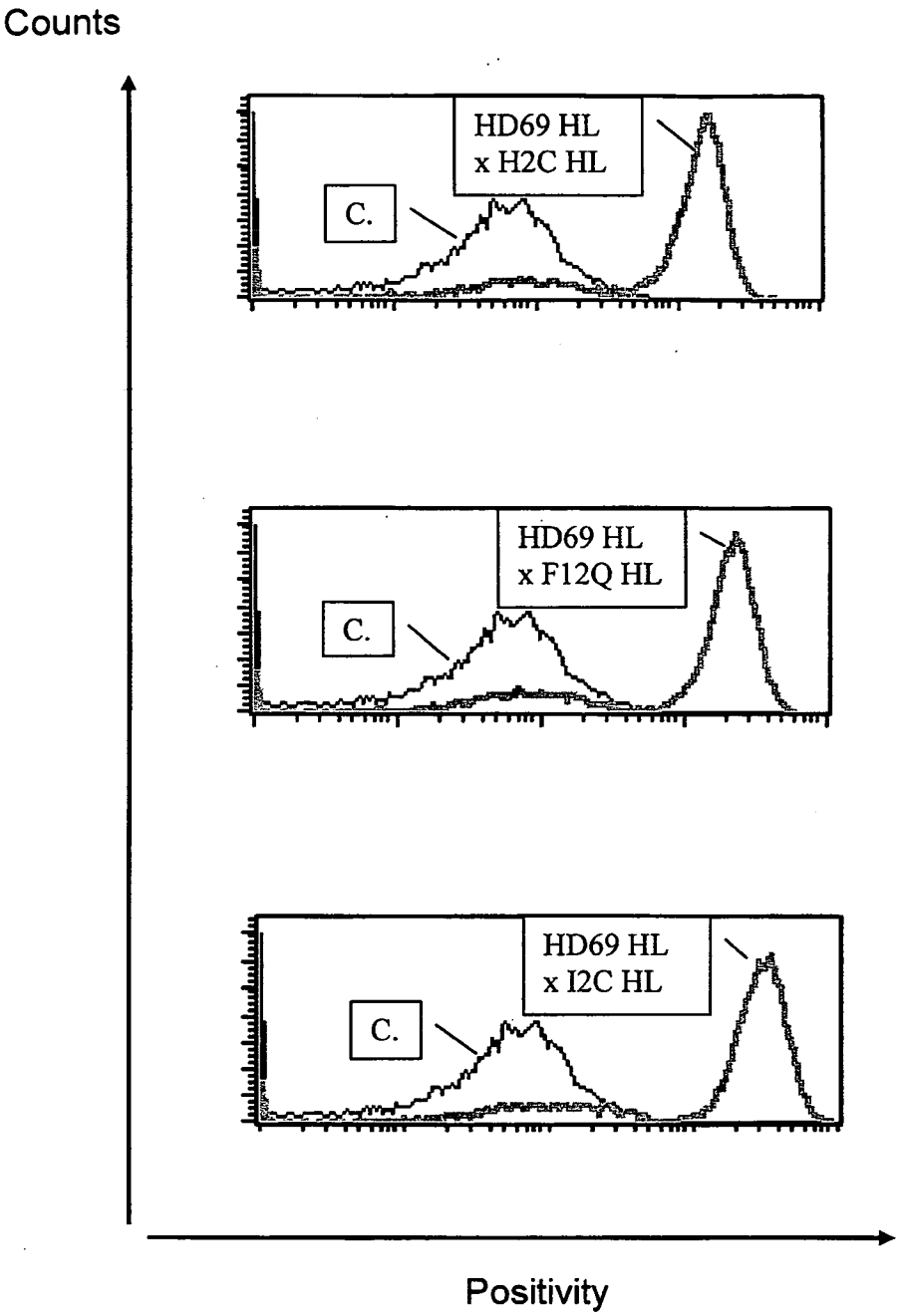


Figure 38c: human PBMCs

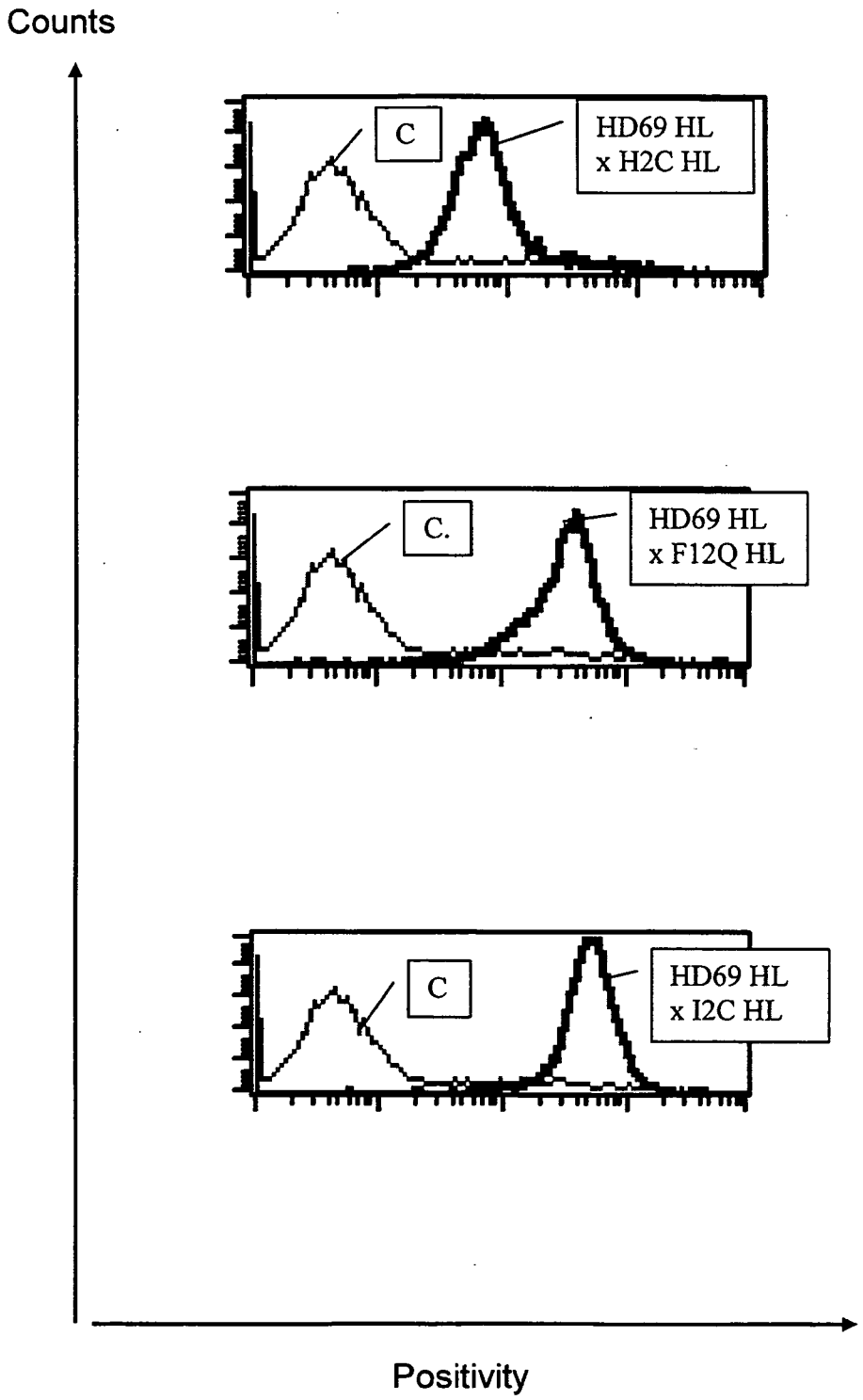


Figure 38d: macaque 4119LnPx (CD3+)

Figure: 39a

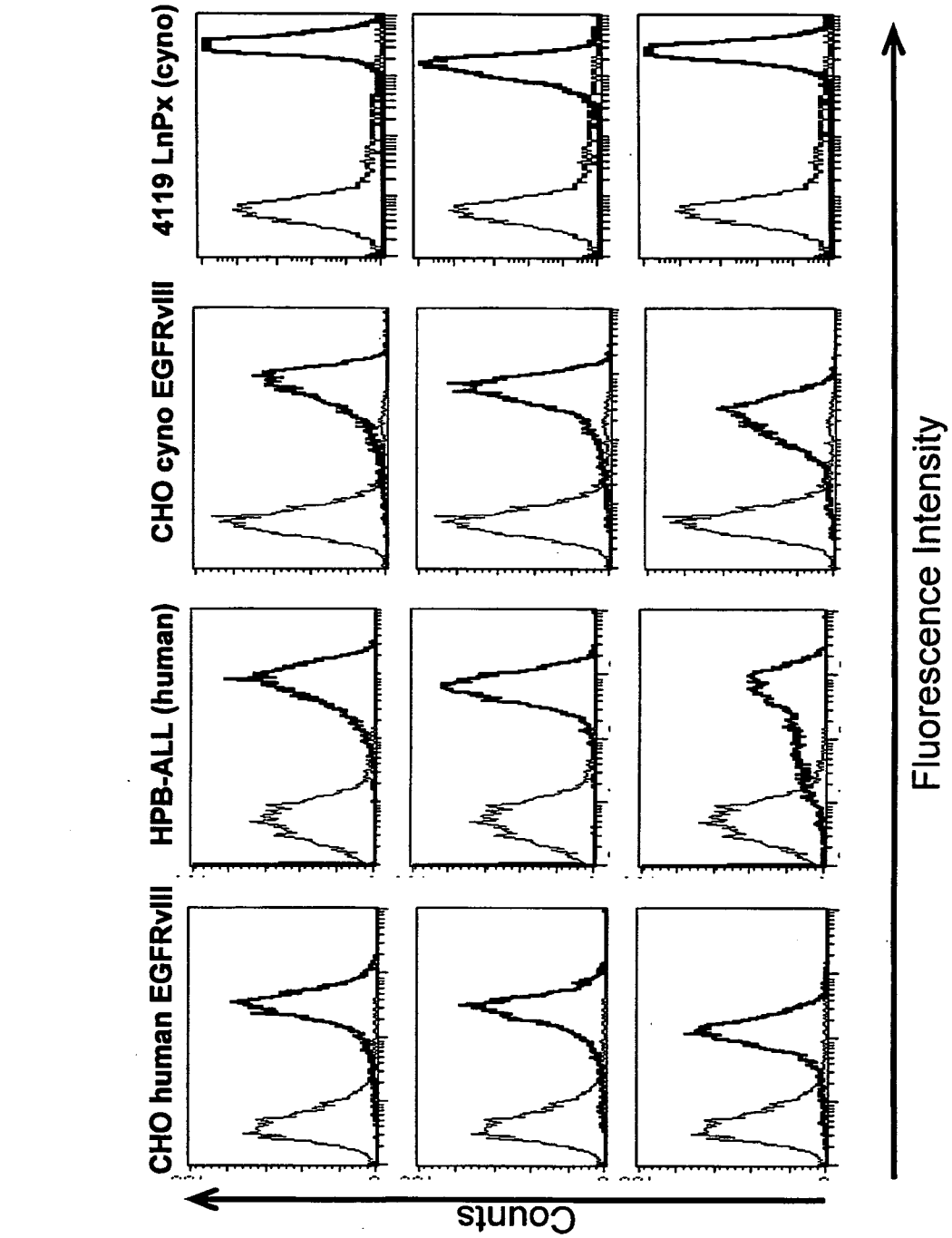

CHO human EGFRvIII
HPB-ALL (human)
CHO cyno EGFRvIII
4119 LnPx (cyno)
V90F5 HL x I2C HL
V90F5 HL x H2C HL
V90F5 HL x F12Q HL
Counts
Fluorescence Intensity

Figure: 39b

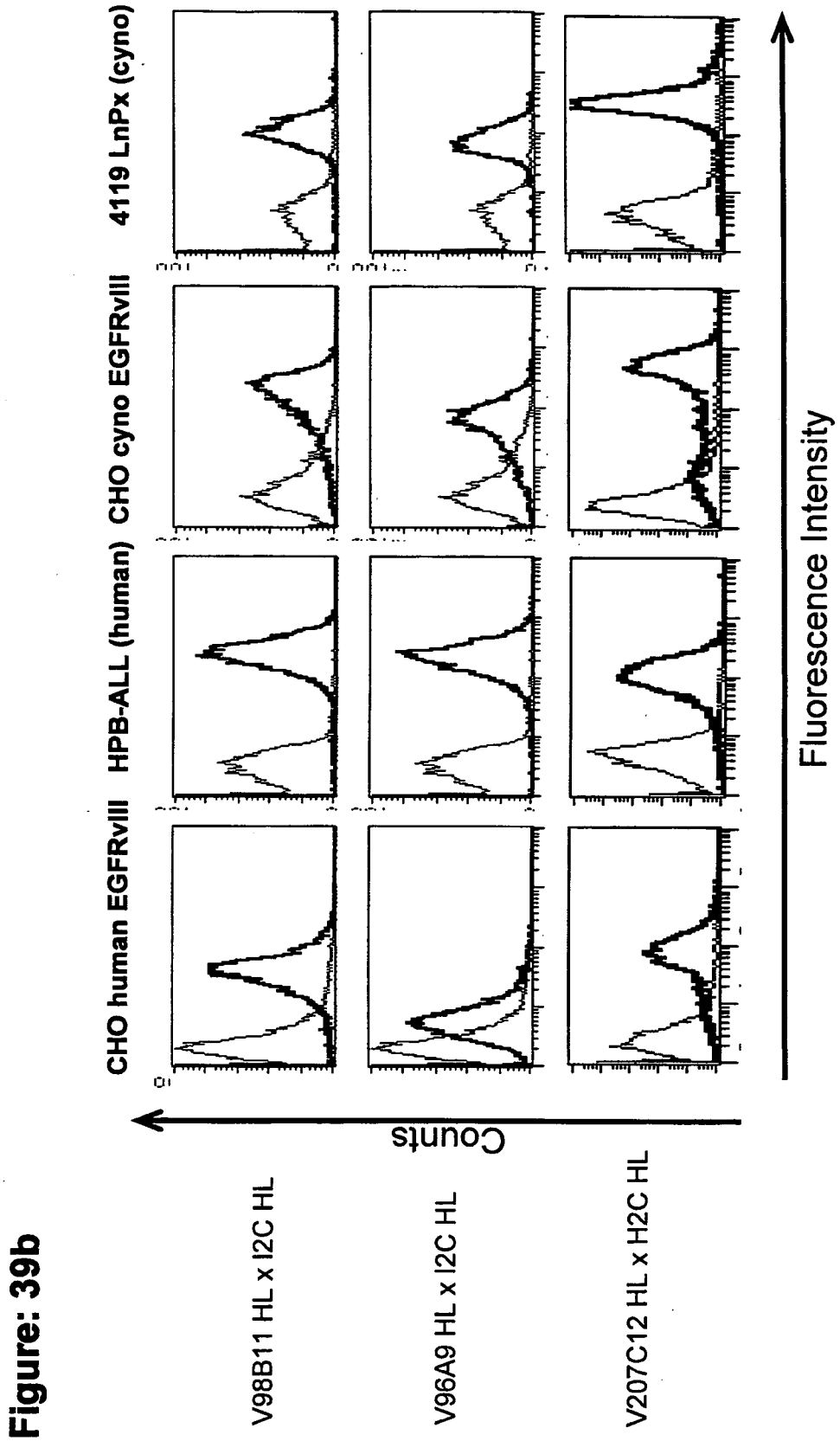

CHO human EGFRvIII
HPB-ALL (human)
CHO cyno EGFRvIII
4119 LnPx (cyno)
V98B11 HL x I2C HL
V96A9 HL x I2C HL
V207C12 HL x H2C HL
Counts
Fluorescence Intensity

Figure: 39c

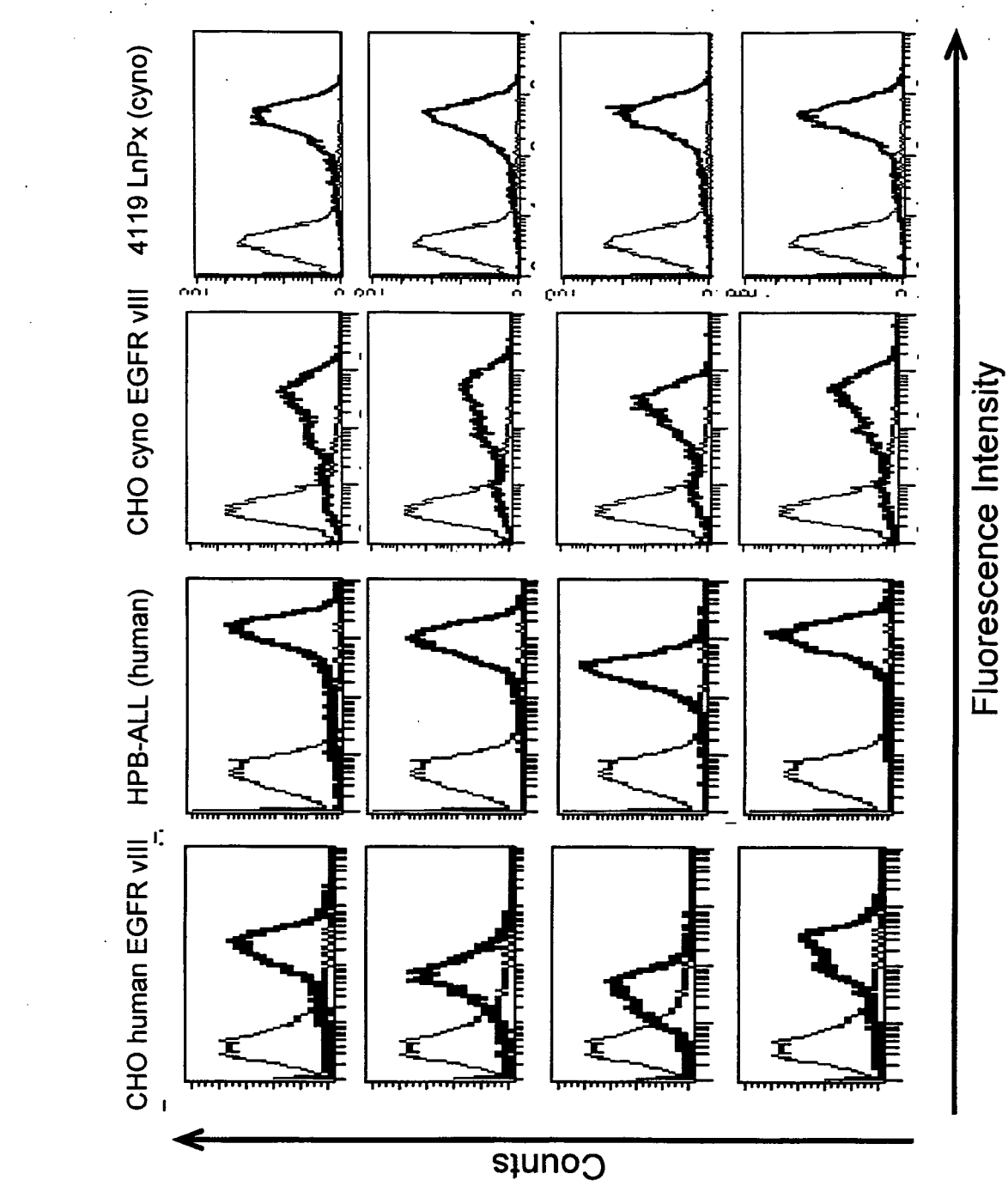

CHO human EGFR vIII
HPB-ALL (human)
CHO cyno EGFR vIII
4119 LnPx (cyno)
V11A11 HL x I2C HL
V11F6 HL x I2C HL
V11G7 HL x I2C HL
V17F5 HL x I2C HL
Counts
Fluorescence Intensity

Figure: 39d

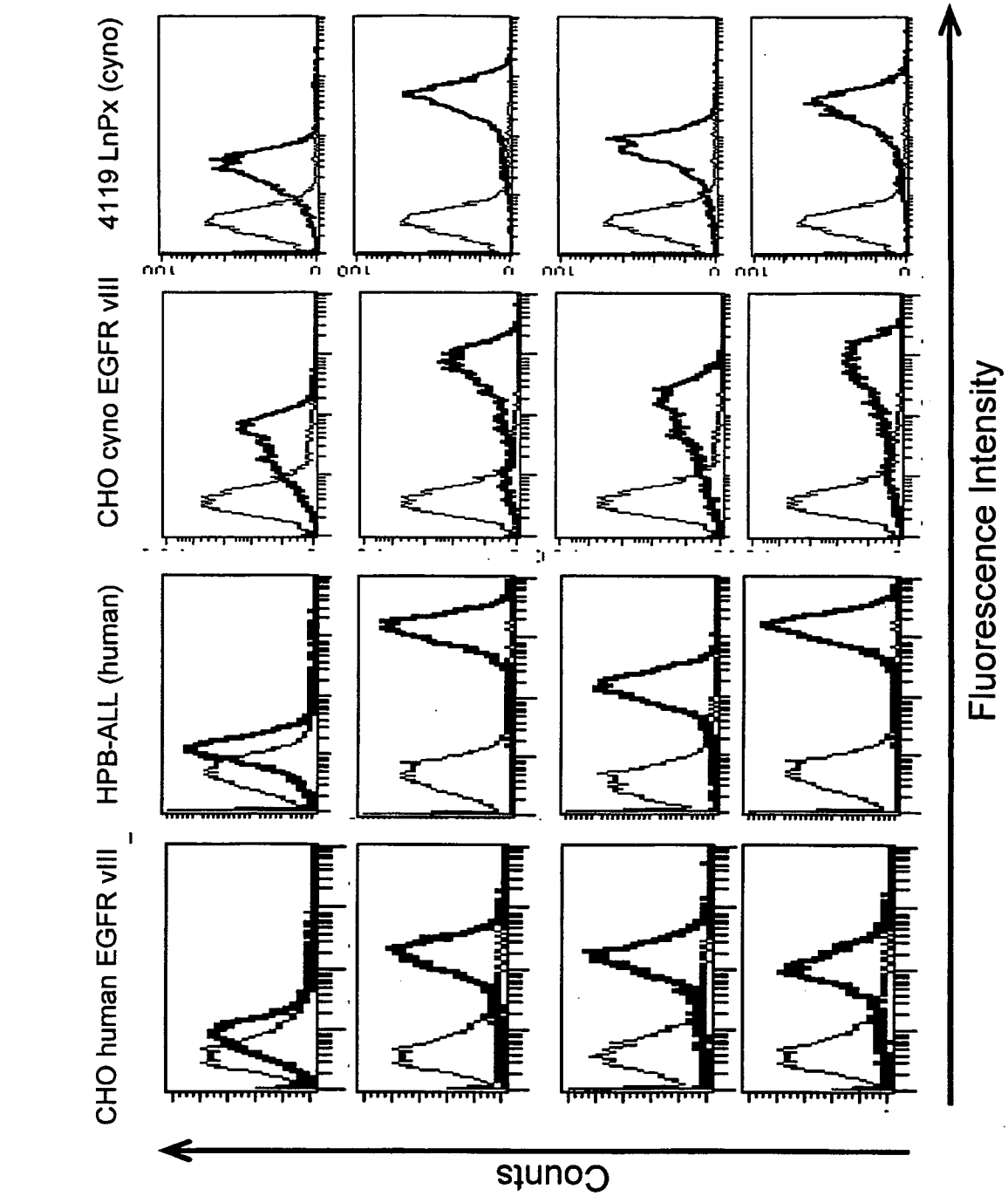

CHO human EGFR vIII
HPB-ALL (human)
CHO cyno EGFR vIII
4119 LnPx (cyno)
V17A4 HL x I2C HL
V17C8 HL x I2C HL
V17G9 HL x I2C HL
V17F11 HL x I2C HL
Counts
Fluorescence Intensity

Figure: 39e

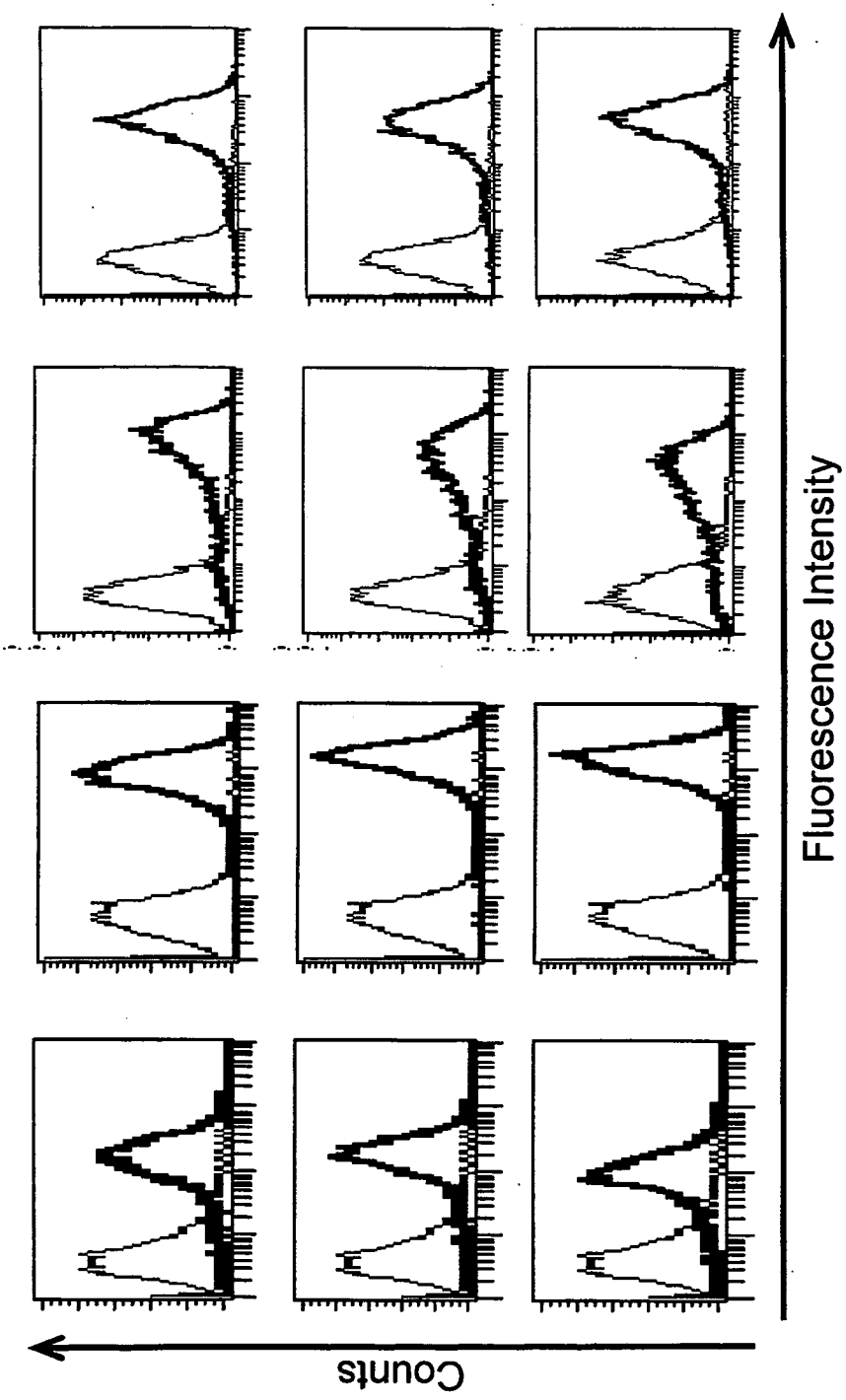

CHO human EGFR vIII
HPB-ALL (human)
CHO cyno EGFR vIII
4119 LnPx (cyno)
V16B7 HL x I2C HL
V11A4 HL x I2C HL
V17B11 HL x I2C HL
Counts
Fluorescence Intensity

Figure: 39f

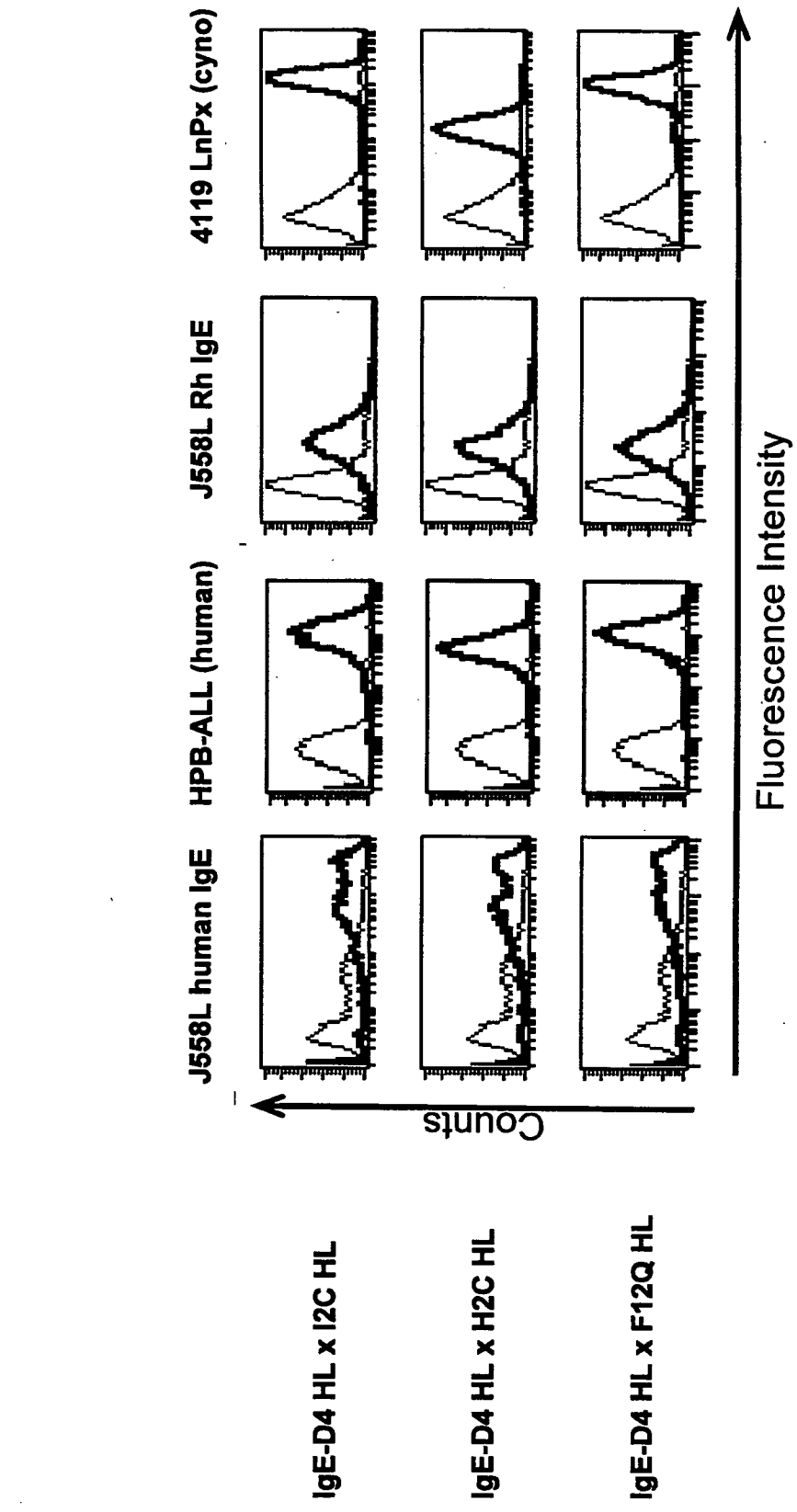
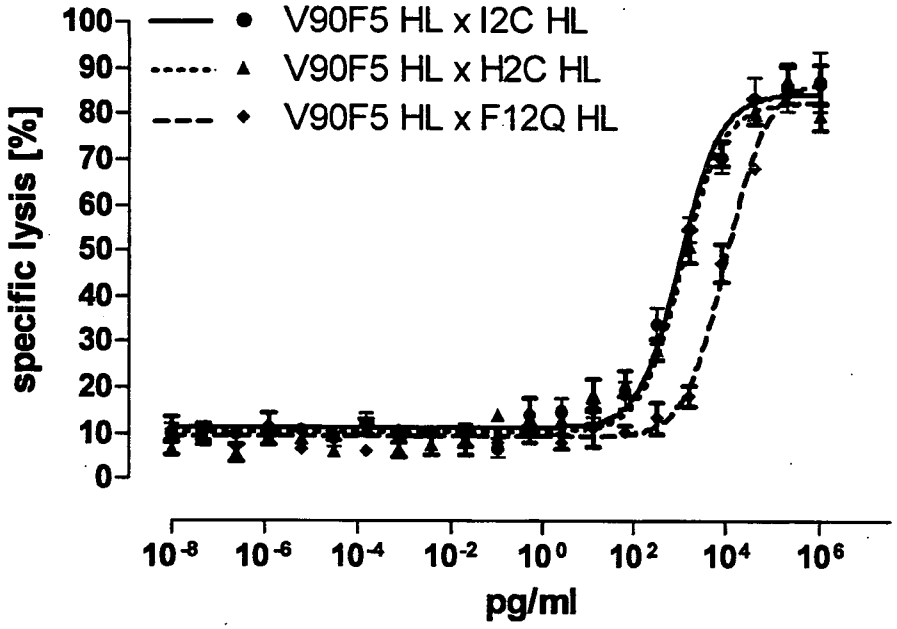

J558L human IgE
HPB-ALL (human)
J558L Rh IgE
4119 LnPx (cyno)
IgE-D4 HL x I2C HL
IgE-D4 HL x H2C HL
IgE-D4 HL x F12Q HL
Counts
Fluorescence Intensity

Figure 40a

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



B) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFRvIII

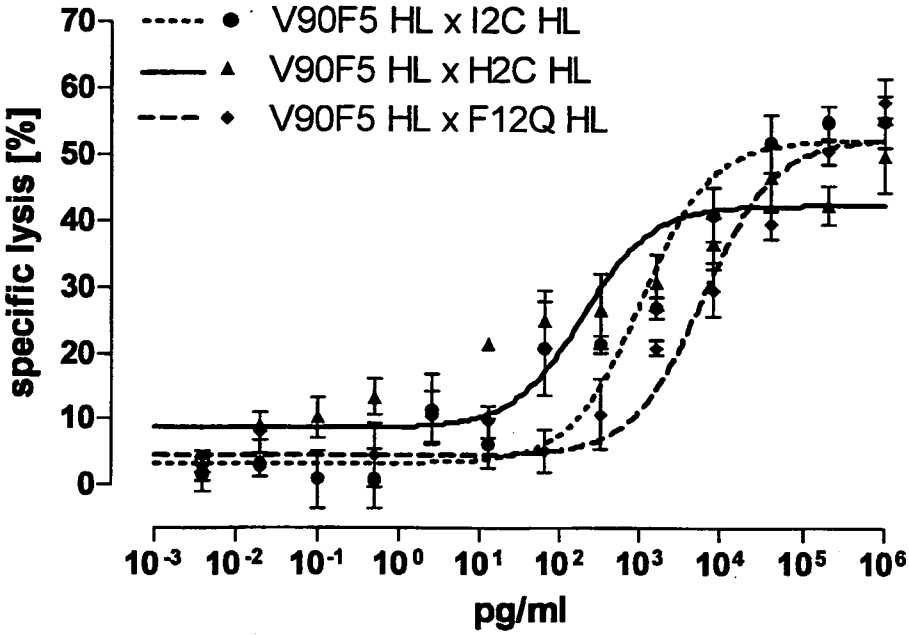
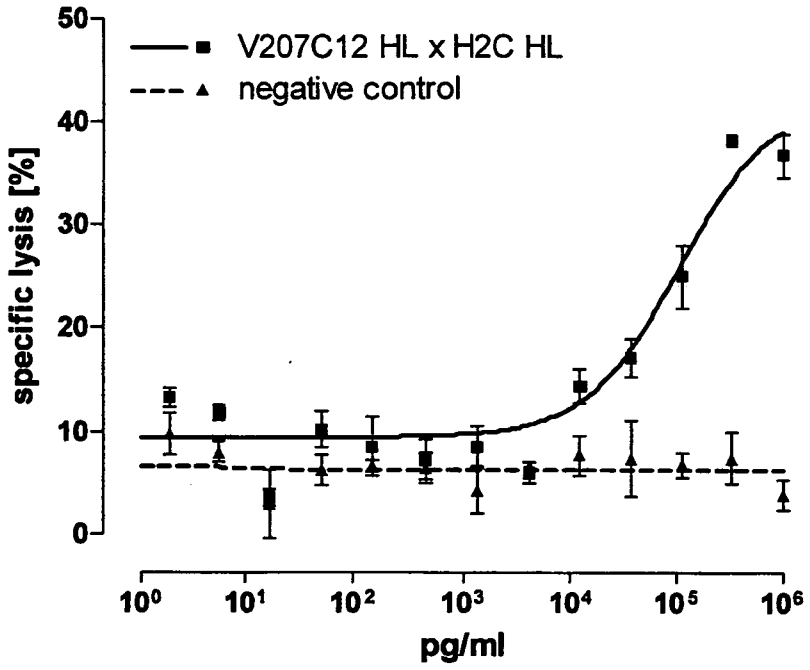


Figure 40b

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



B) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFRvIII

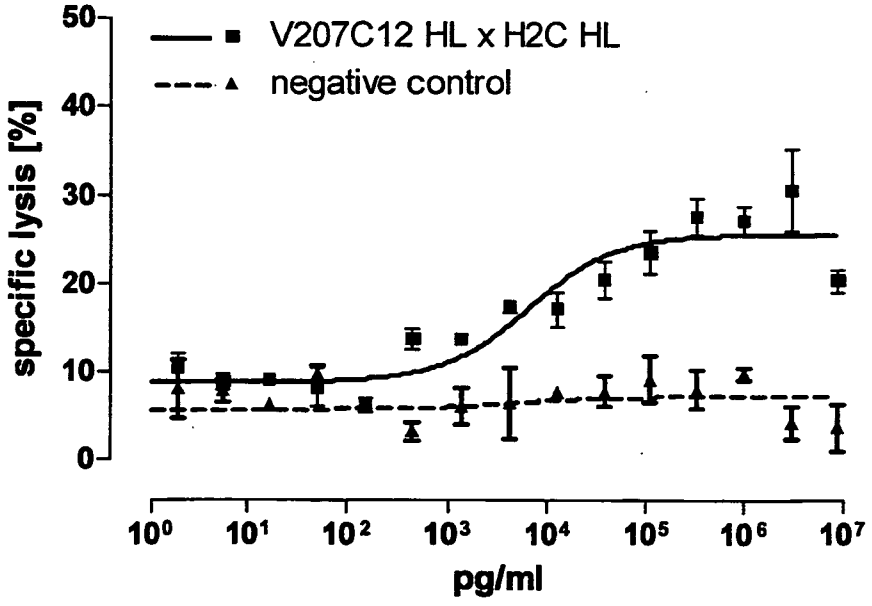
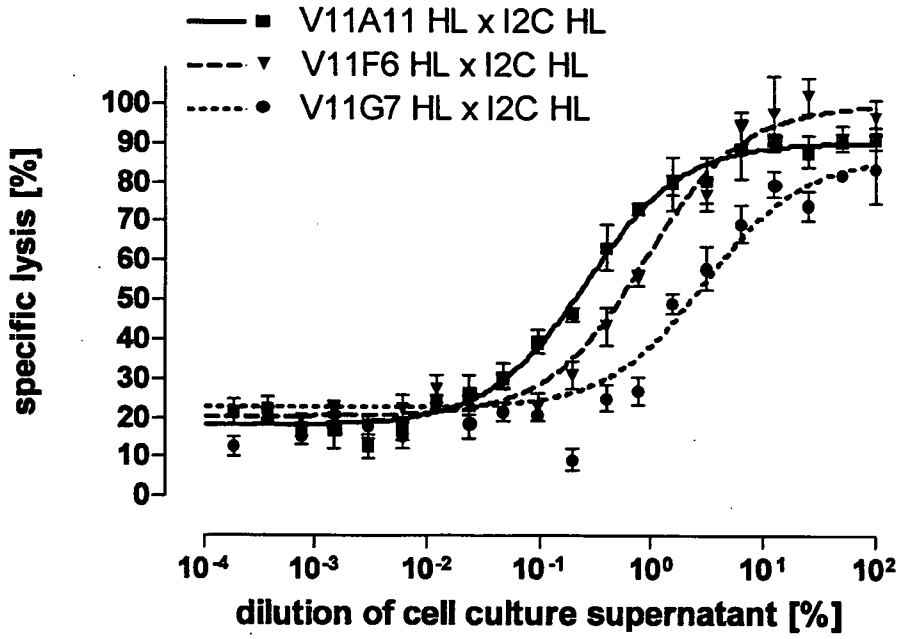


Figure 40c

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



B) Effector cells: stimulated CD4/CD56 depleted human PBMC
Target cells: CHO transfected with human EGFRvIII

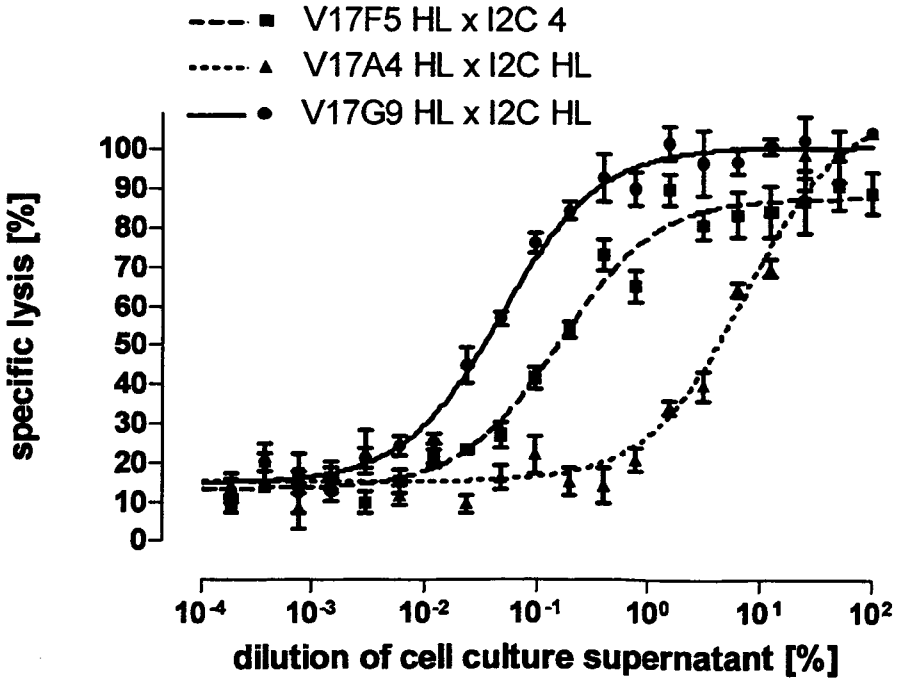
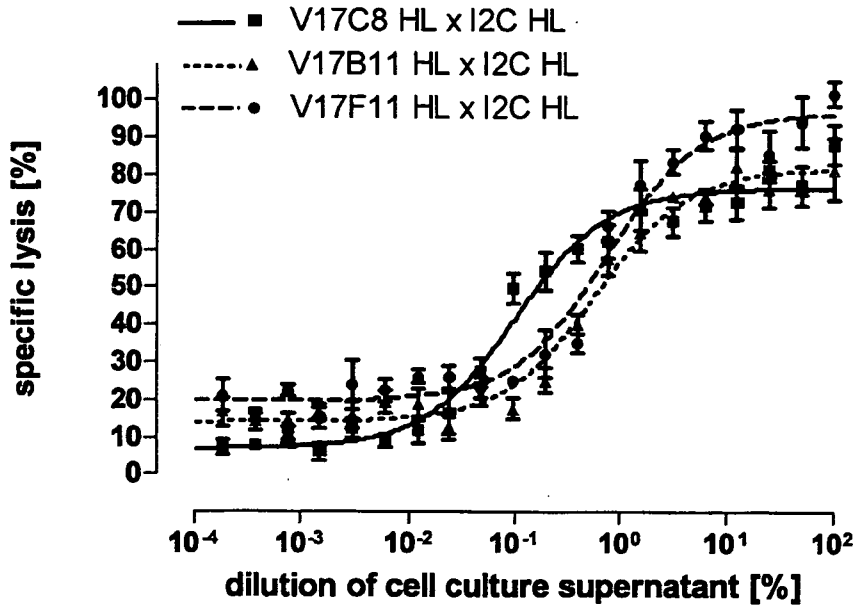


Figure 40d

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



B) Effector cells: stimulated CD4/CD56 depleted human PBMC
Target cells: CHO transfected with human EGFRvIII

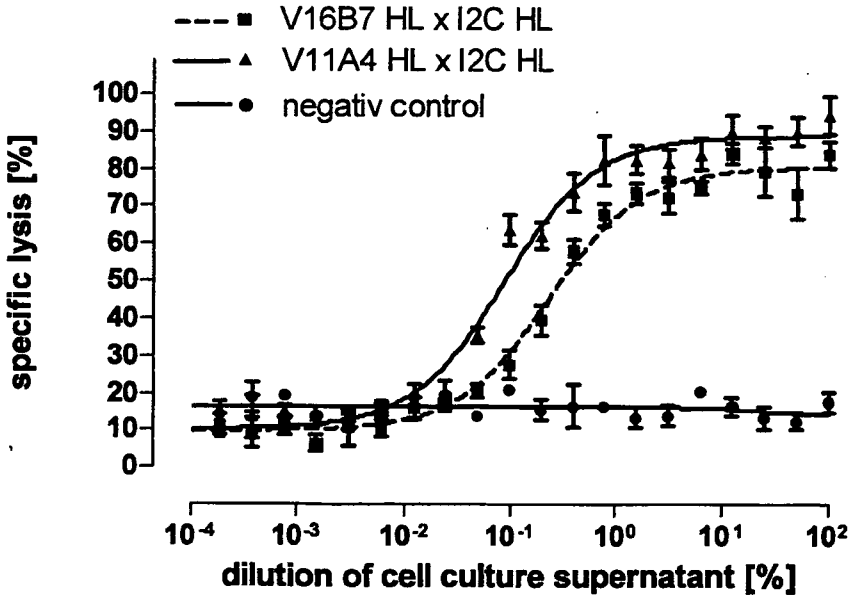
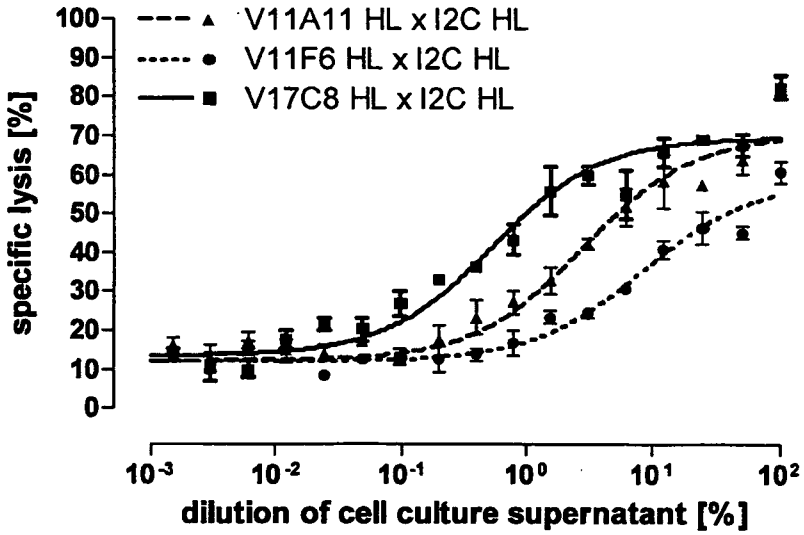


Figure 40e

A) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFRvIII



B) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFRvIII

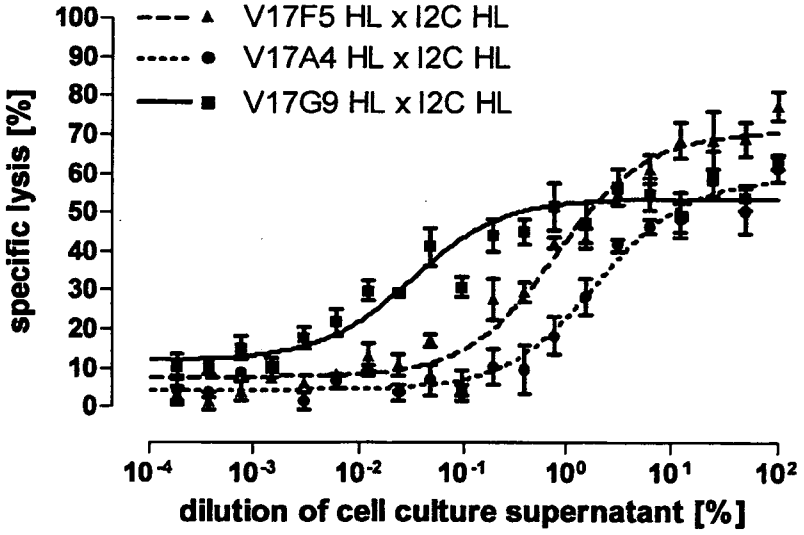
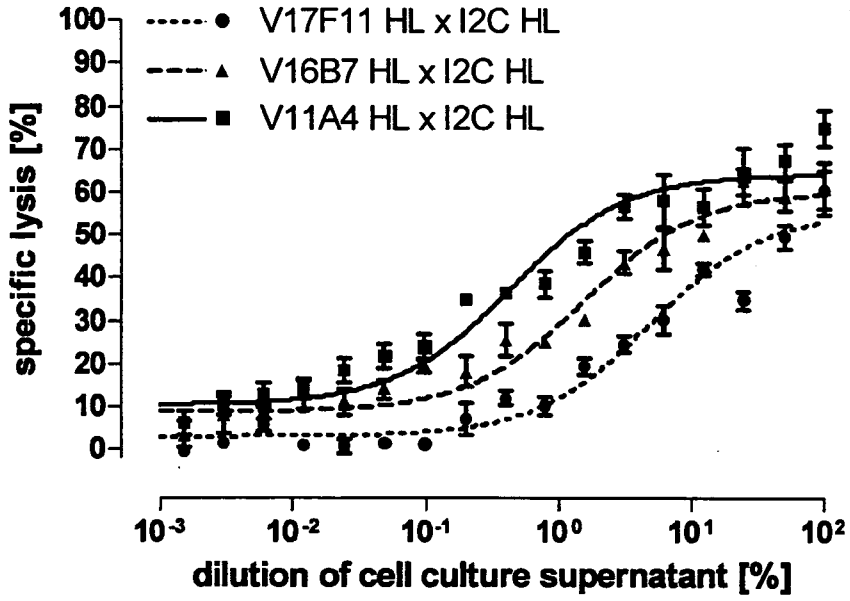


Figure 40f

A) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFRvIII



B) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFRvIII

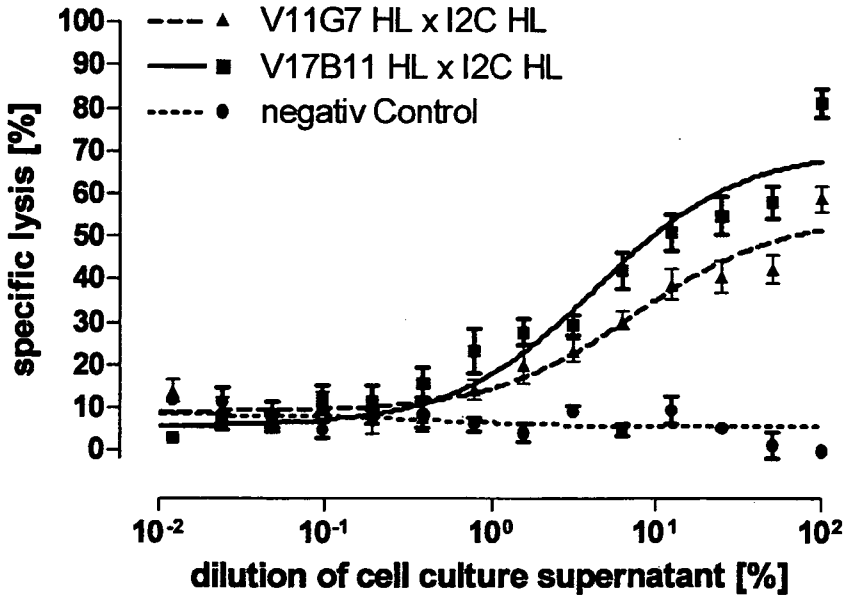
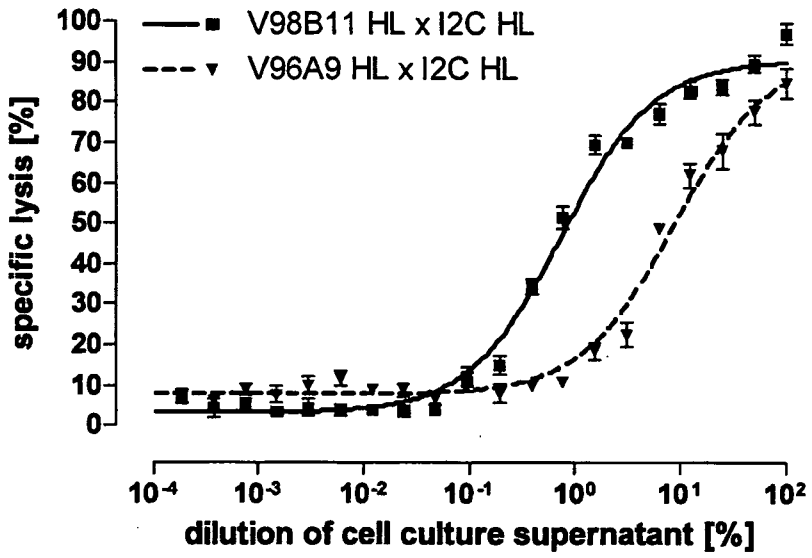


Figure 40g

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



B) Effector cells: 4119LnPx
Target cells: CHO transfected with cyno EGFRvIII

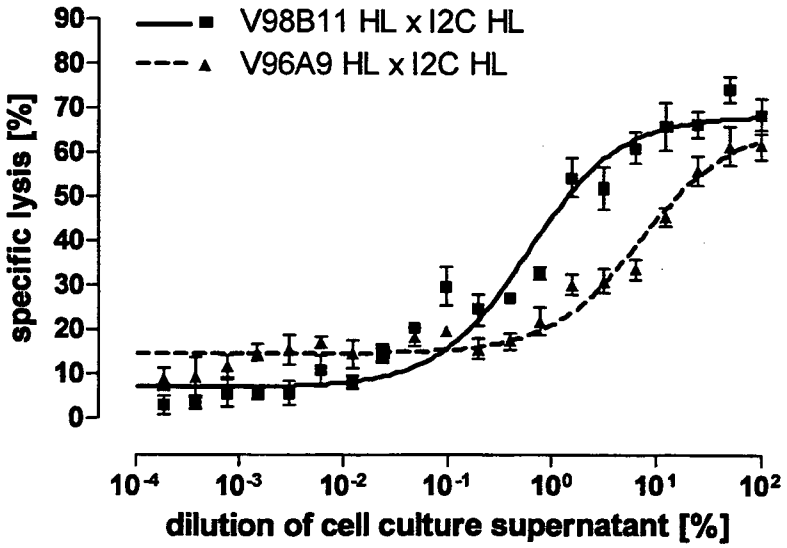


Figure: 41a

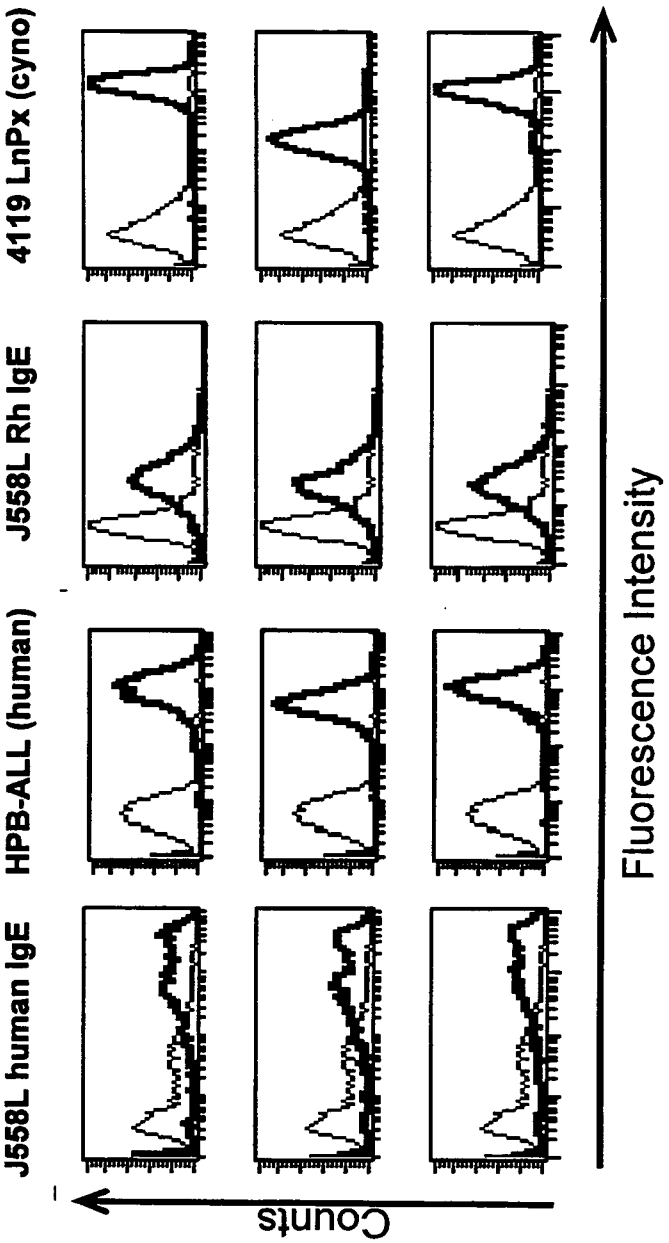

J558L human IgE
HPB-ALL (human)
J558L Rh IgE
4119 LnPx (cyno)
IgE-D4 HL x I2C HL
IgE-D4 HL x H2C HL
IgE-D4 HL x F12Q HL
Counts
Fluorescence Intensity

Figure: 41b

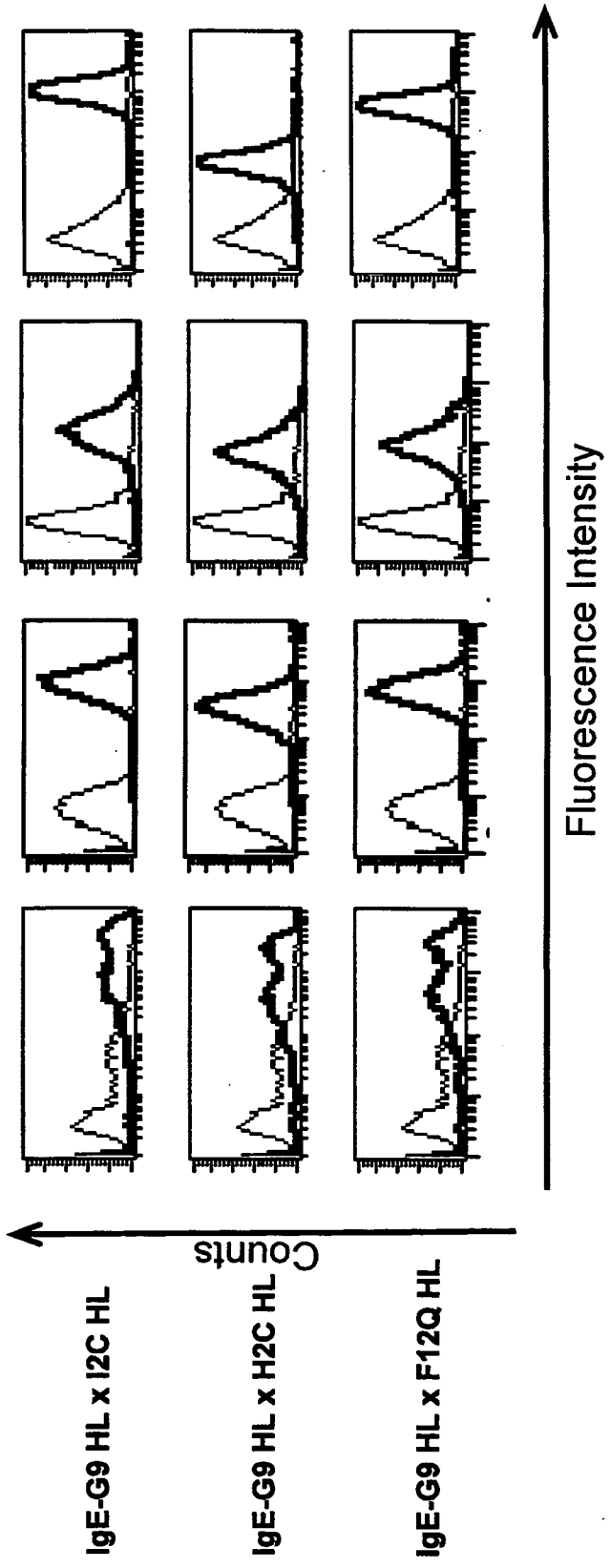

J558L human IgE
HPB-ALL (human)
J558 Rh IgE
4119 LnPx (cyno)
IgE-G9 HL x I2C HL
IgE-G9 HL x H2C HL
IgE-G9 HL x F12Q HL
Counts
Fluorescence Intensity

Figure: 41c

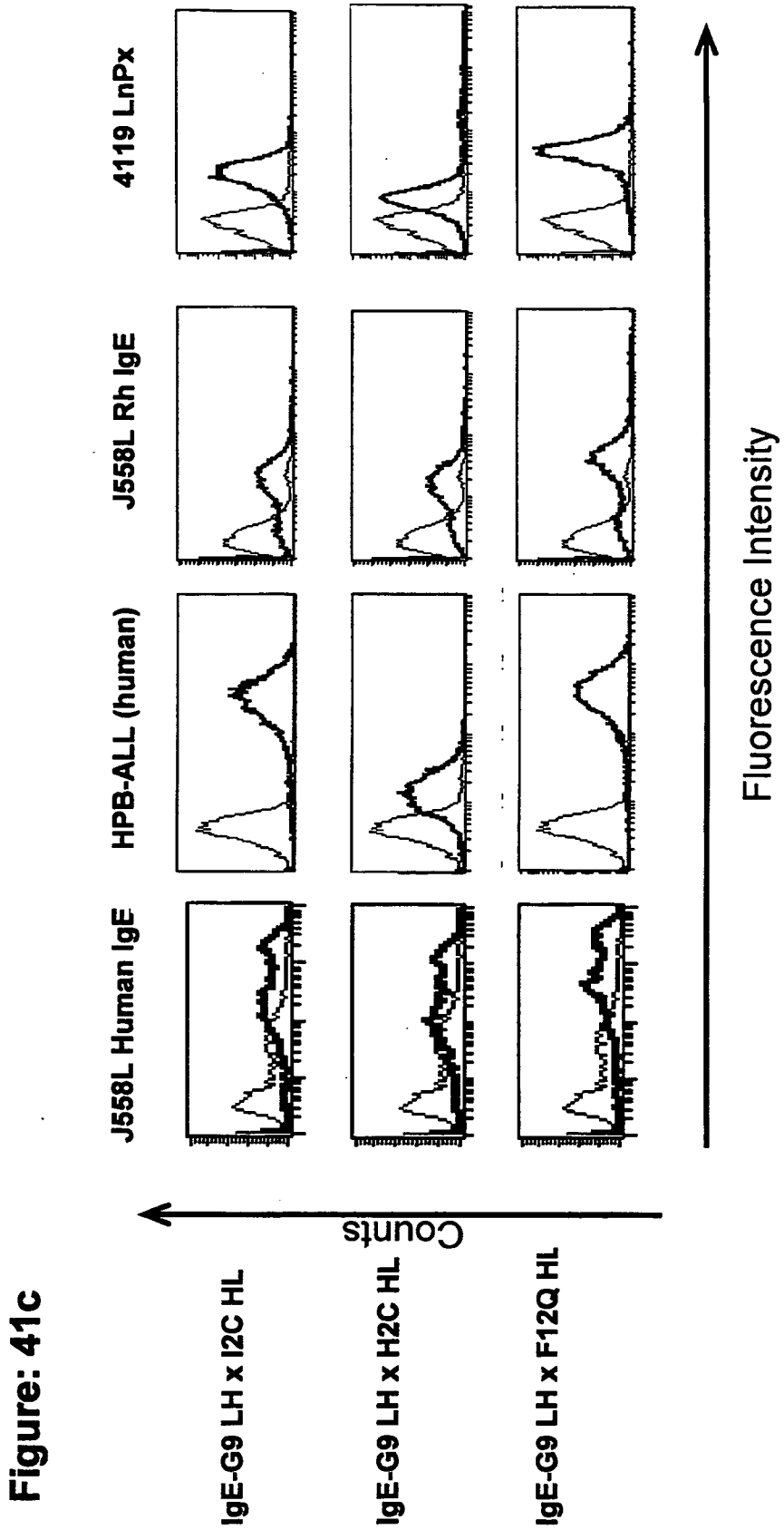
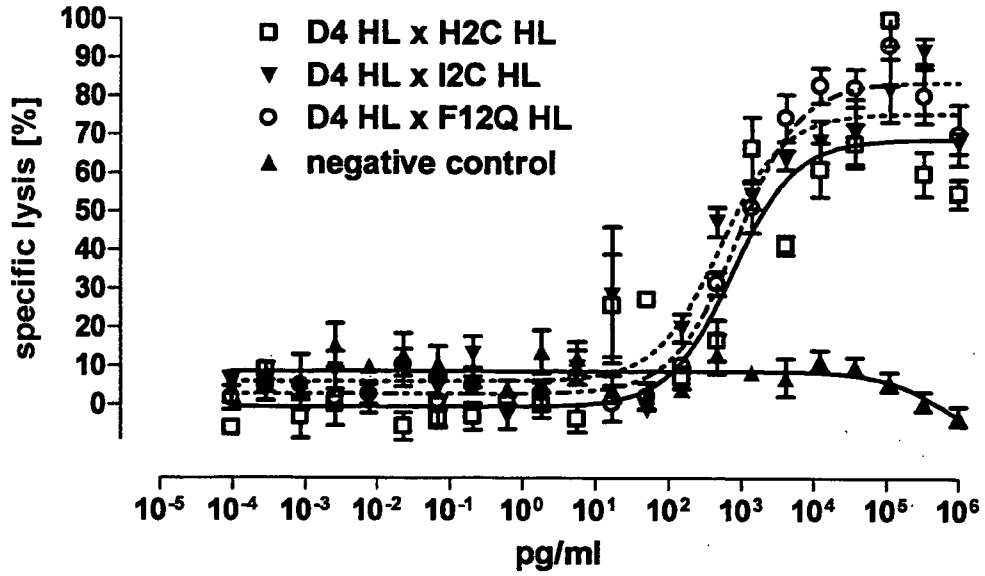

J558L Human IgE
HPB-ALL (human)
J558L Rh IgE
4119 LnPx
IgE-G9 LH x I2C HL
IgE-G9 LH x H2C HL
IgE-G9 LH x F12Q HL
Counts
Fluorescence Intensity

Figure 42a

A)

Effector cells: stimulated CD4/CD56 depleted human PBMC
Target cells: J558L cells transfected with human IgE



B)

Effector cells: 4119 LnPx
Target cells: J558L cells transfected with macaque IgE

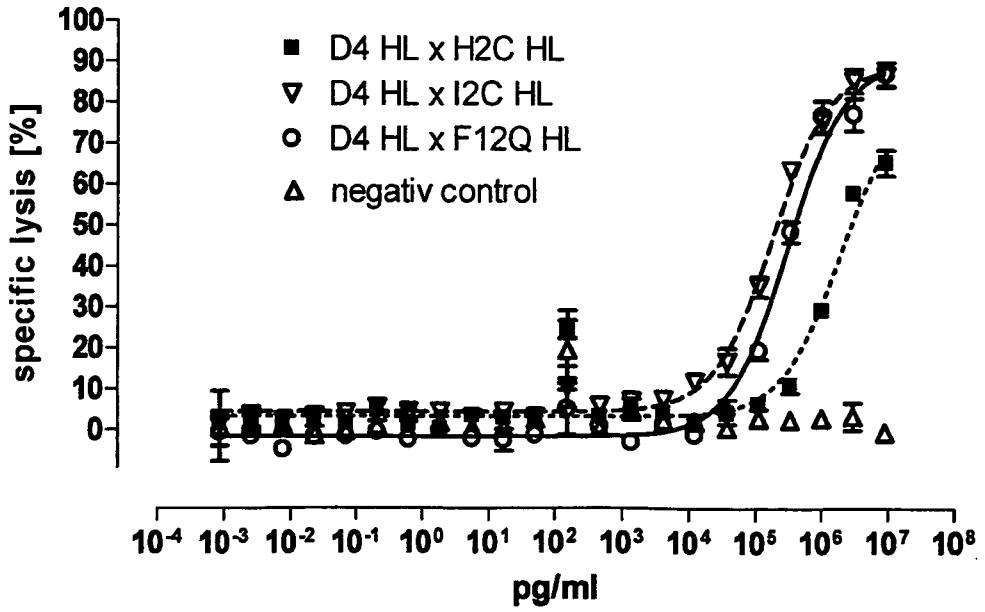
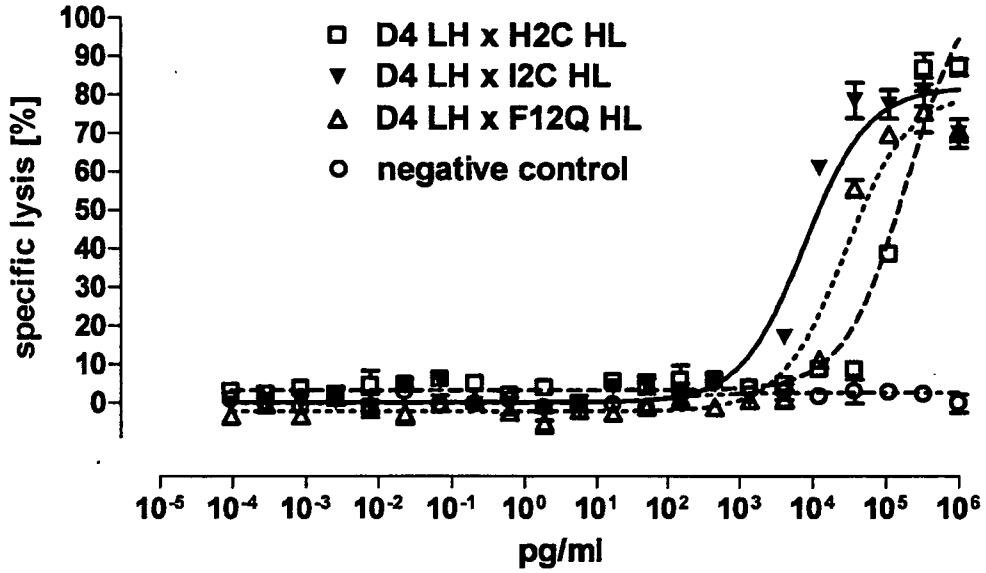


Figure 42b

A)

Effector cells: stimulated CD4/CD56 depleted human PBMC
Target cells: J558L cells transfected with Human IgE



B)

Effector cells: 4119 LnPx
Target cells: J558L cells transfected with macaque IgE

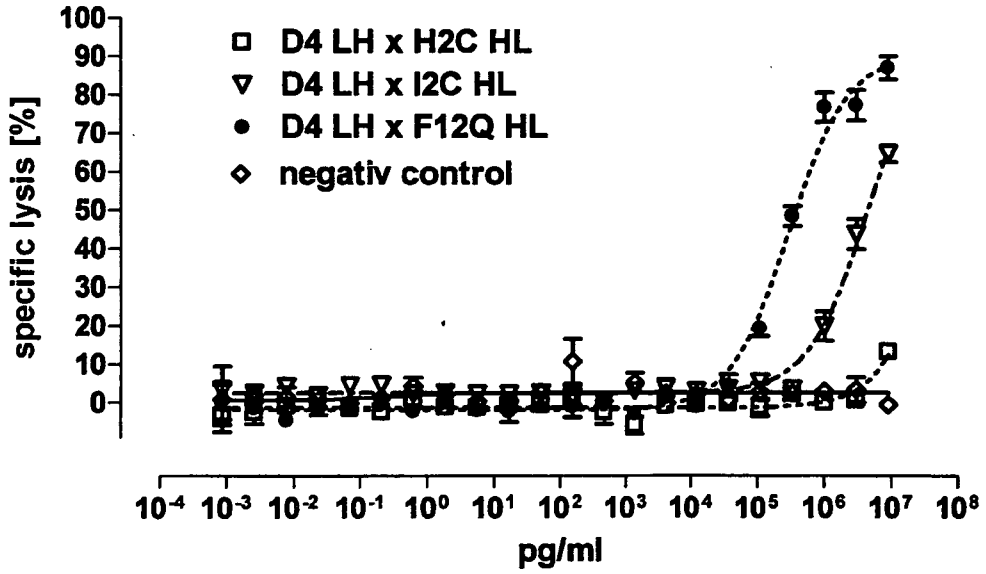
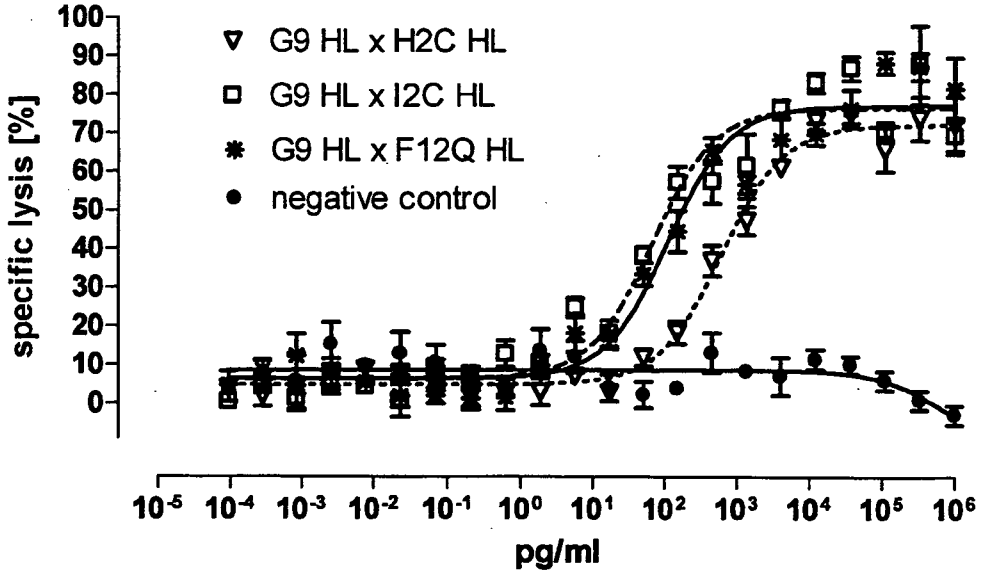


Figure 42c

A)

Effector cells: stimulated CD4/CD56 depleted human PBMC
Target cells: J558L cells transfected with Human IgE



B)

Effector cells: 4119 LnPx
Target cells: J558L cells transfected with macaque IgE

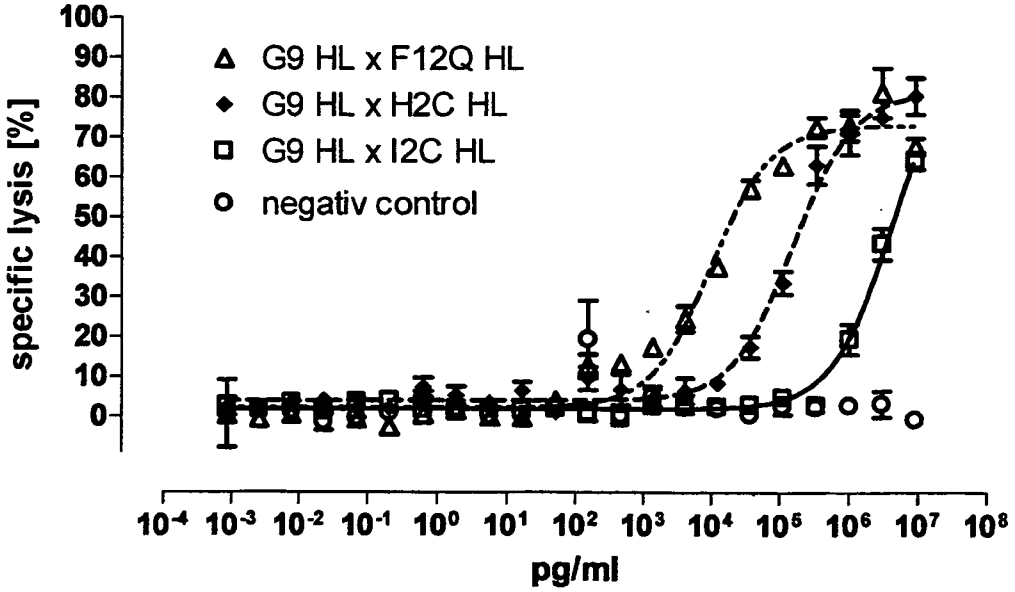
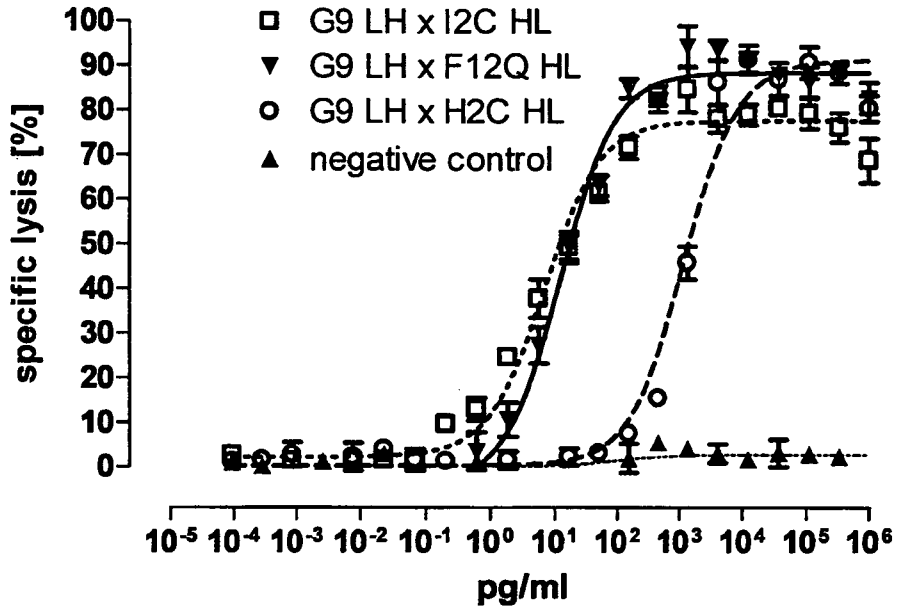


Figure 42d

A)

Effector cells: stimulated CD4/CD56 depleted human PBMC
Target cells: J558L cells transfected with Human IgE



B)

Effector cells: 4119 LnPx
Target cells: J558L cells transfected with macaque IgE

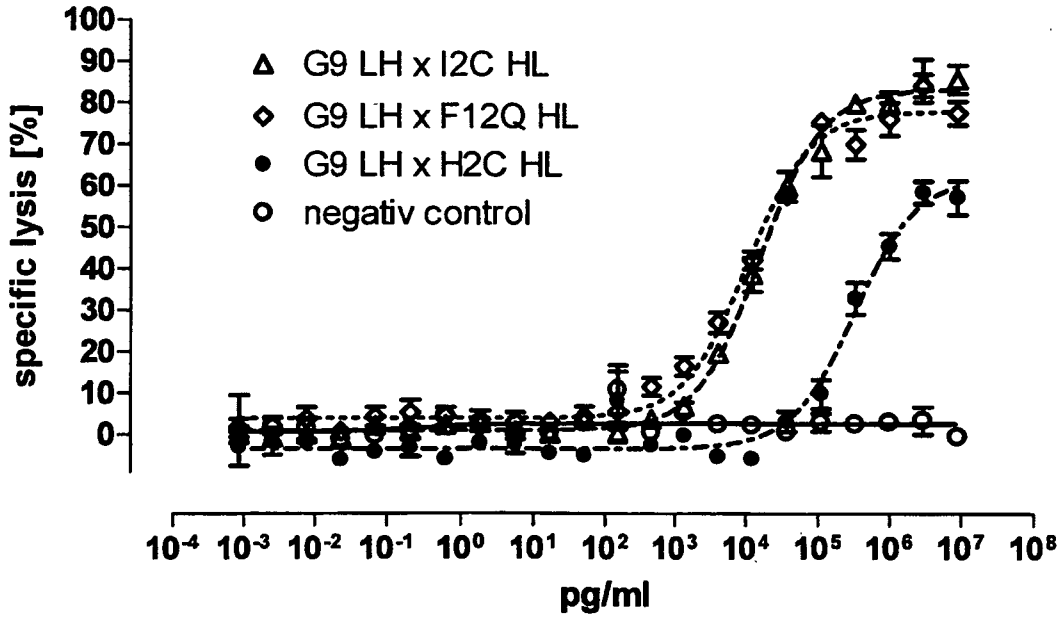
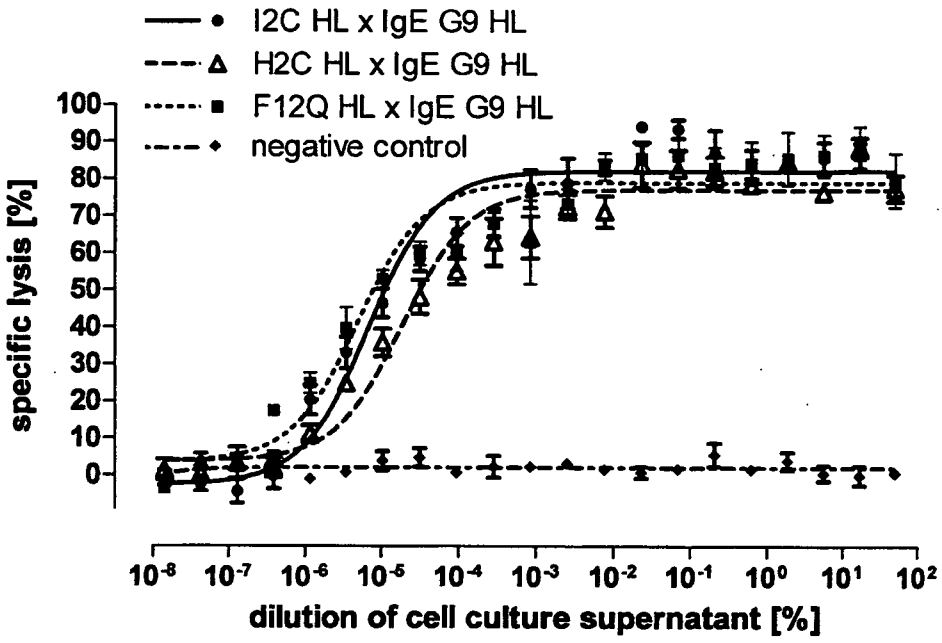


Figure 42e

A)

Effector cells: stimulated CD4/CD56 depleted human PBMC
Target cells: J558L cells transfected with human IgE



B)

Effector cells: 4119 LnPx
Target cells: J558L cells transfected with macaque IgE

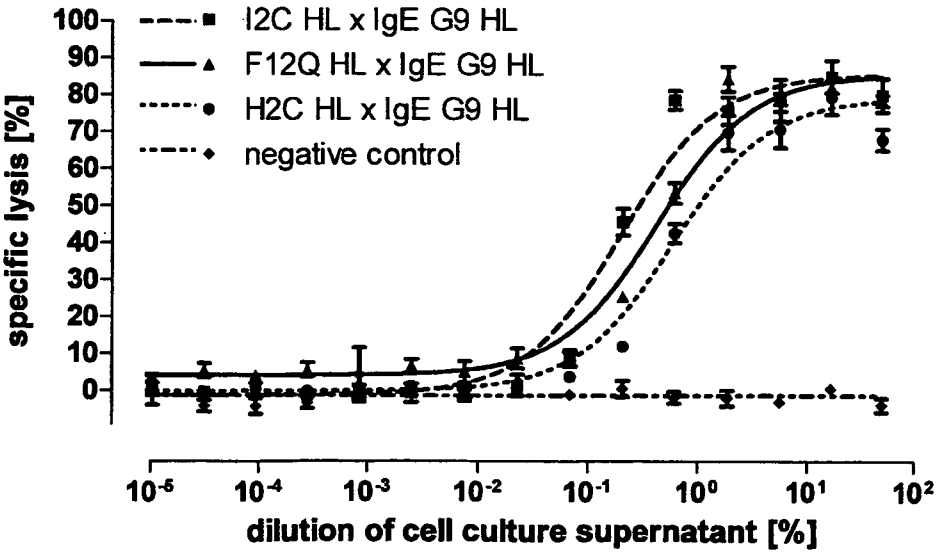
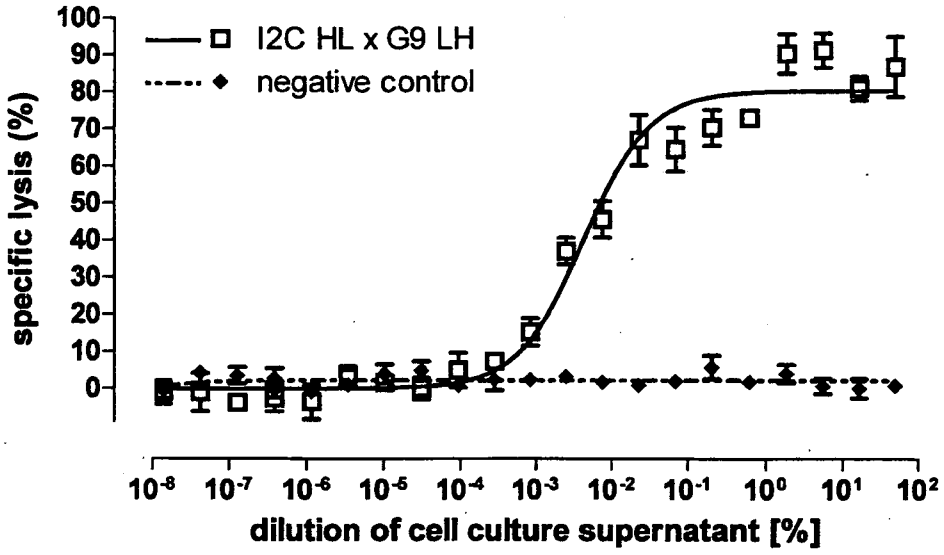


Figure 42f

A)

Effector cells: stimulated CD4/CD56 depleted human PBMC
Target cells: J558L cells transfected with Human IgE



B)

Effector cells: 4119 LnPx
Target cells: J558L cells transfected with macaque IgE

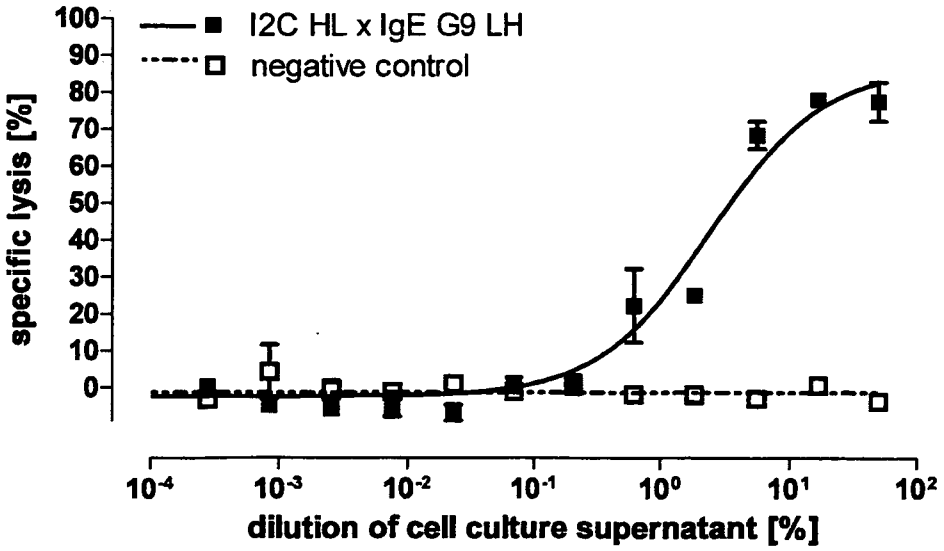
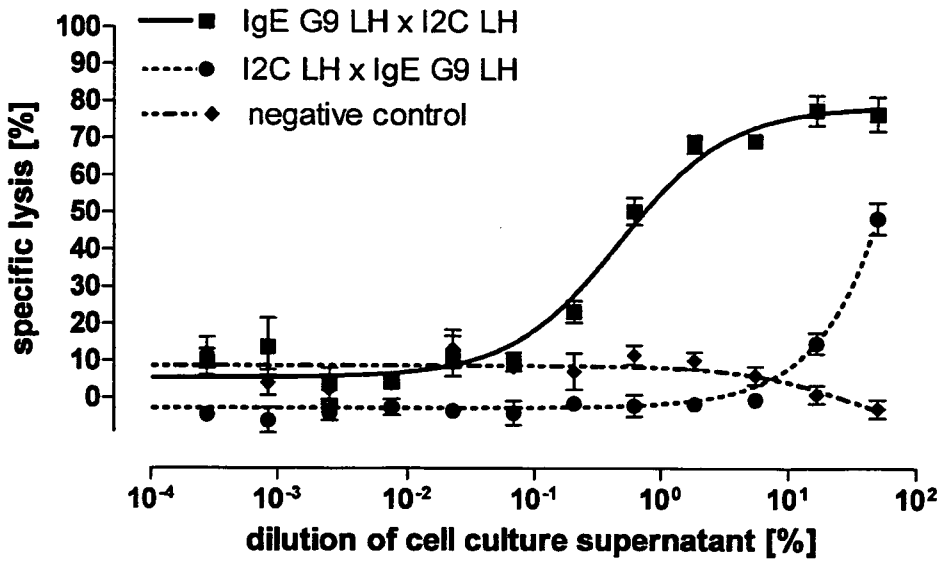


Figure 42g

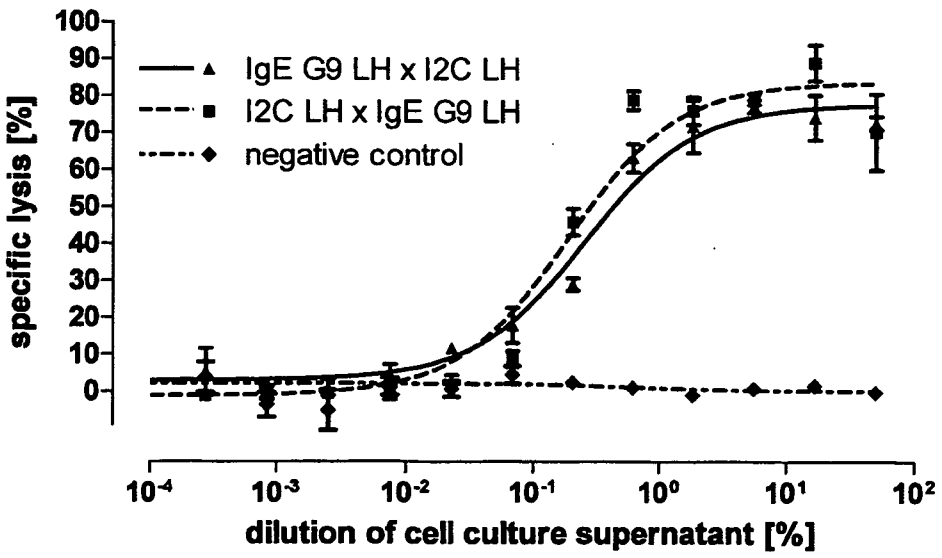
A)

Effector cells: stimulated CD4/CD56 depleted human PBMC
Target cells: J558L cells transfected with Human IgE



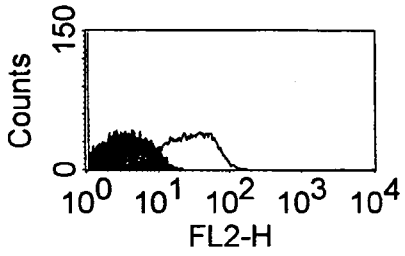
B)

Effector cells: 4119 LnPx
Target cells: J558L cells transfected with macaque IgE



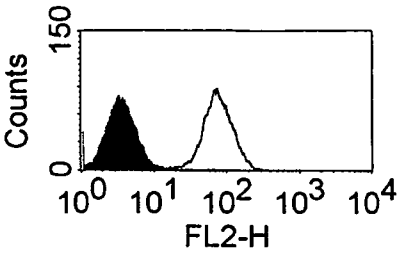
Human CD44 transfected CHO

CD44-A8HLxI2CHL



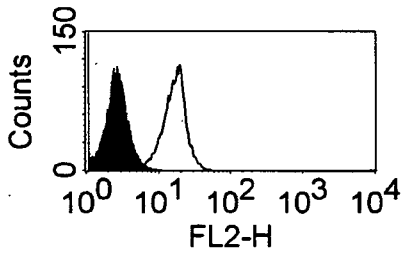
HPB-ALL

CD44-A8HLxI2CHL



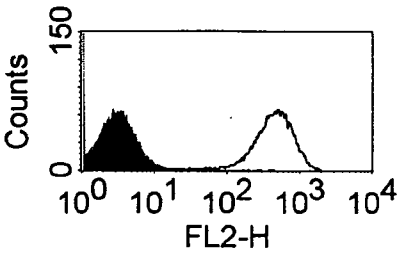
Macaque CD44 transfected CHO

CD44-A8HLxI2CHL



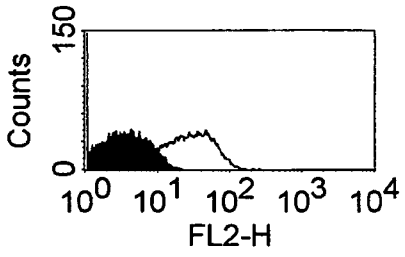
Macaque PBMC

CD44-A8HLxI2CHL



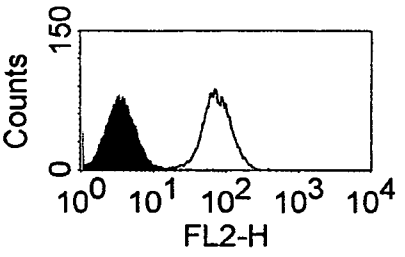
Human CD44 transfected CHO

CD44-A8LHxI2CHL



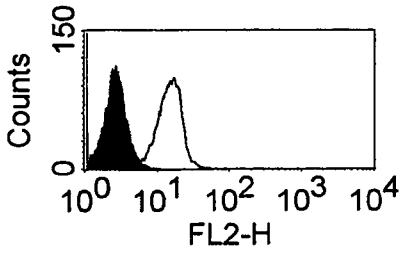
HPB-ALL

CD44-A8LHxI2CHL



Macaque CD44 transfected CHO

CD44-A8LHxI2CHL



Macaque PBMC

CD44-A8LHxI2CHL

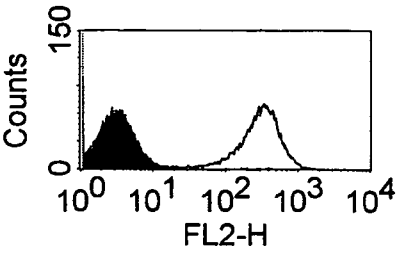
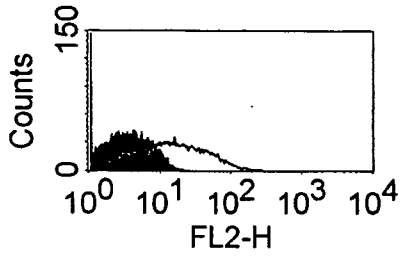


Figure 43

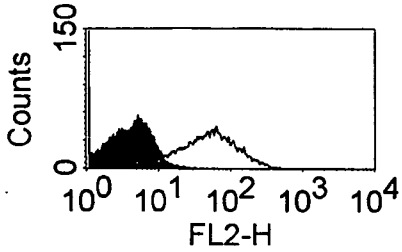
Human CD44 transfected CHO

anti-CD44 antibody



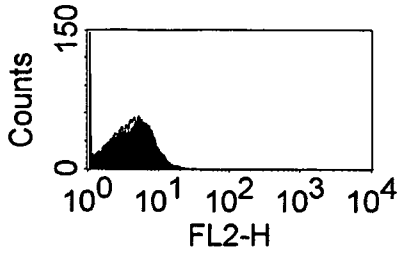
Human CD44 without v6 transfected CHO

anti-CD44 antibody



Human CD44 without v6 transfected CHO

CD44-A8HLxI2CHL



Human CD44 without v6 transfected CHO

CD44-A8LHxI2CHL

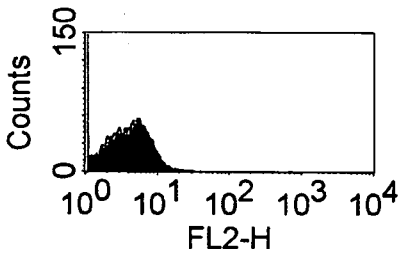


Figure 44

Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CD44

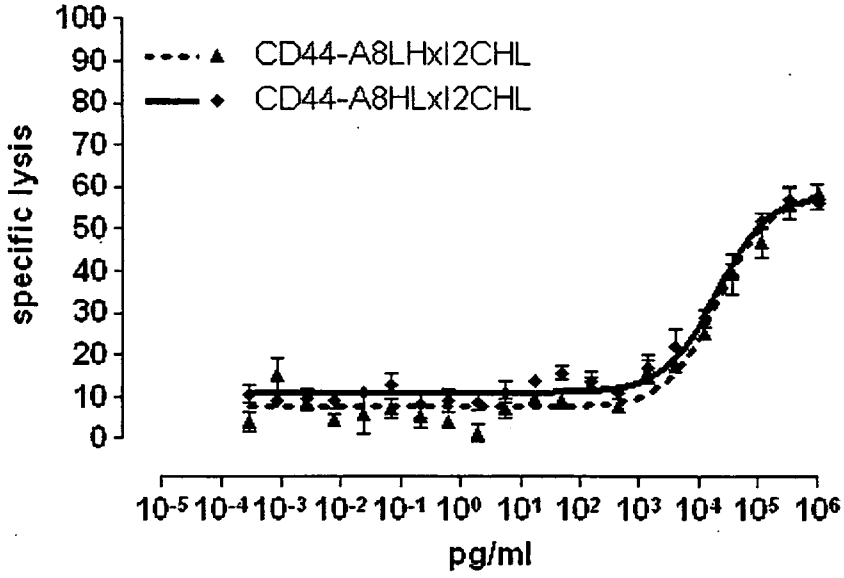
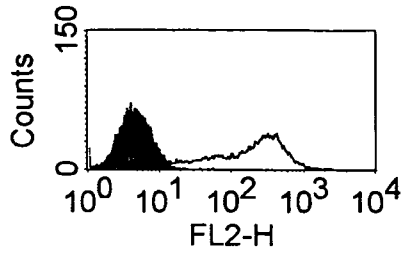


Figure 45

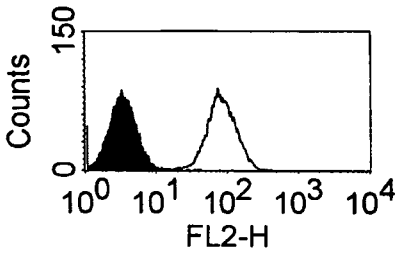
Human CD30 transfected CHO

M911HLxl2CHL



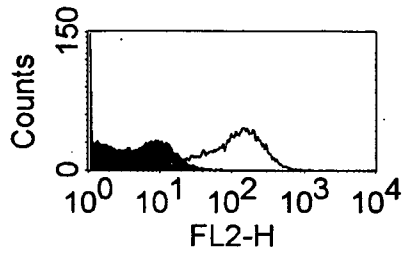
HPB-ALL

M911HLxl2CHL



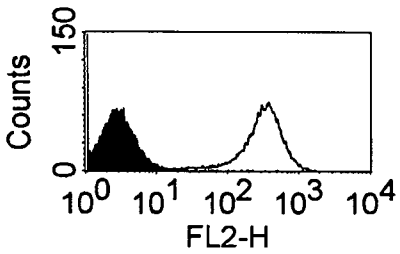
Macaque CD30 transfected CHO

M911HLxl2CHL



Macaque PBMC

M911HLxl2CHL



MEC-1

M911HLxl2CHL

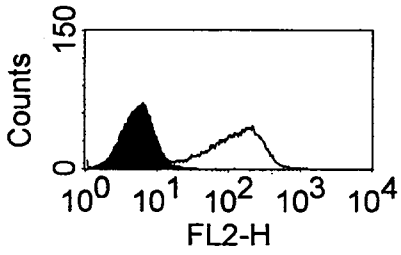


Figure 46 (1)

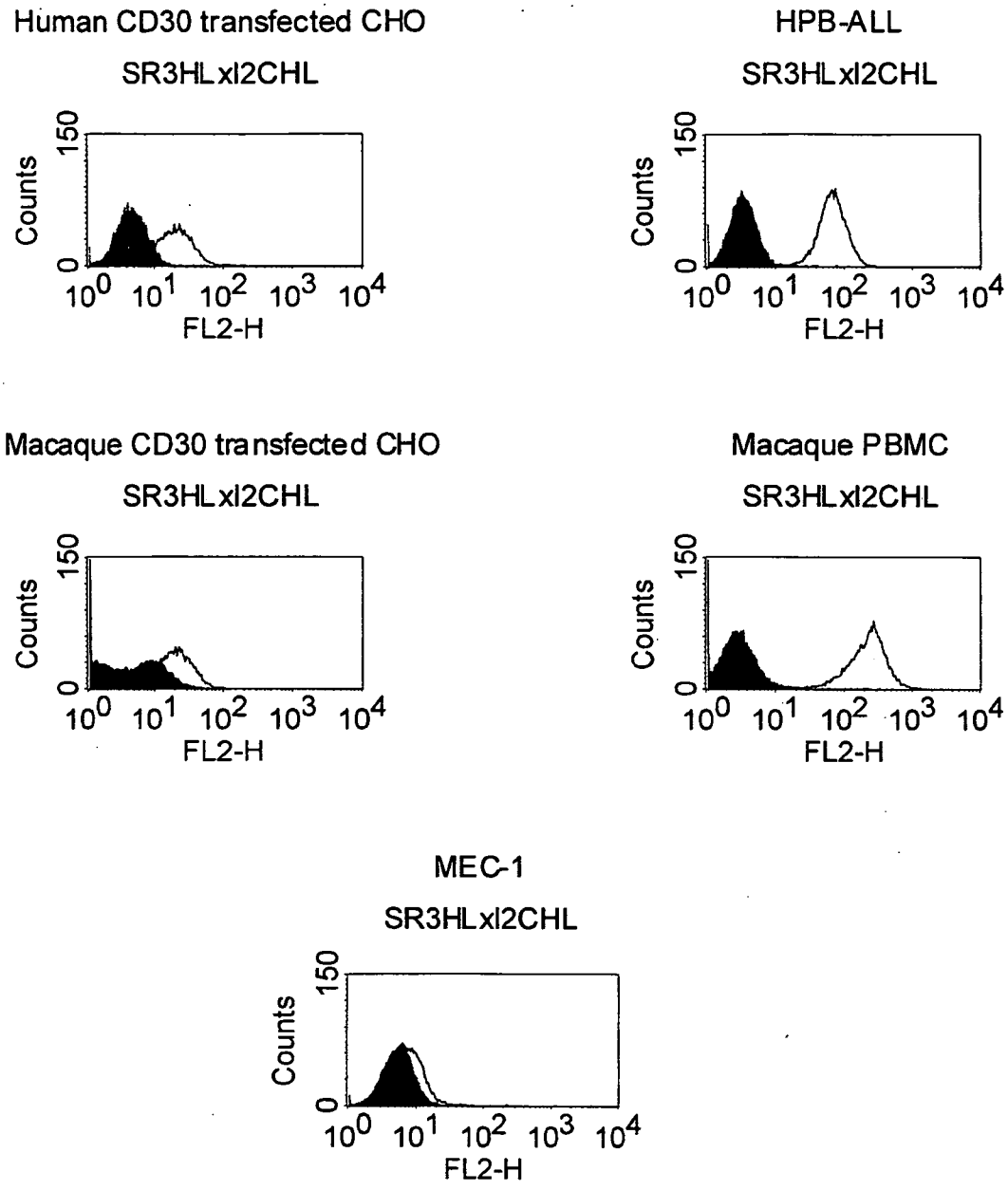
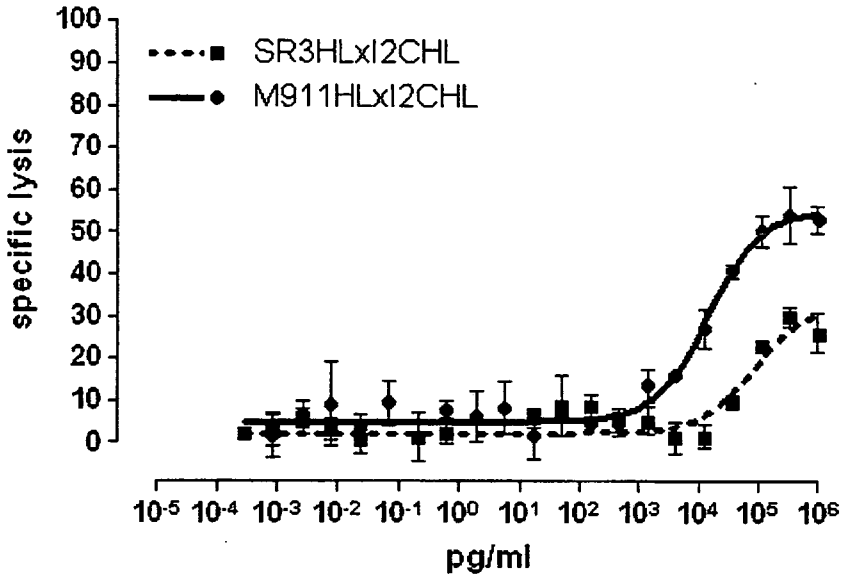

Human CD30 transfected CHO
SR3HLxI2CHL
HPB-ALL
SR3HLxI2CHL
Macaque CD30 transfected CHO
SR3HLxI2CHL
Macaque PBMC
SR3HLxI2CHL
MEC-1
SR3HLxI2CHL
Counts
150
0
10^0 10^1 10^2 10^3 10^4
FL2-H

Figure 46 (2)

Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: MEC-1



Effector cells: macaque 4119 LnPx

Target cells: CHO transfected with macaque CD30

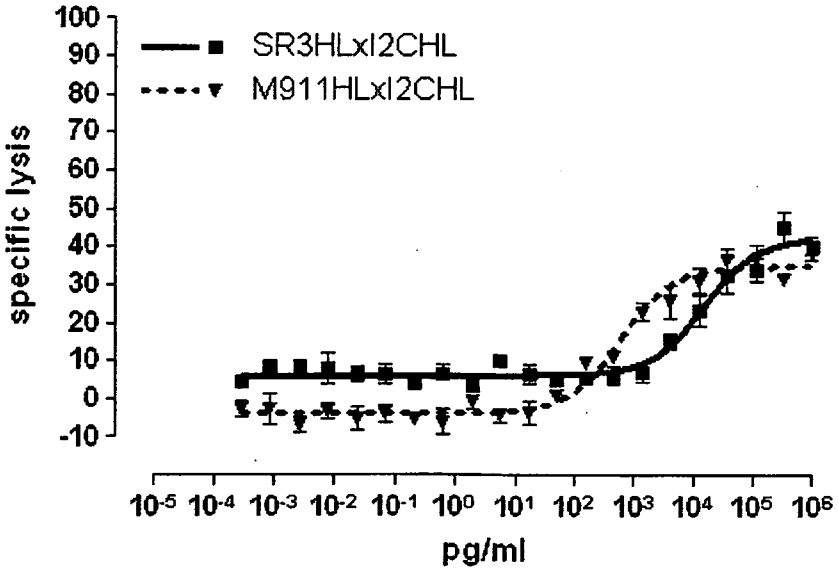
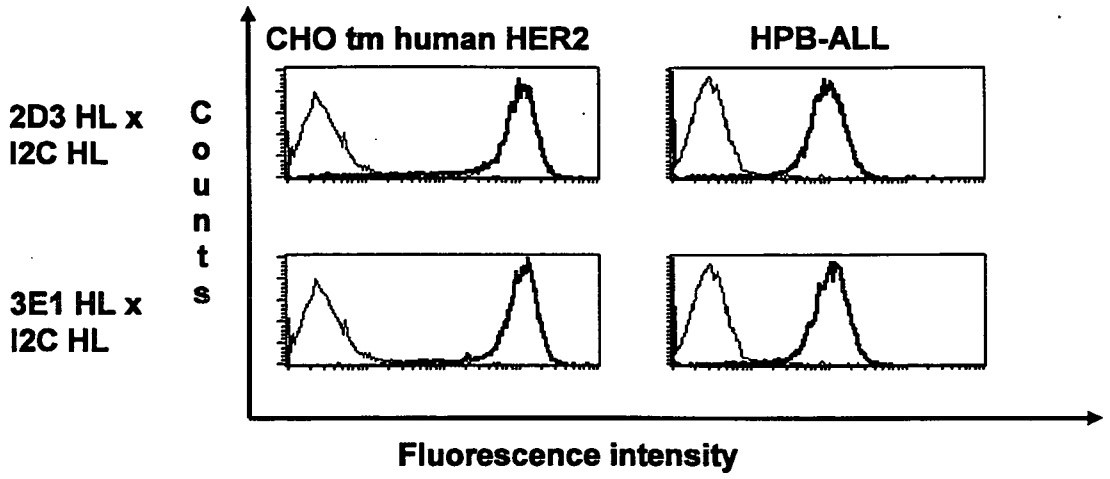


Figure 47


CHO tm human HER2
HPB-ALL
2D3 HL x I2C HL
3E1 HL x I2C HL
Counts
Fluorescence intensity

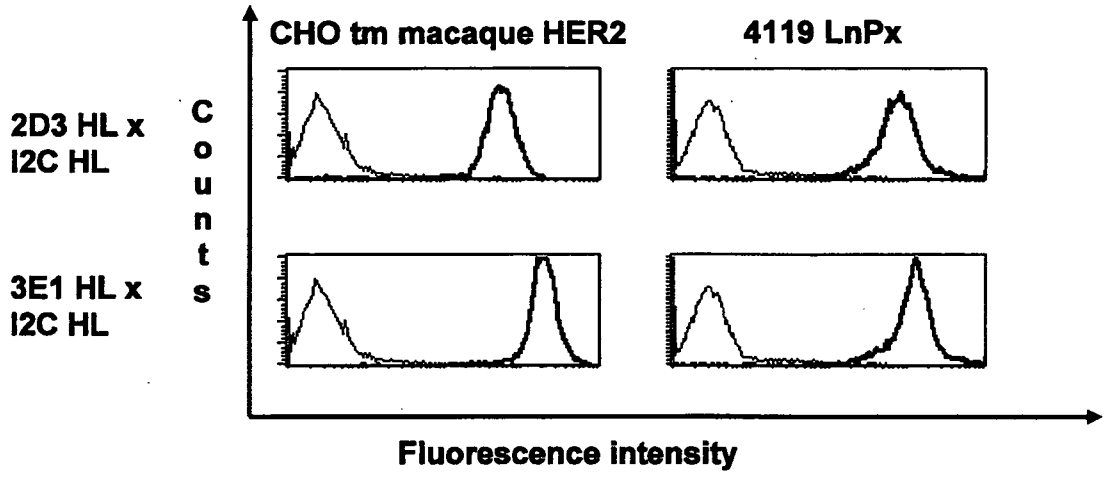

CHO tm macaque HER2
4119 LnPx
2D3 HL x I2C HL
3E1 HL x I2C HL
Counts
Fluorescence intensity

Figure 48

Effector cells: unstimulated human CD56 depleted PBMC
Target cells: CHO transfected with human HER2
E:T ratio: 10:1

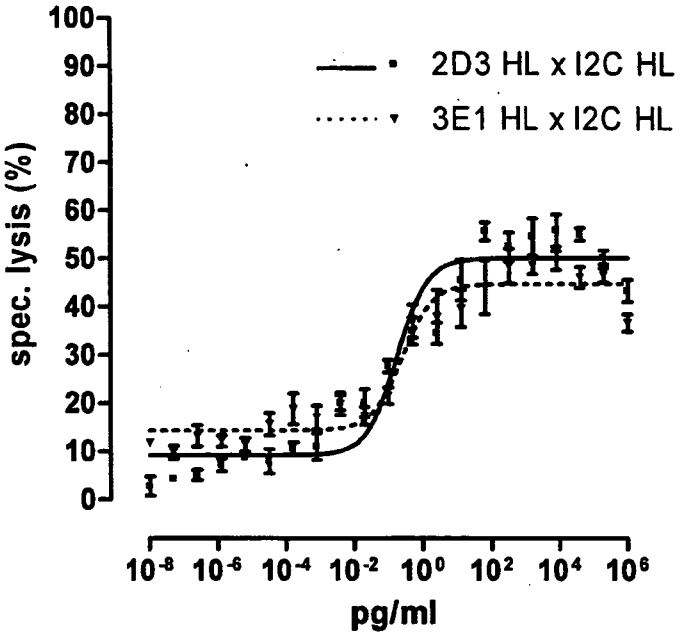


Figure 49a

Effector cells: 4119 LnPx
Target cells: CHO transfected with macaque HER2
E:T ratio: 10:1

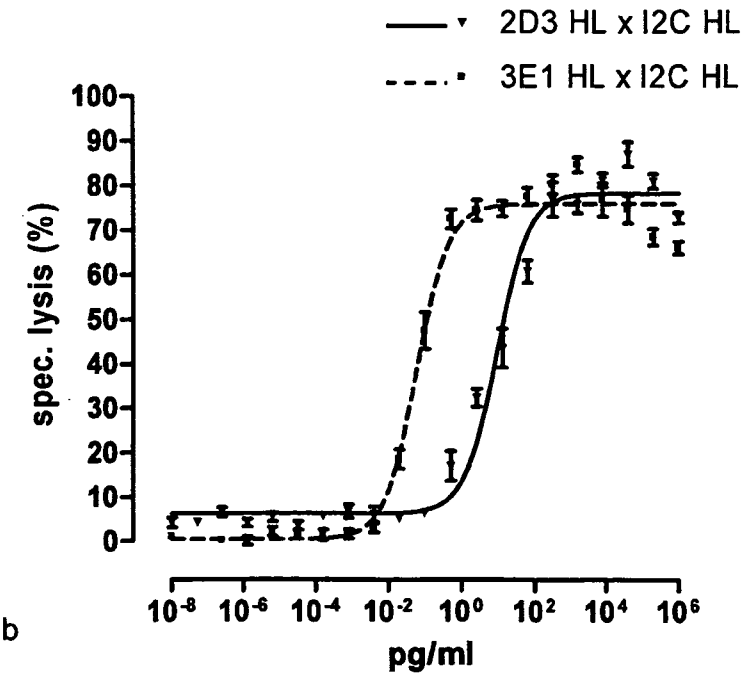


Figure 49b

SDS PAGE of the purification of E292F3 HL x I2C HL

Corresponding Western blot of the purification of E292F3 HL x I2C HL

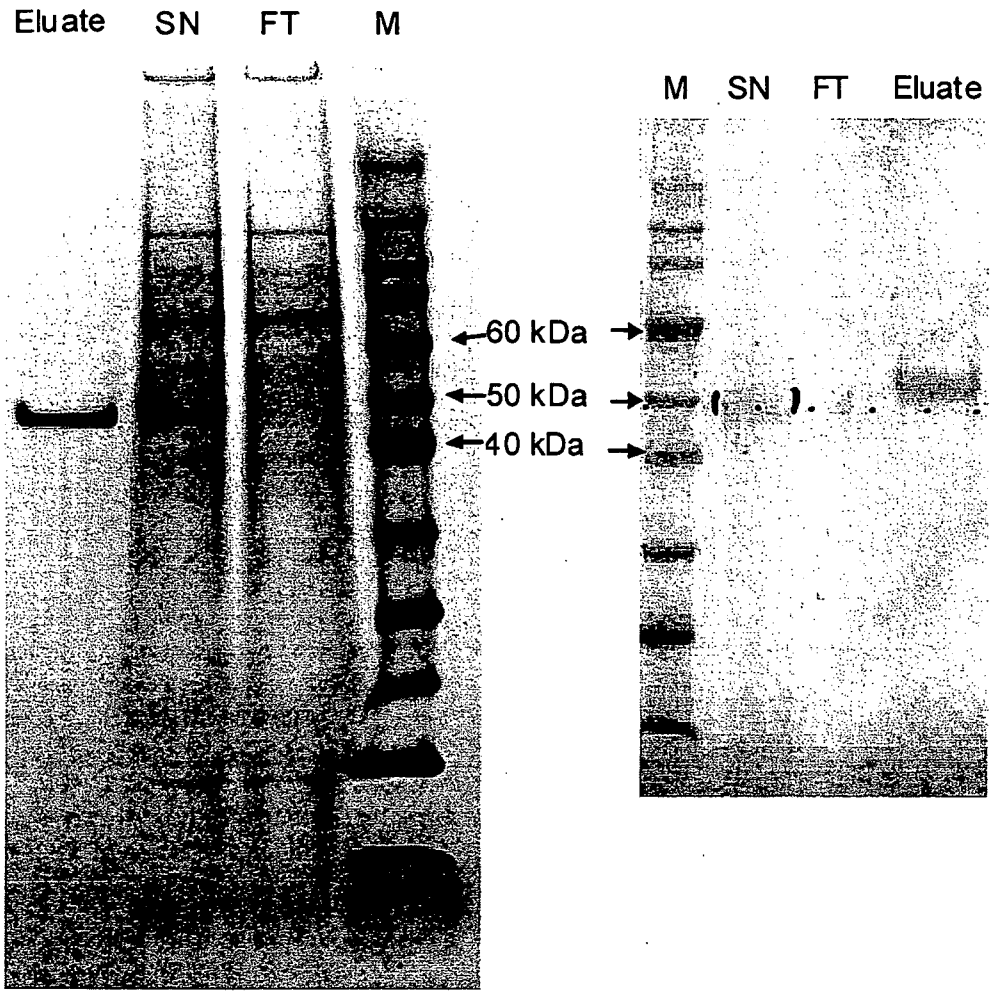


Figure 50

SDS PAGE of the purification of V207C12 HL x H2C HL

Corresponding Western blot of the purification of V207C12 HL x H2C HL

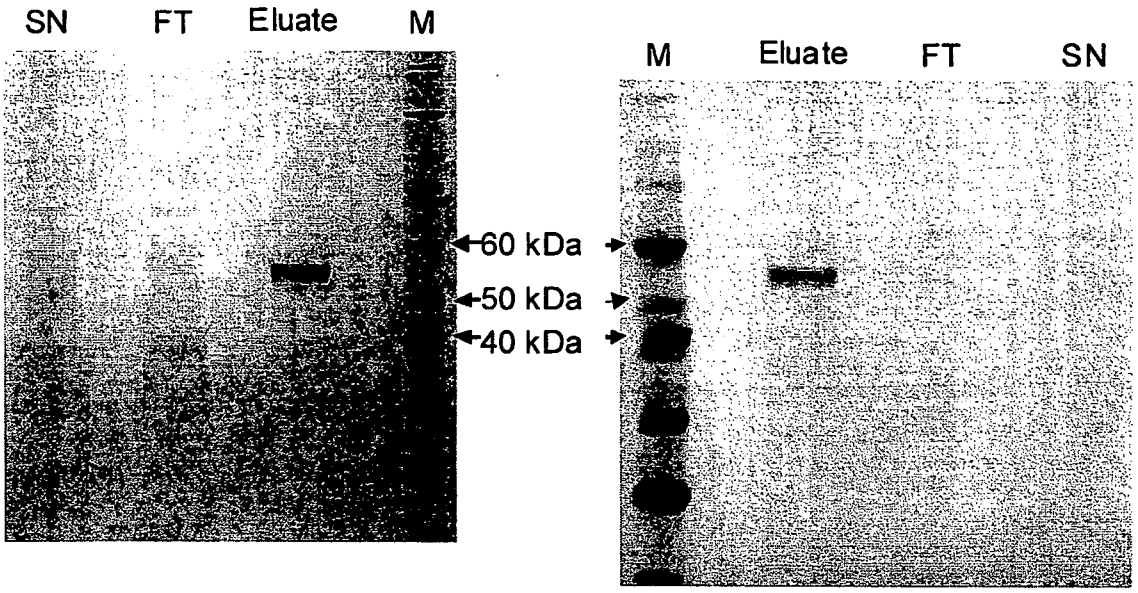


Figure 51

SDS PAGE of the purification of AF5HLxF12QHL

Corresponding Western blot of the purification of AF5HLxF12QHL

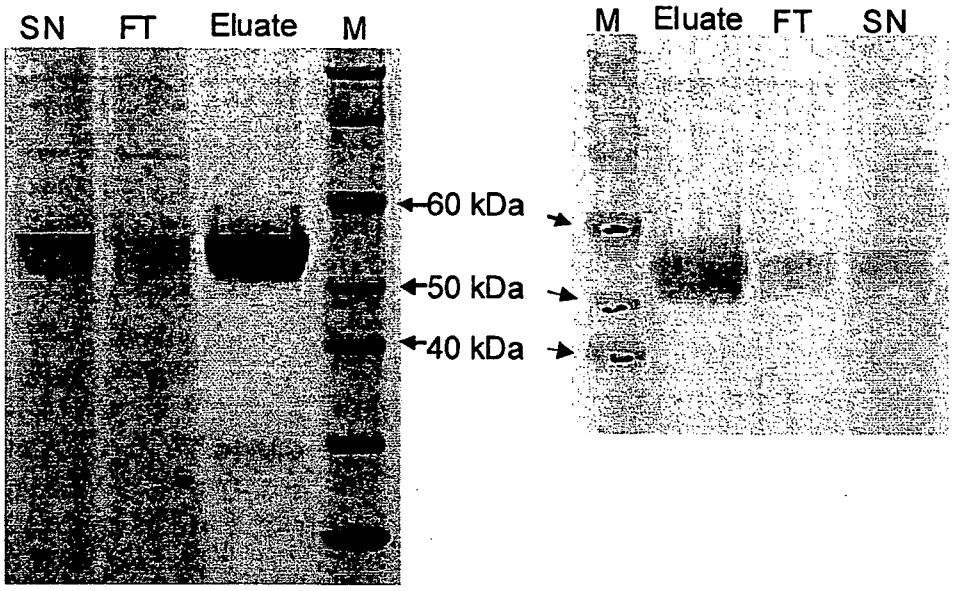
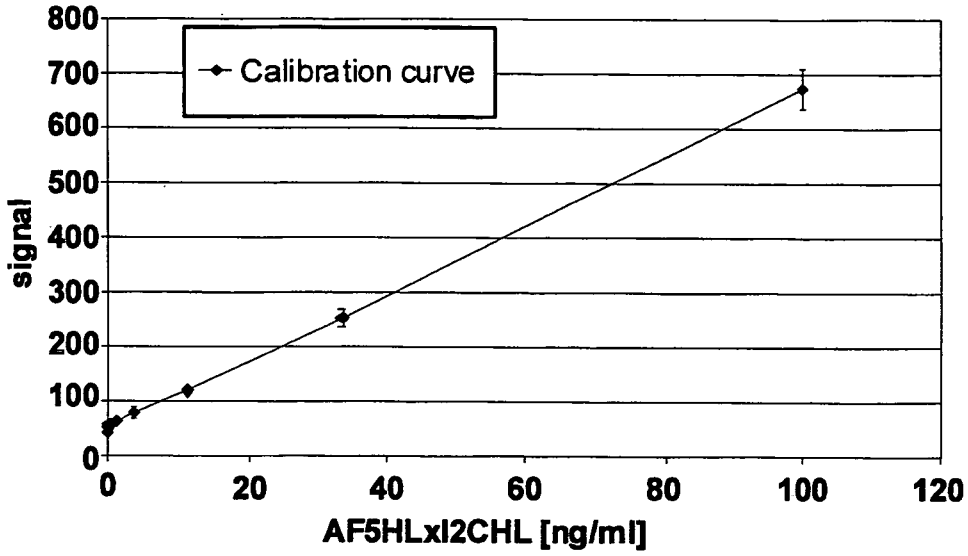


Figure 52


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

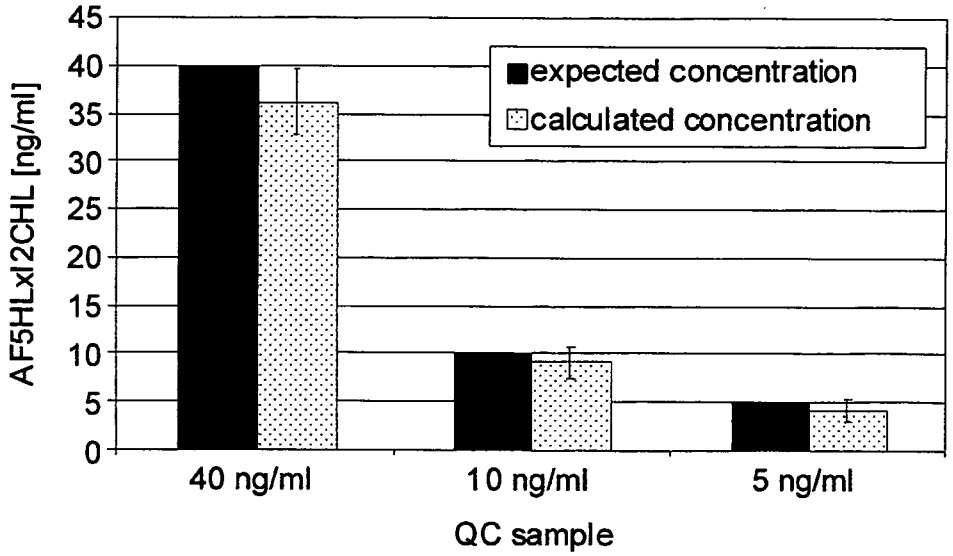
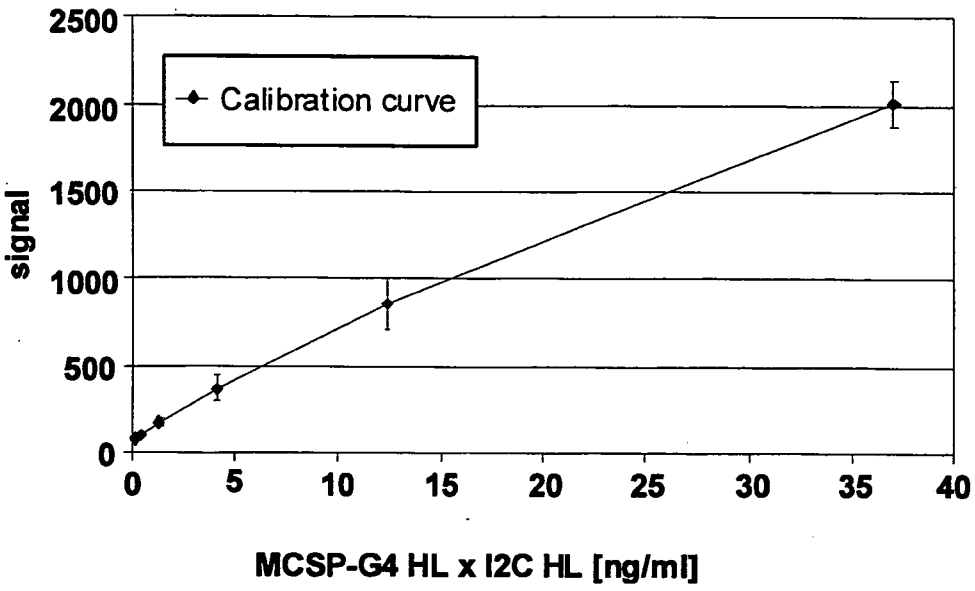

expected concentration
calculated concentration
AF5HLxI2CHL [ng/ml]
45
40
35
30
25
20
15
10
5
0
40 ng/ml
10 ng/ml
5 ng/ml
QC sample

Figure 53


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

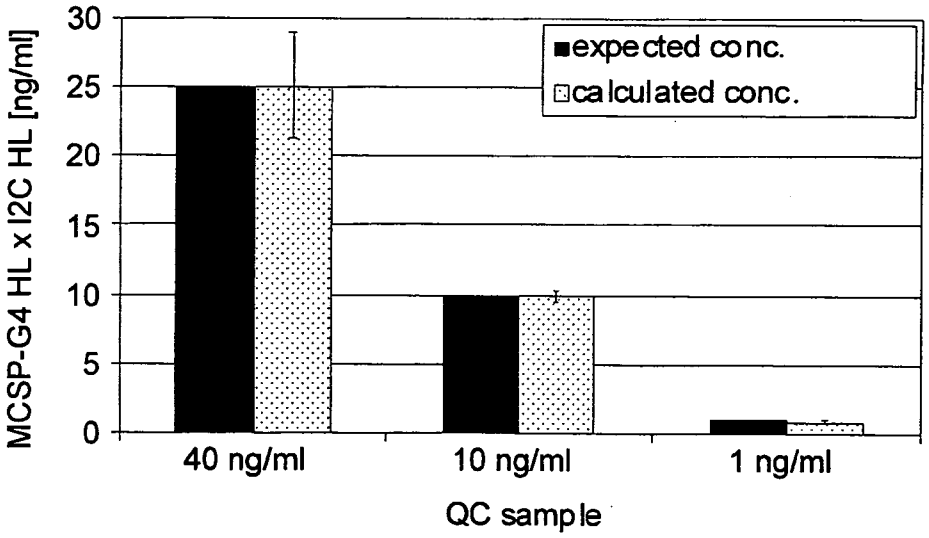
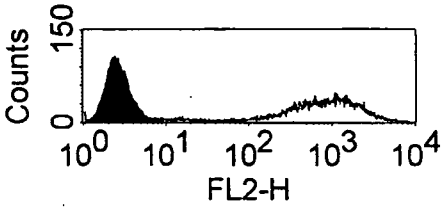

30
25
20
15
10
5
0
MCSP-G4 HL x I2C HL [ng/ml]
expected conc.
calculated conc.
40 ng/ml
10 ng/ml
1 ng/ml
QC sample

Figure 54

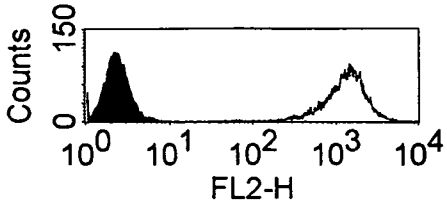
Human 1-27 CD3-EpCAM CHO

anti-Flag antibody



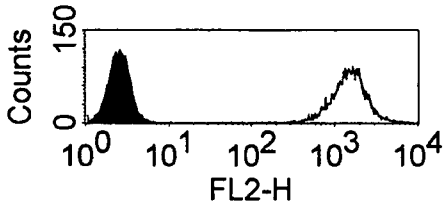
Marmoset 1-27 CD3-EpCAM CHO

anti-Flag antibody



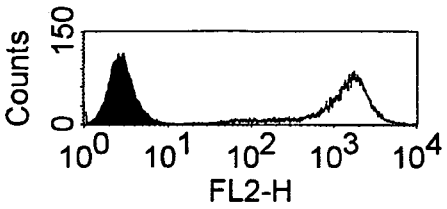
Tamarin 1-27 CD3-EpCAM CHO

anti-Flag antibody



Squirrel Monkey 1-27 CD3-EpCAM CHO

anti-Flag antibody



Swine 1-27 CD3-EpCAM CHO

anti-Flag antibody

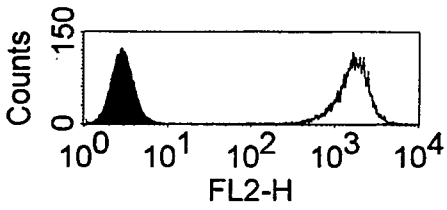


Figure 55

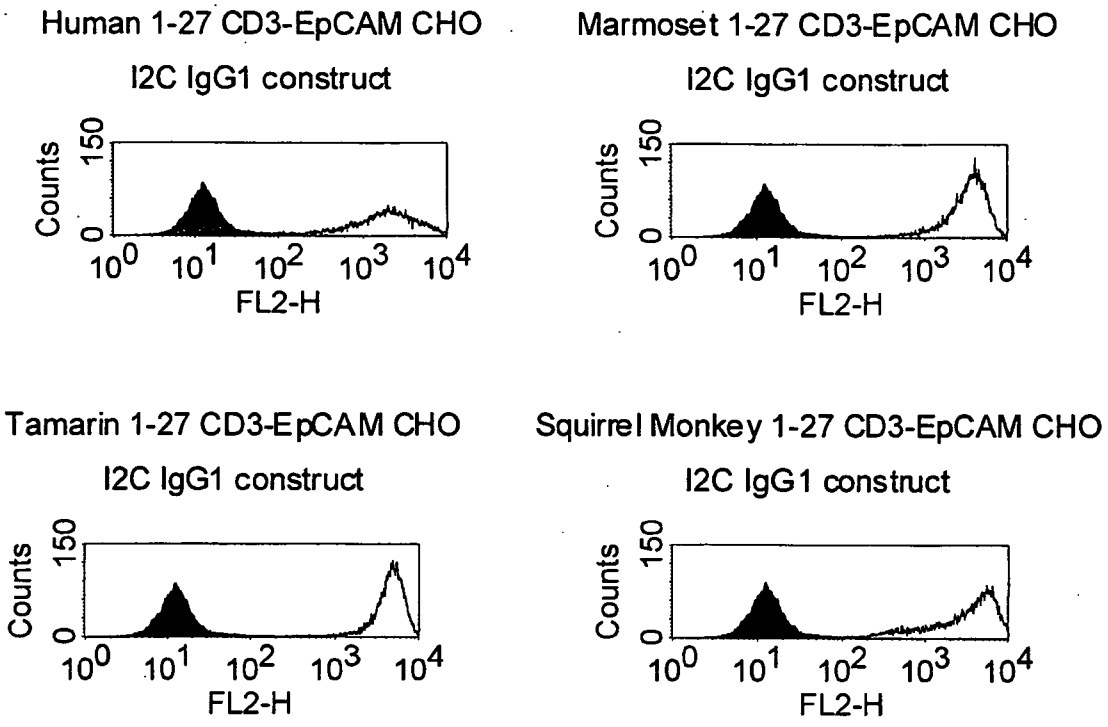
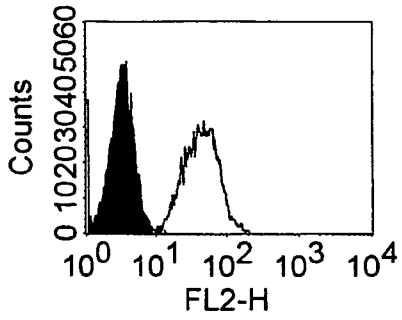

Human 1-27 CD3-EpCAM CHO
I2C IgG1 construct
Counts
150
0
10^0 10^1 10^2 10^3 10^4
FL2-H
Marmoset 1-27 CD3-EpCAM CHO
I2C IgG1 construct
Counts
150
0
10^0 10^1 10^2 10^3 10^4
FL2-H
Tamarin 1-27 CD3-EpCAM CHO
I2C IgG1 construct
Counts
150
0
10^0 10^1 10^2 10^3 10^4
FL2-H
Squirrel Monkey 1-27 CD3-EpCAM CHO
I2C IgG1 construct
Counts
150
0
10^0 10^1 10^2 10^3 10^4
FL2-H

Figure 56

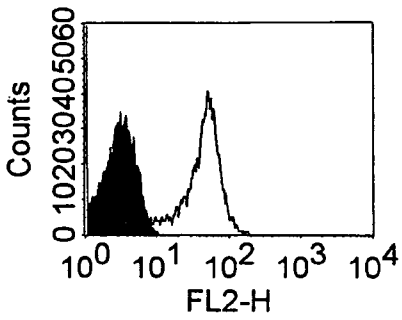
Human CD3-WT in EL4

UCHT1



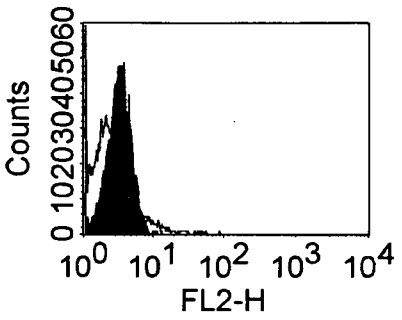
Human CD3-H6 in EL4

UCHT1



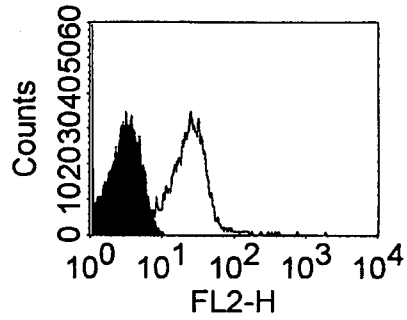
Human CD3-WT in EL4

anti-His Tag



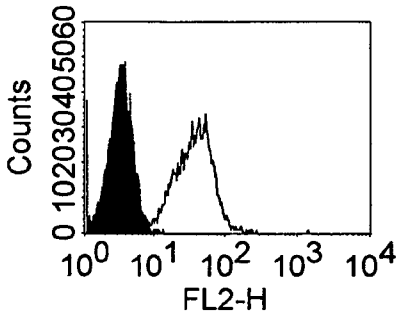
Human CD3-H6 in EL4

anti-His Tag



Human CD3-WT in EL4

I2C IgG1



Human CD3-H6 in EL4

I2C IgG1

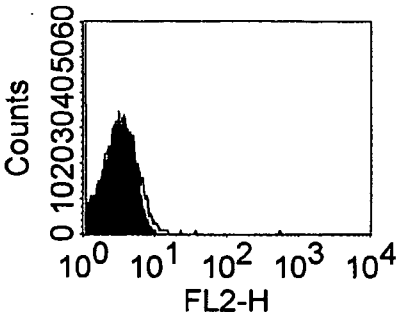


Figure 57

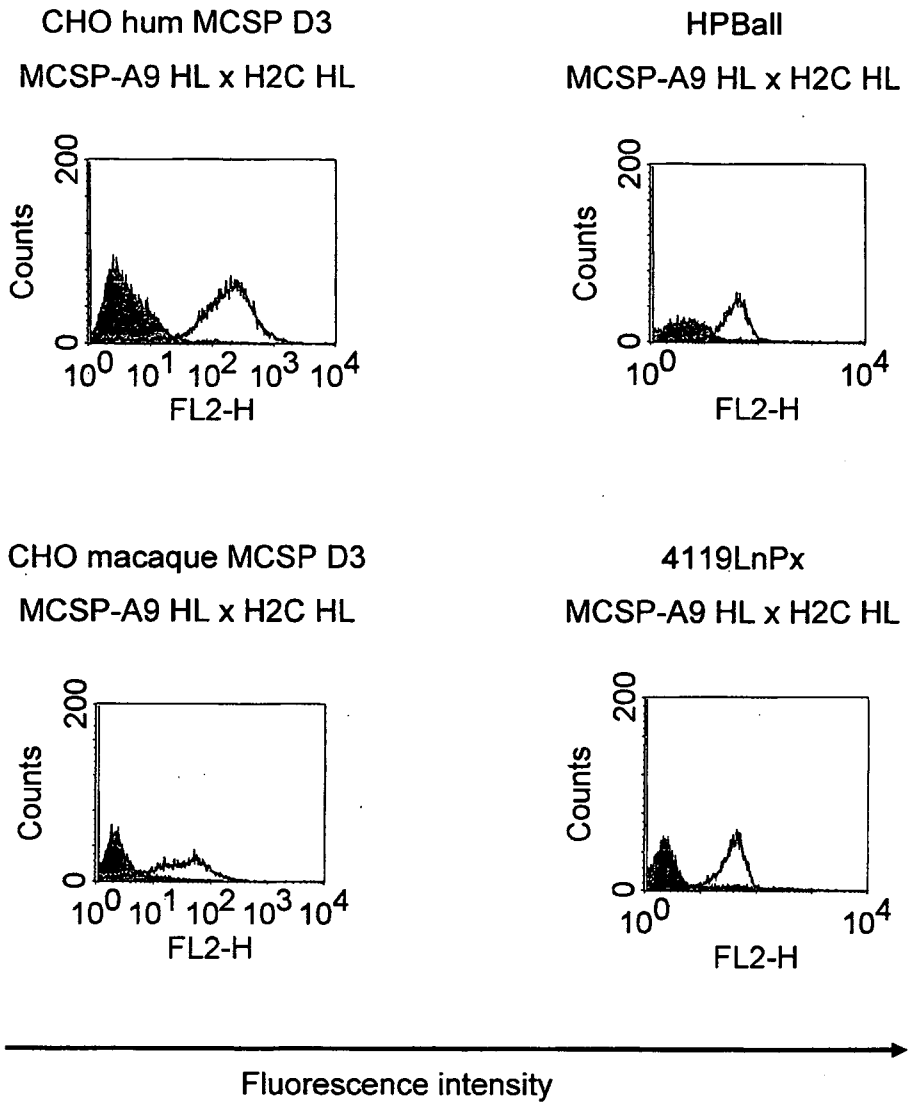

CHO hum MCSP D3
MCSP-A9 HL x H2C HL
Counts
200
0
10^0 10^1 10^2 10^3 10^4
FL2-H
HPBall
MCSP-A9 HL x H2C HL
Counts
200
0
10^0
10^4
FL2-H
CHO macaque MCSP D3
MCSP-A9 HL x H2C HL
Counts
200
0
10^0 10^1 10^2 10^3 10^4
FL2-H
4119LnPx
MCSP-A9 HL x H2C HL
Counts
200
0
10^0
10^4
FL2-H
Fluorescence intensity

Figure 58a

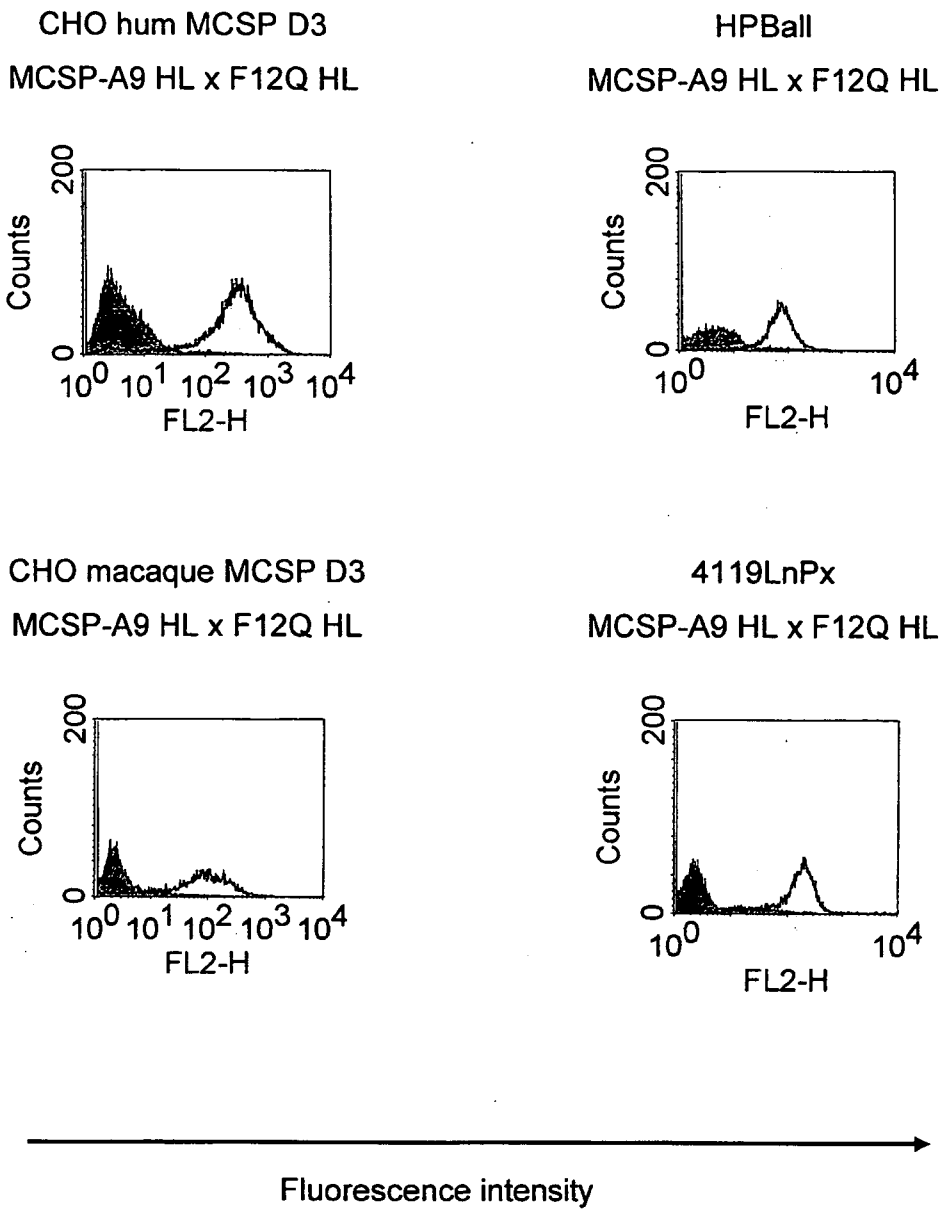

CHO hum MCSP D3
MCSP-A9 HL x F12Q HL
HPBall
MCSP-A9 HL x F12Q HL
CHO macaque MCSP D3
MCSP-A9 HL x F12Q HL
4119LnPx
MCSP-A9 HL x F12Q HL
Counts
200
0
10^0 10^1 10^2 10^3 10^4
FL2-H
Fluorescence intensity

Figure 58b

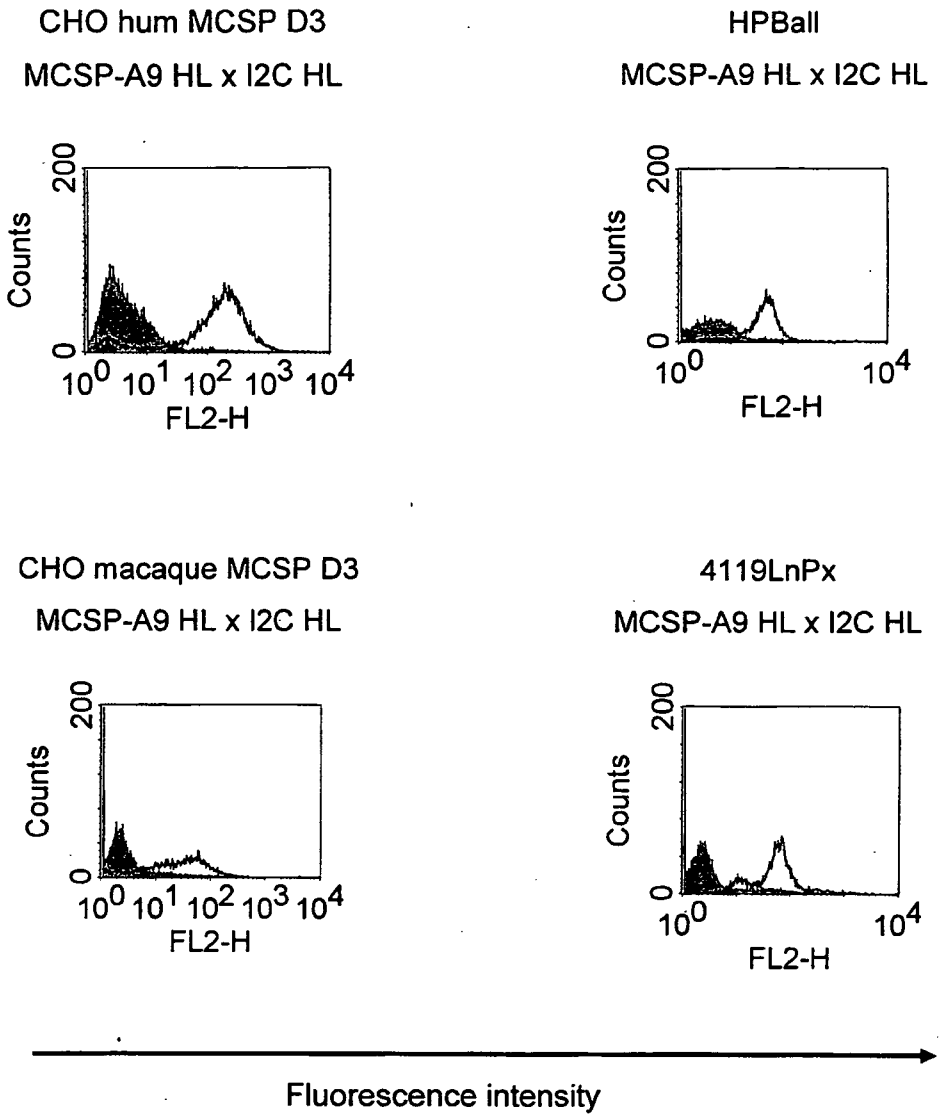

CHO hum MCSP D3
MCSP-A9 HL x I2C HL
Counts
200
0
10^0 10^1 10^2 10^3 10^4
FL2-H
HPBall
MCSP-A9 HL x I2C HL
Counts
200
0
10^0
10^4
FL2-H
CHO macaque MCSP D3
MCSP-A9 HL x I2C HL
Counts
200
0
10^0 10^1 10^2 10^3 10^4
FL2-H
4119LnPx
MCSP-A9 HL x I2C HL
Counts
200
0
10^0
10^4
FL2-H
Fluorescence intensity

Figure 58c

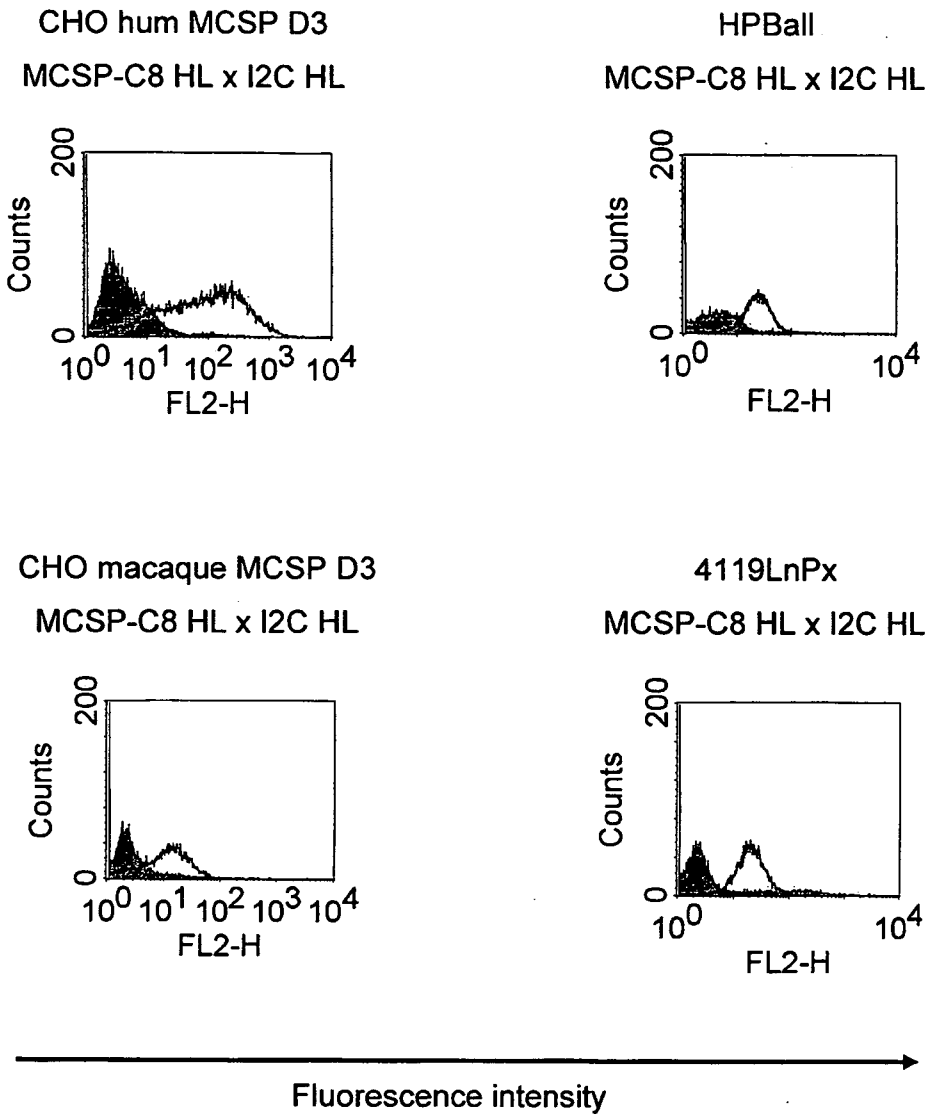

CHO hum MCSP D3
MCSP-C8 HL x I2C HL
Counts
200
0
10^0 10^1 10^2 10^3 10^4
FL2-H
HPBall
MCSP-C8 HL x I2C HL
Counts
200
0
10^0
10^4
FL2-H
CHO macaque MCSP D3
MCSP-C8 HL x I2C HL
Counts
200
0
10^0 10^1 10^2 10^3 10^4
FL2-H
4119LnPx
MCSP-C8 HL x I2C HL
Counts
200
0
10^0
10^4
FL2-H
Fluorescence intensity

Figure 58d

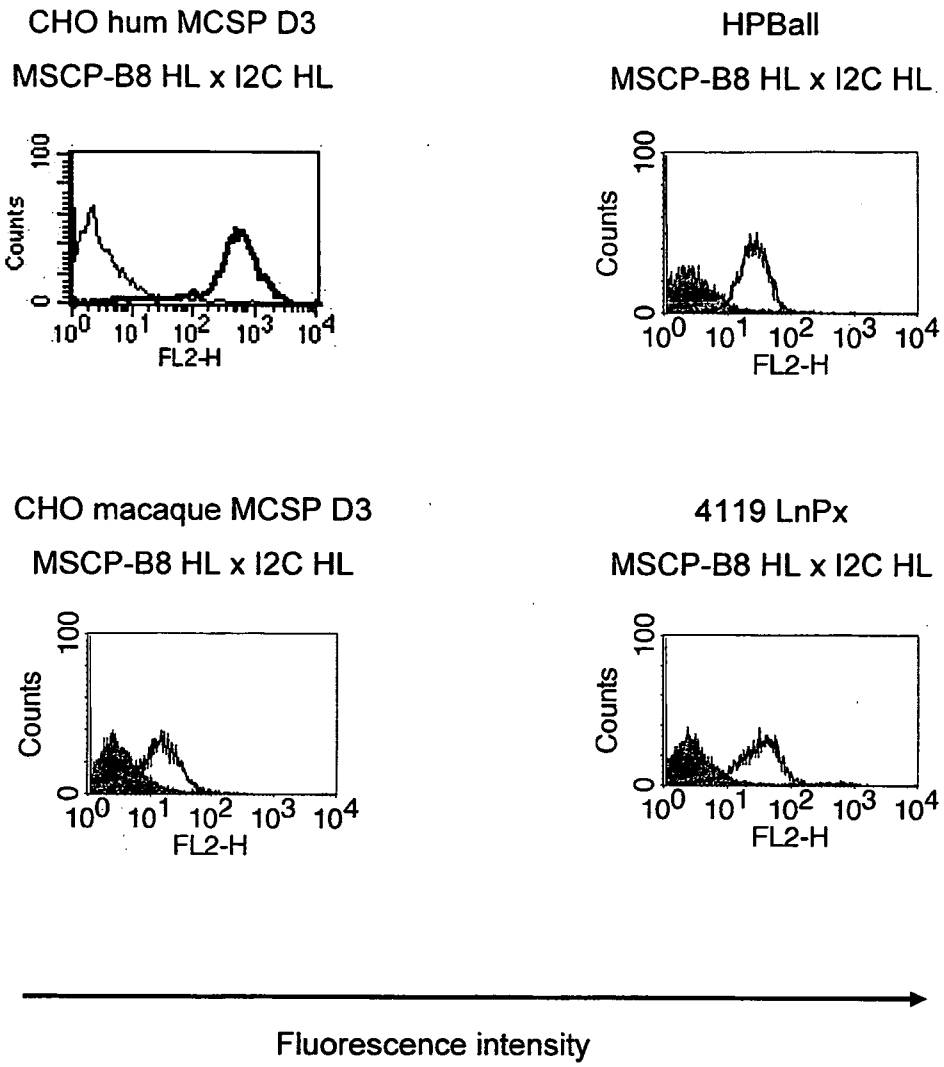

CHO hum MCSP D3
MSCP-B8 HL x I2C HL
HPBall
MSCP-B8 HL x I2C HL
CHO macaque MCSP D3
MSCP-B8 HL x I2C HL
4119 LnPx
MSCP-B8 HL x I2C HL
Counts
100
0
10^0 10^1 10^2 10^3 10^4
FL2-H
Fluorescence intensity

Figure 58e

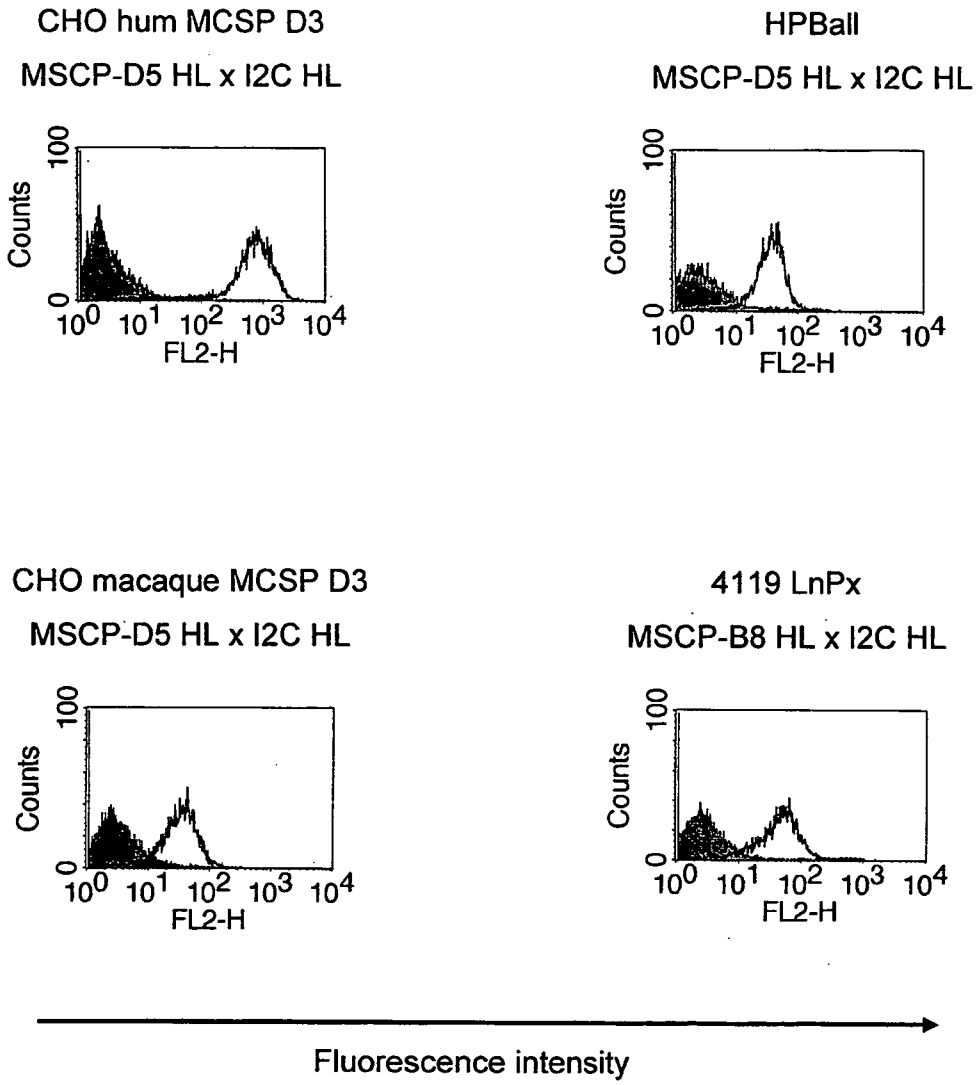

CHO hum MCSP D3
MSCP-D5 HL x I2C HL
HPBall
MSCP-D5 HL x I2C HL
CHO macaque MCSP D3
MSCP-D5 HL x I2C HL
4119 LnPx
MSCP-B8 HL x I2C HL
Counts
100
0
10^0 10^1 10^2 10^3 10^4
FL2-H
Fluorescence intensity

Figure 58f

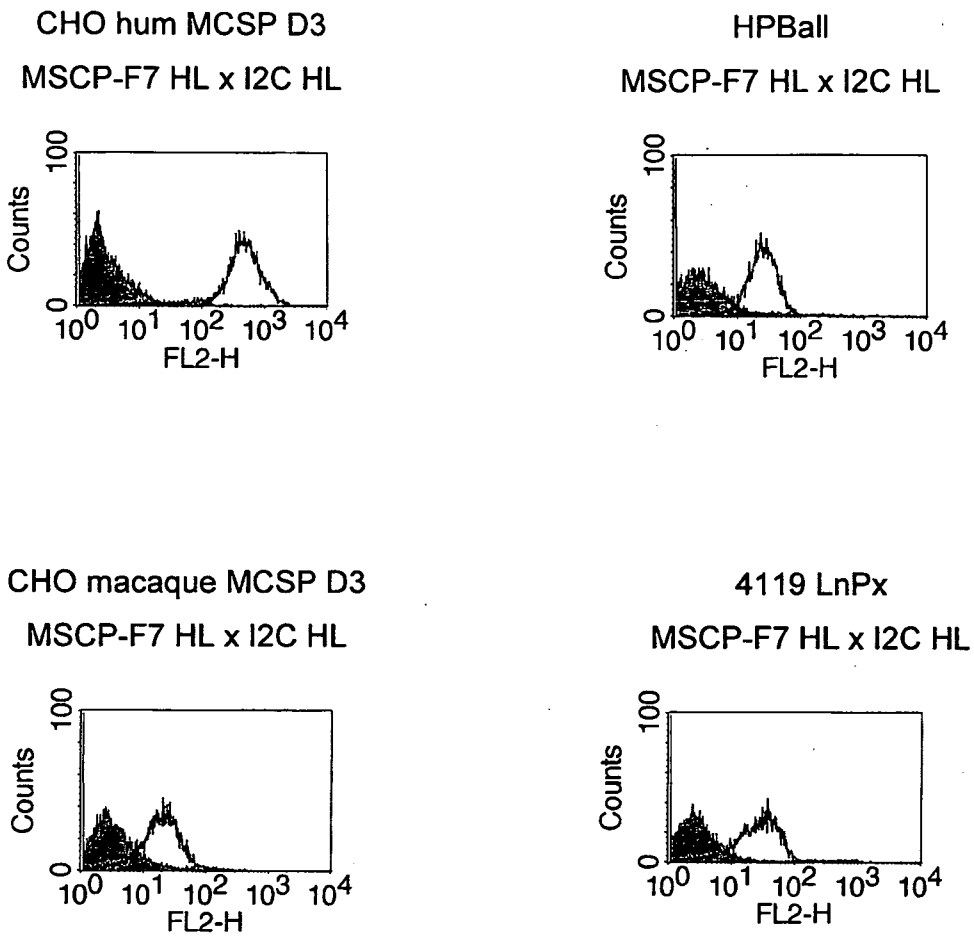

CHO hum MCSP D3
MSCP-F7 HL x I2C HL
Counts
100
0
10^0 10^1 10^2 10^3 10^4
FL2-H
HPBall
MSCP-F7 HL x I2C HL
Counts
100
0
10^0 10^1 10^2 10^3 10^4
FL2-H
CHO macaque MCSP D3
MSCP-F7 HL x I2C HL
Counts
100
0
10^0 10^1 10^2 10^3 10^4
FL2-H
4119 LnPx
MSCP-F7 HL x I2C HL
Counts
100
0
10^0 10^1 10^2 10^3 10^4
FL2-H
Fluorescence intensity

Figure 58g

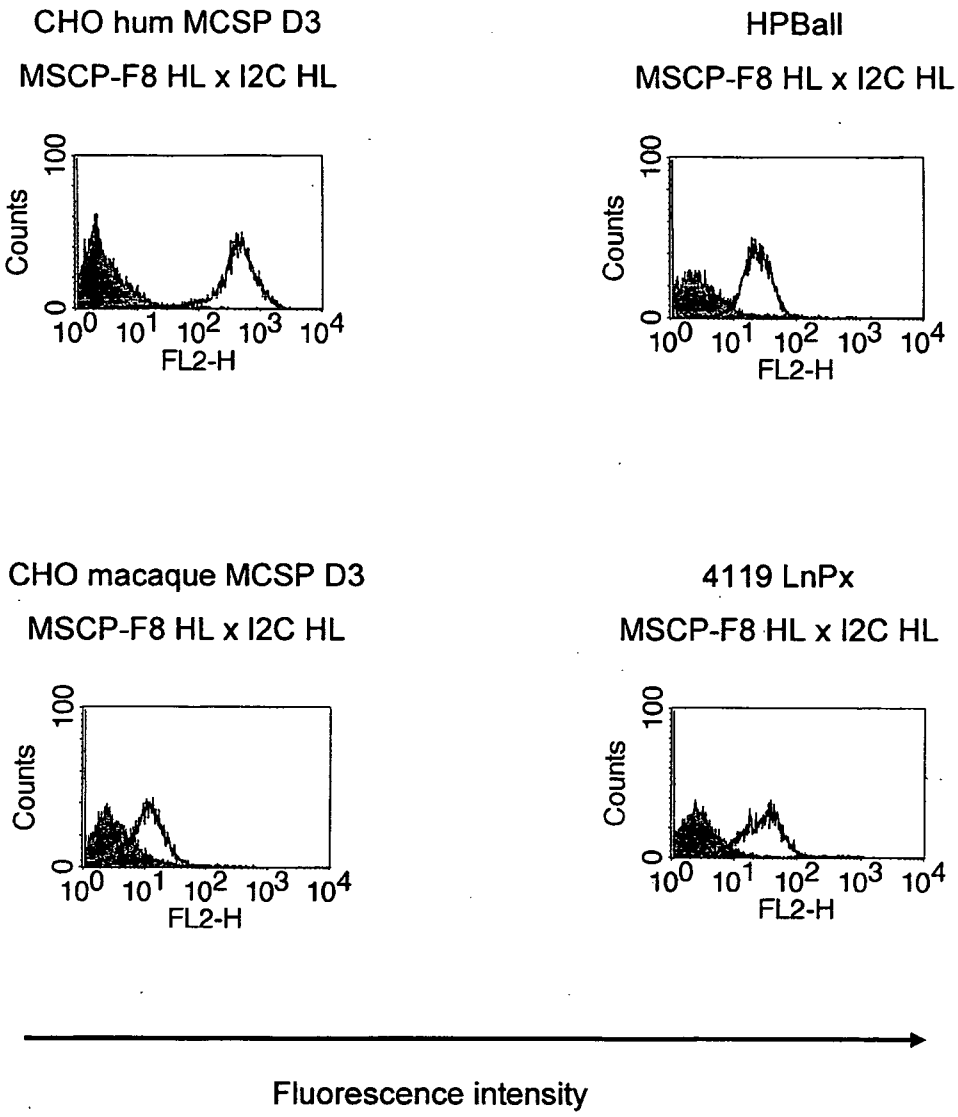

CHO hum MCSP D3
MSCP-F8 HL x I2C HL
HPBall
MSCP-F8 HL x I2C HL
CHO macaque MCSP D3
MSCP-F8 HL x I2C HL
4119 LnPx
MSCP-F8 HL x I2C HL
Counts
100
0
10^0 10^1 10^2 10^3 10^4
FL2-H
Fluorescence intensity

Figure 58h

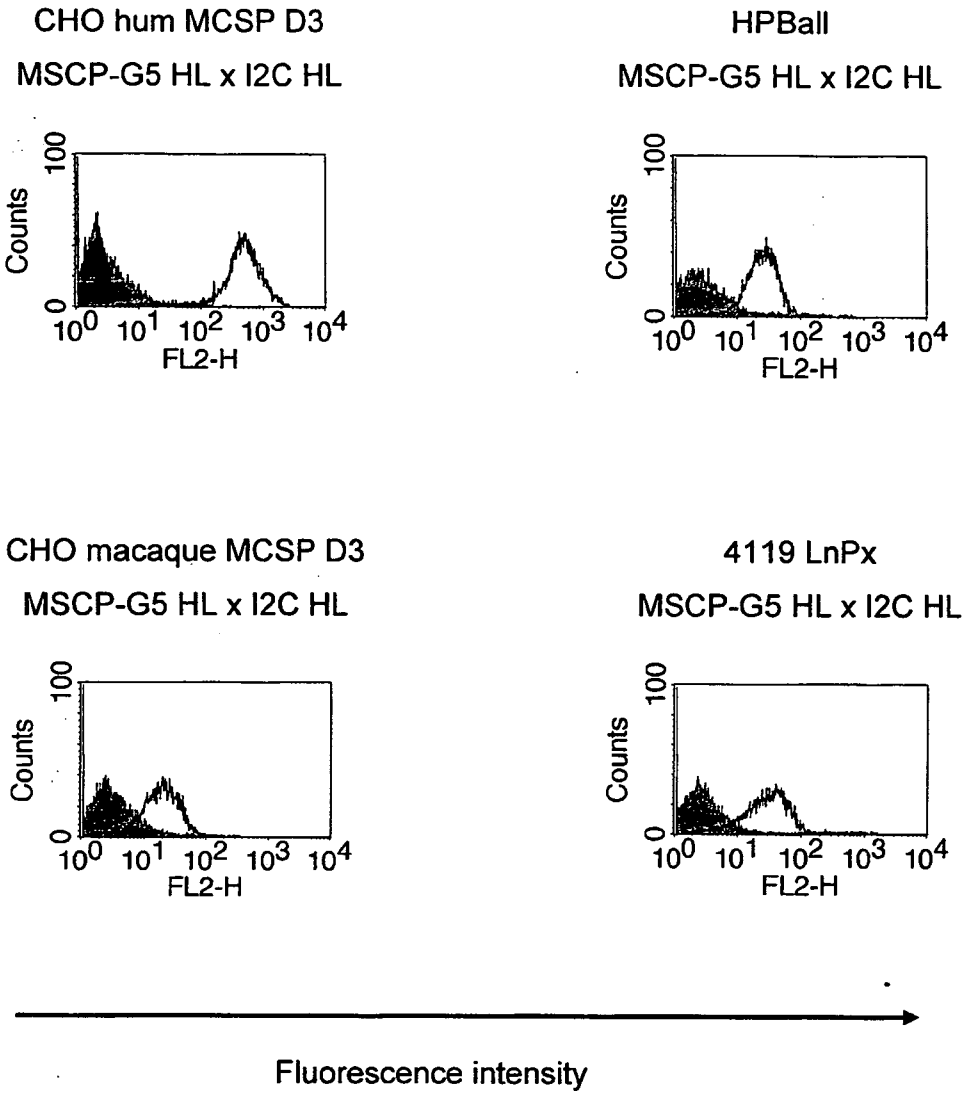
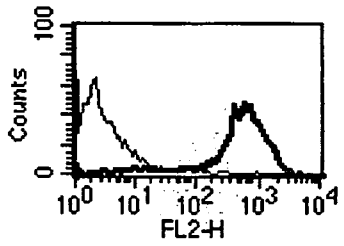

CHO hum MCSP D3
MSCP-G5 HL x I2C HL
HPBall
MSCP-G5 HL x I2C HL
CHO macaque MCSP D3
MSCP-G5 HL x I2C HL
4119 LnPx
MSCP-G5 HL x I2C HL
Counts
100
0
10^0 10^1 10^2 10^3 10^4
FL2-H
Fluorescence intensity

Figure 58i

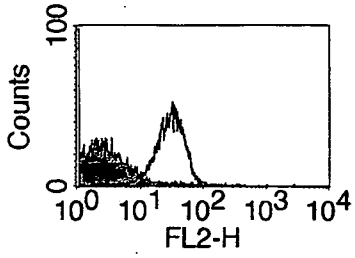
CHO hum MCSP D3

MSCP-G8 HL x I2C HL



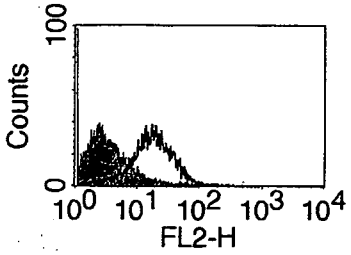
HPBall

MSCP-G8 HL x I2C HL



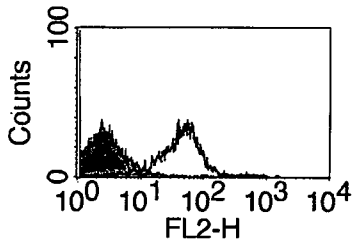
CHO macaque MCSP D3

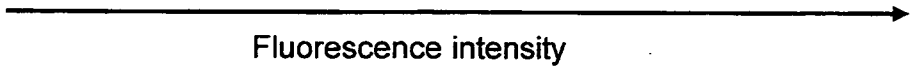
MSCP-G8 HL x I2C HL



4119 LnPx

MSCP-G8 HL x I2C HL



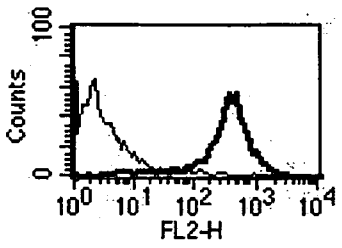


Fluorescence intensity

Figure 58j

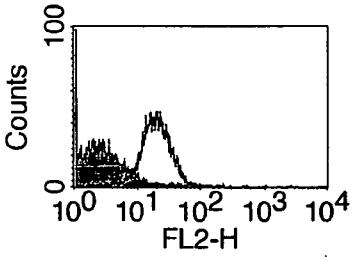
CHO hum MCSP D3

MSCP-B7 HL x I2C HL



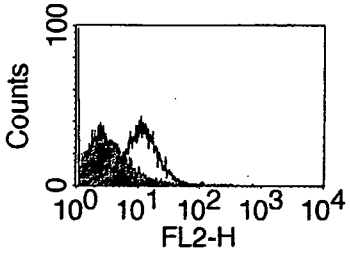
HPBall

MSCP-B7 HL x I2C HL



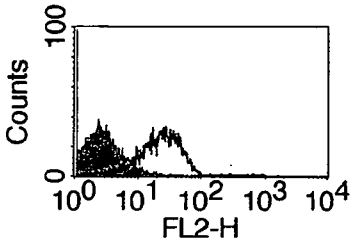
CHO macaque MCSP D3

MSCP-B7 HL x I2C HL



4119 LnPx

MSCP-B7 HL x I2C HL





Fluorescence intensity

Figure 58k

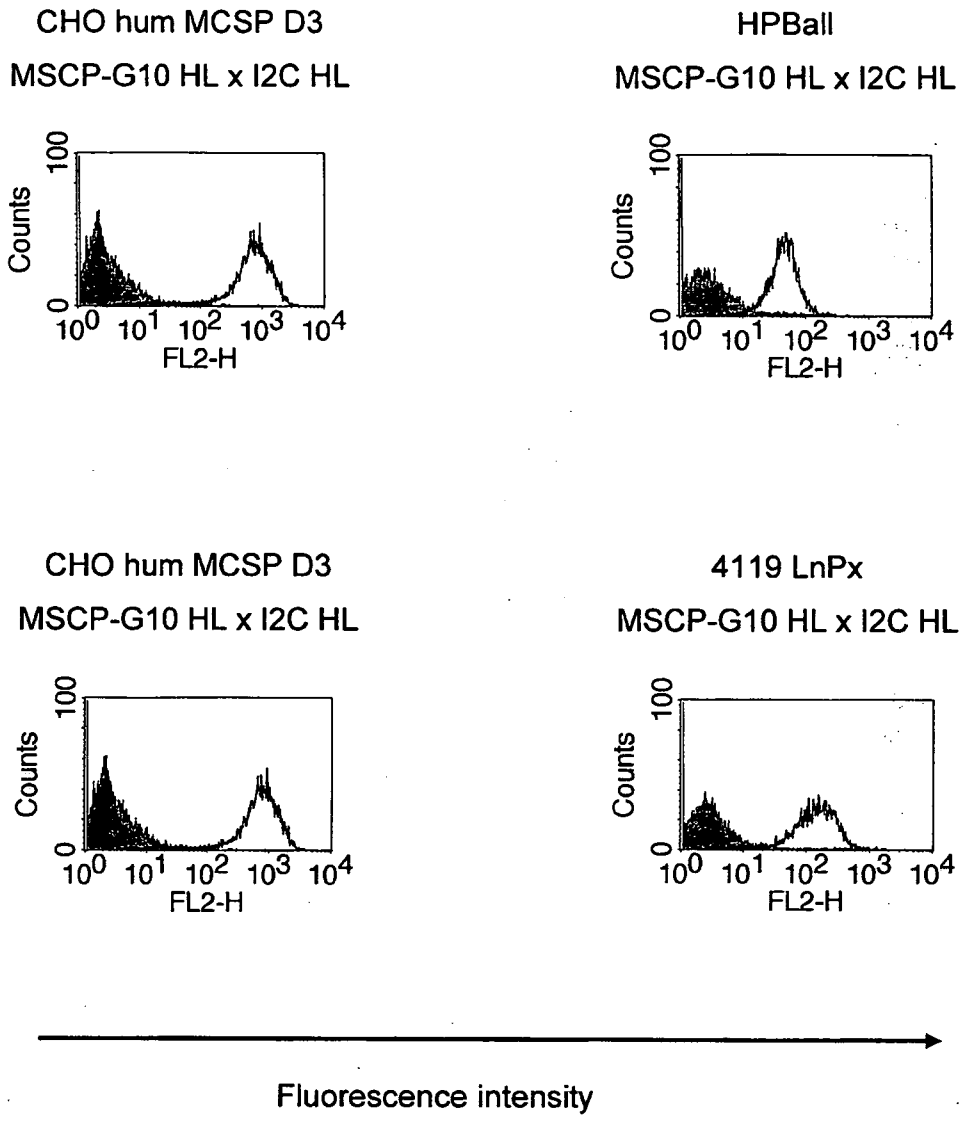
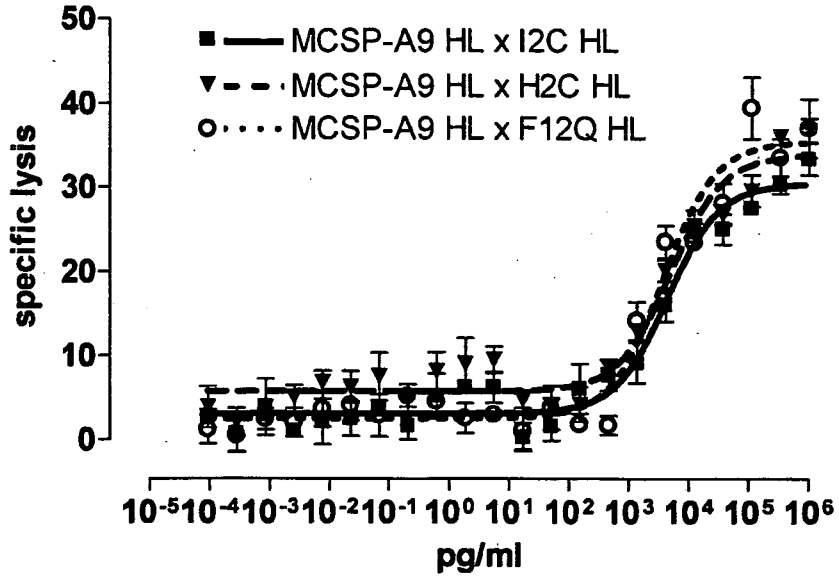

CHO hum MCSP D3
MSCP-G10 HL x I2C HL
Counts
100
0
10^0 10^1 10^2 10^3 10^4
FL2-H
HPBall
MSCP-G10 HL x I2C HL
Counts
100
0
10^0 10^1 10^2 10^3 10^4
FL2-H
CHO hum MCSP D3
MSCP-G10 HL x I2C HL
Counts
100
0
10^0 10^1 10^2 10^3 10^4
FL2-H
4119 LnPx
MSCP-G10 HL x I2C HL
Counts
100
0
10^0 10^1 10^2 10^3 10^4
FL2-H
Fluorescence intensity

Figure 58l

Effector cells: stimulated human CD4/CD56 depleted human PBMC
Target cells: CHO transfected with human MCSP D3
E:T ratio: 10:1



Effector cells: 4119 LnPx
Target cells: CHO transfected with macaque MCSP D3
E:T ratio: 10:1

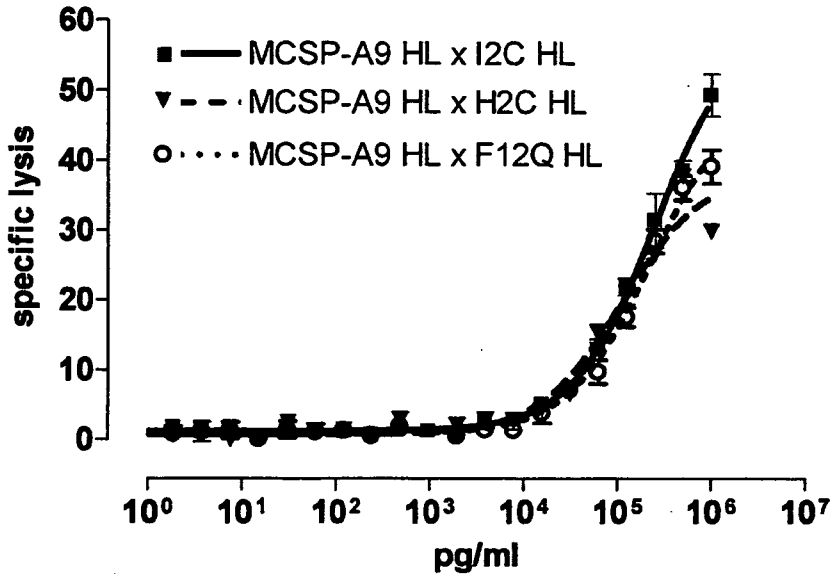
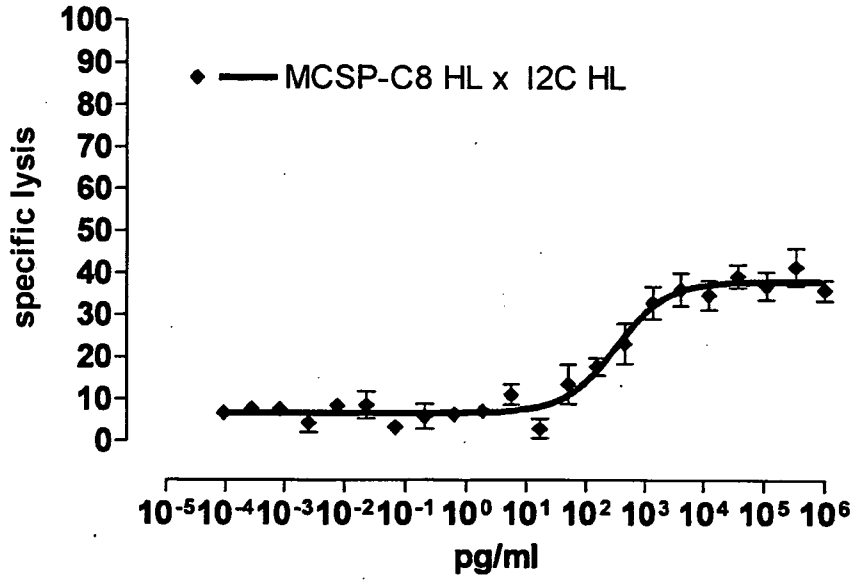


Figure 59a

Effector cells: stimulated human CD4/CD56 depleted human PBMC
Target cells: CHO transfected with human MCSP D3
E:T ratio: 10:1



Effector cells: 4119 LnPx
Target cells: CHO transfected with macaque MCSP D3
E:T ratio: 10:1

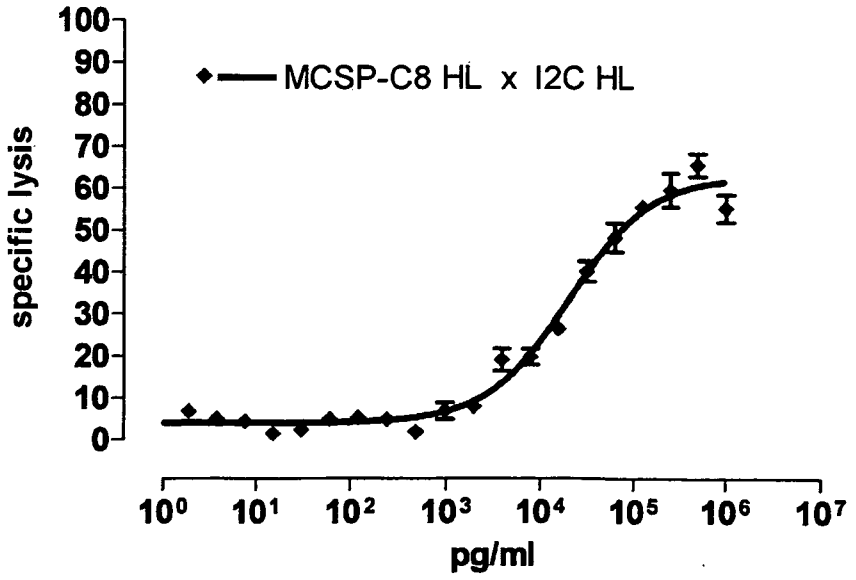
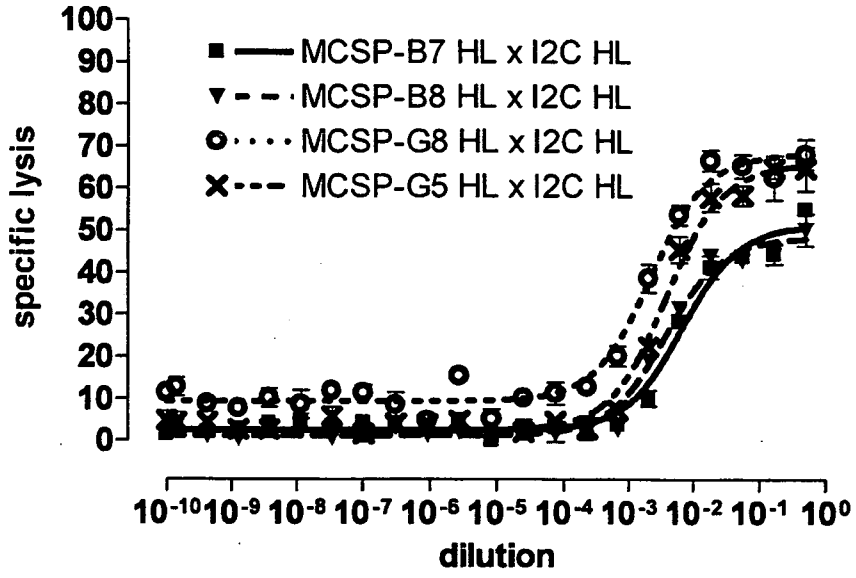


Figure 59b

Effector cells: stimulated human CD4/CD56 depleted human PBMC
Target cells: CHO transfected with human MCSP D3
E:T ratio: 10:1



Effector cells: 4119 LnPx
Target cells: CHO transfected with macaque MCSP D3
E:T ratio: 10:1

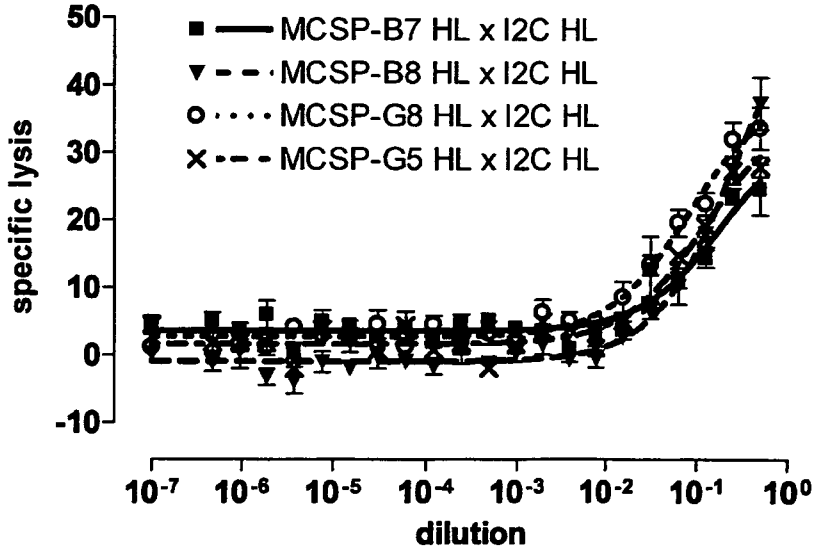
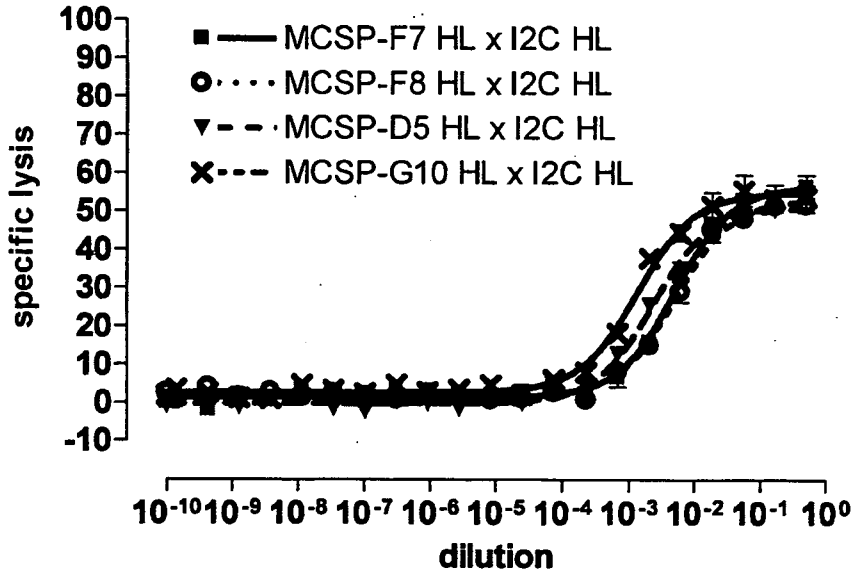


Figure 59c

Effector cells: stimulated human CD4/CD56 depleted human PBMC
Target cells: CHO transfected with human MCSP D3
E:T ratio: 10:1



Effector cells: 4119 LnPx
Target cells: CHO transfected with macaque MCSP D3
E:T ratio: 10:1

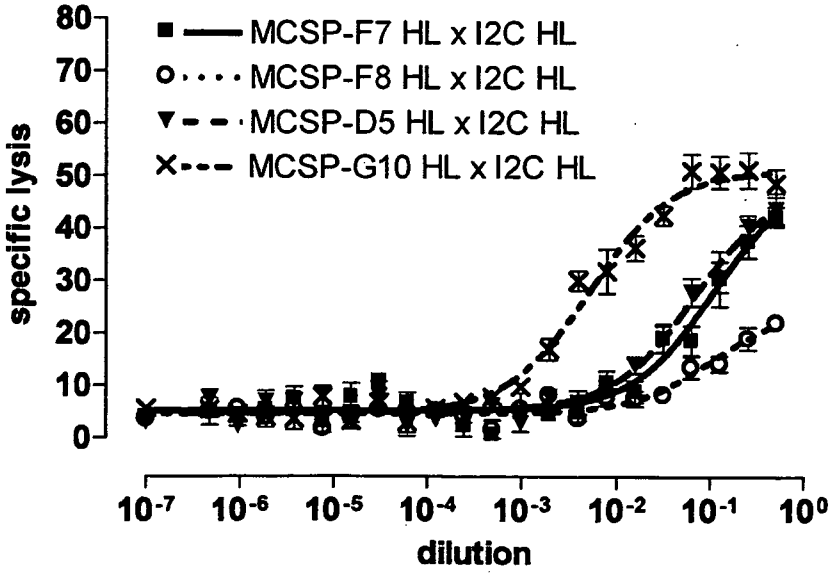
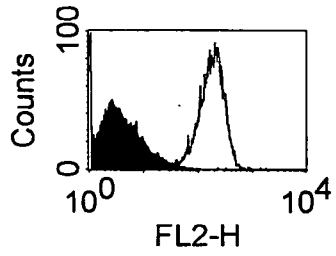


Figure 59d

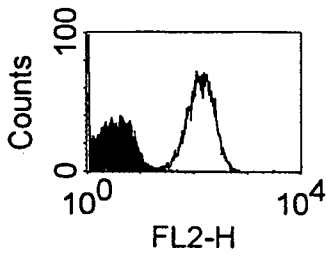
Human CD33 transfected CHO

I2CHLxAF5HL



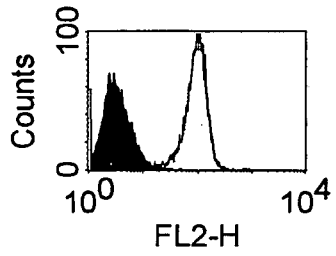
HPB-ALL

I2CHLxAF5HL



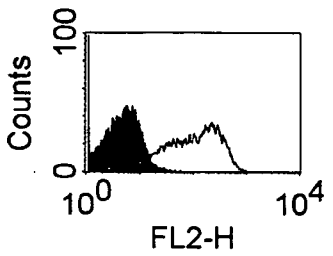
Macaque CD33 transfected CHO

I2CHLxAF5HL



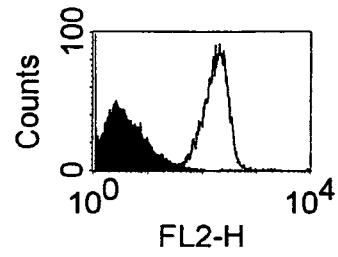
Macaque PBMC

I2CHLxAF5HL



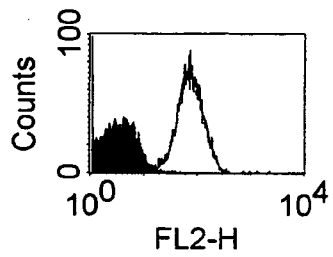
Human CD33 transfected CHO

H2CHLxAF5HL



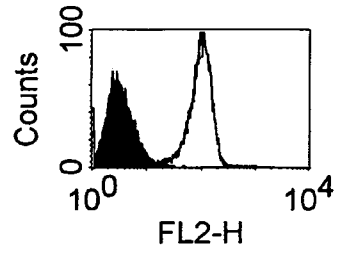
HPB-ALL

H2CHLxAF5HL



Macaque CD33 transfected CHO

H2CHLxAF5HL



Macaque PBMC

H2CHLxAF5HL

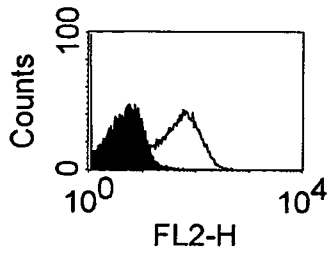
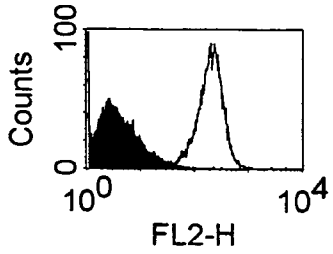


Figure 60a

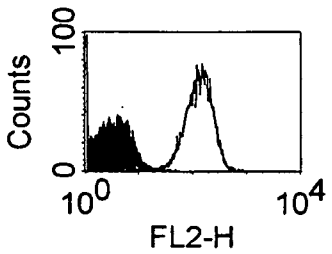
Human CD33 transfected CHO

F12QHLxAF5HL



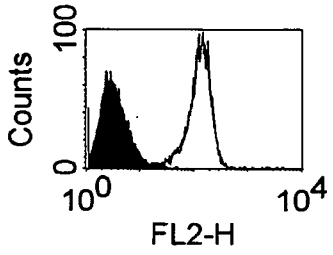
HPB-ALL

F12QHLxAF5HL



Macaque CD33 transfected CHO

F12QHLxAF5HL



Macaque PBMC

F12QHLxAF5HL

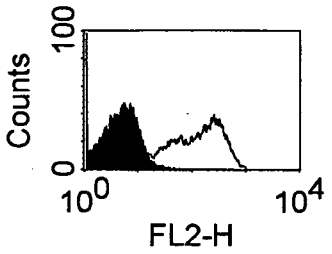
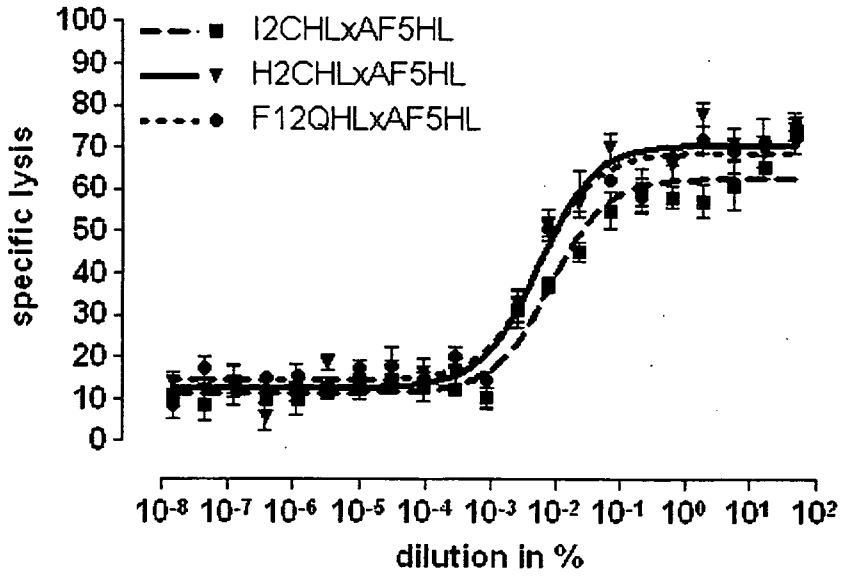


Figure 60b

Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: CHO transfected with human CD33



Effector cells: macaque 4119 LnPx

Target cells: CHO transfected with macaque CD33

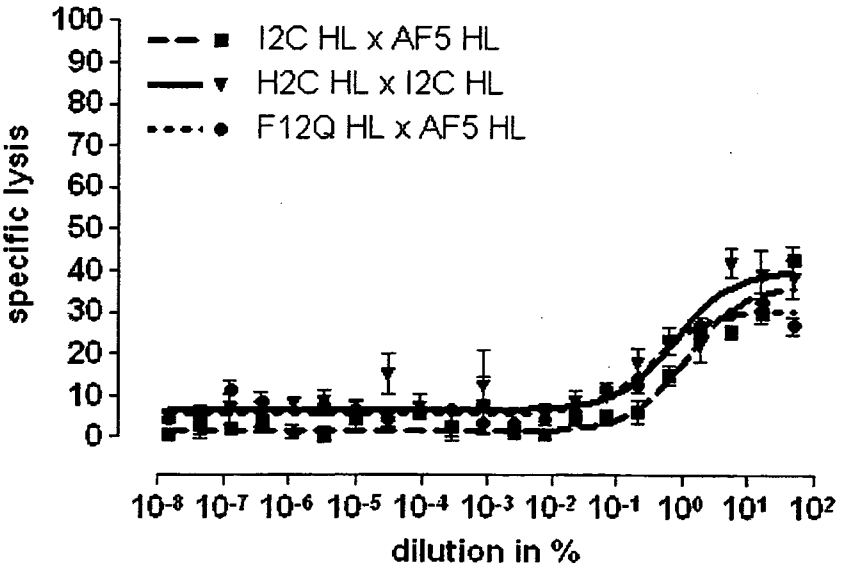


Figure 61

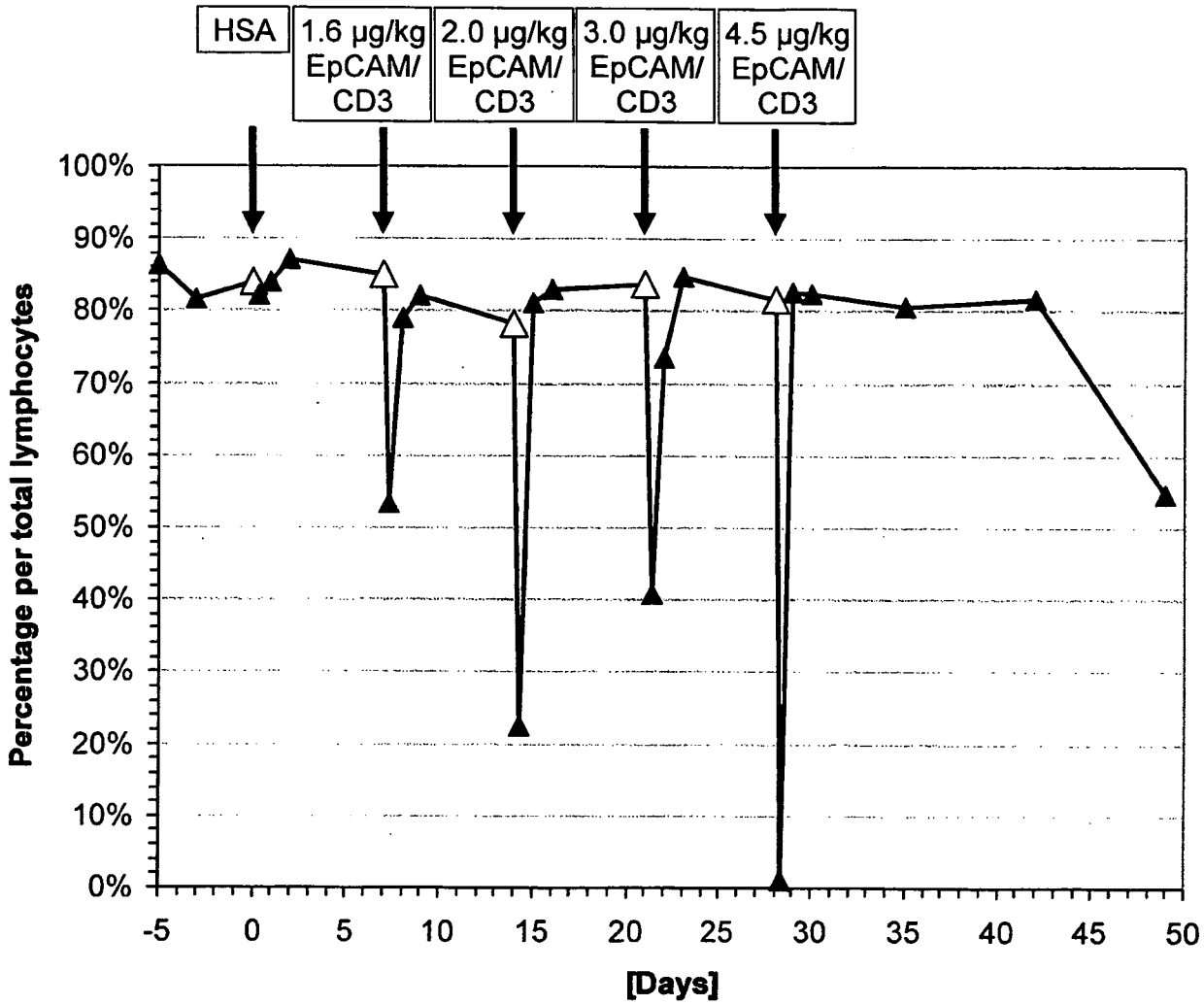

HSA
1.6 µg/kg EpCAM/ CD3
2.0 µg/kg EpCAM/ CD3
3.0 µg/kg EpCAM/ CD3
4.5 µg/kg EpCAM/ CD3
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage per total lymphocytes
-5
0
5
10
15
20
25
30
35
40
45
50
[Days]

Figure 62

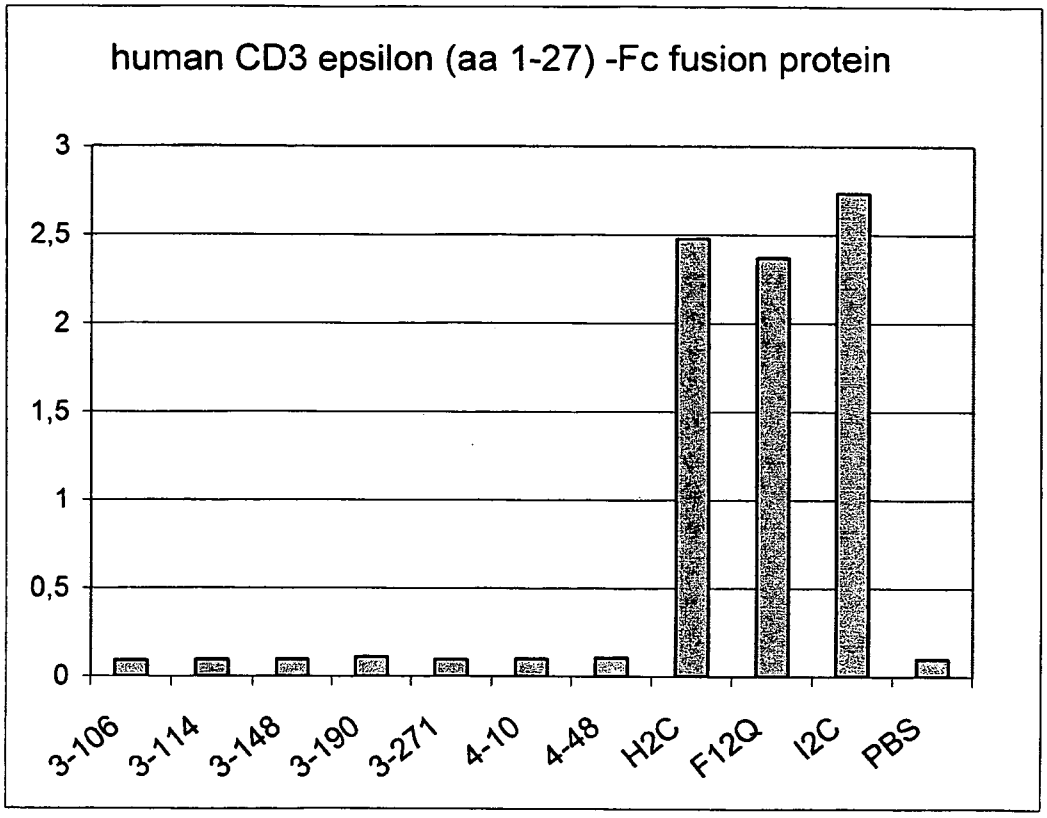

human CD3 epsilon (aa 1-27) -Fc fusion protein
3
2,5
2
1,5
1
0,5
0
3-106
3-114
3-148
3-190
3-271
4-10
4-48
H2C
F12Q
I2C
PBS

Figure 63

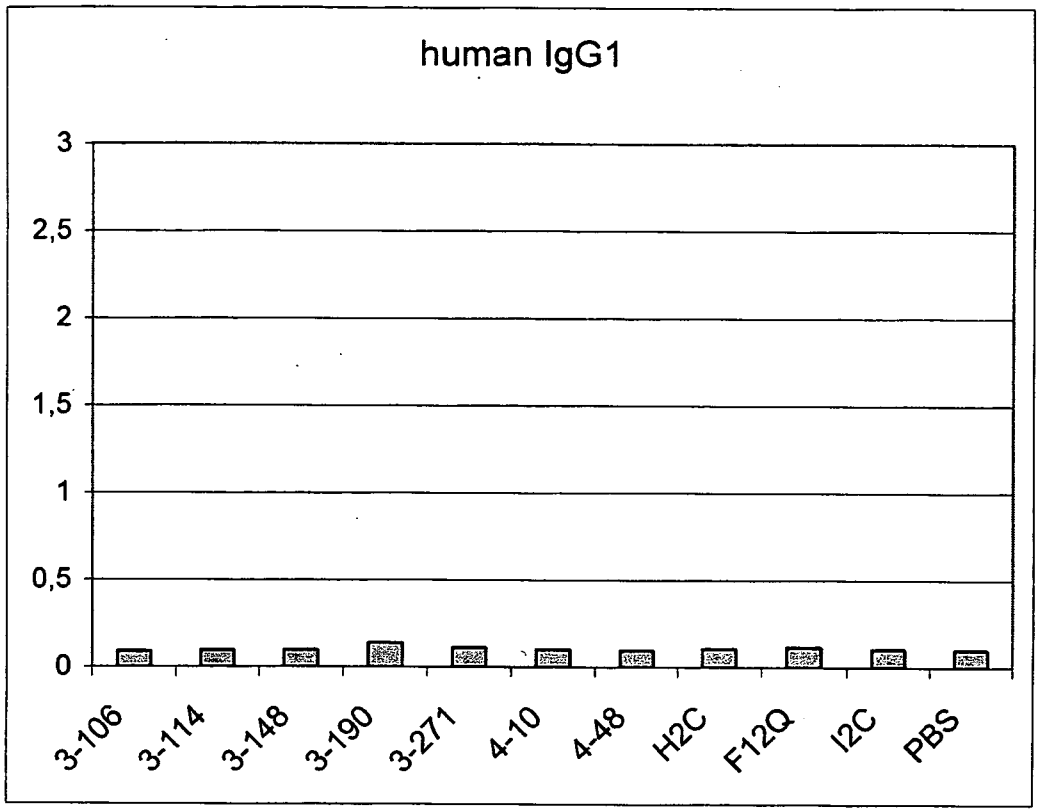

human IgG1
3
2,5
2
1,5
1
0,5
0
3-106
3-114
3-148
3-190
3-271
4-10
4-48
H2C
F12Q
I2C
PBS

Figure 64

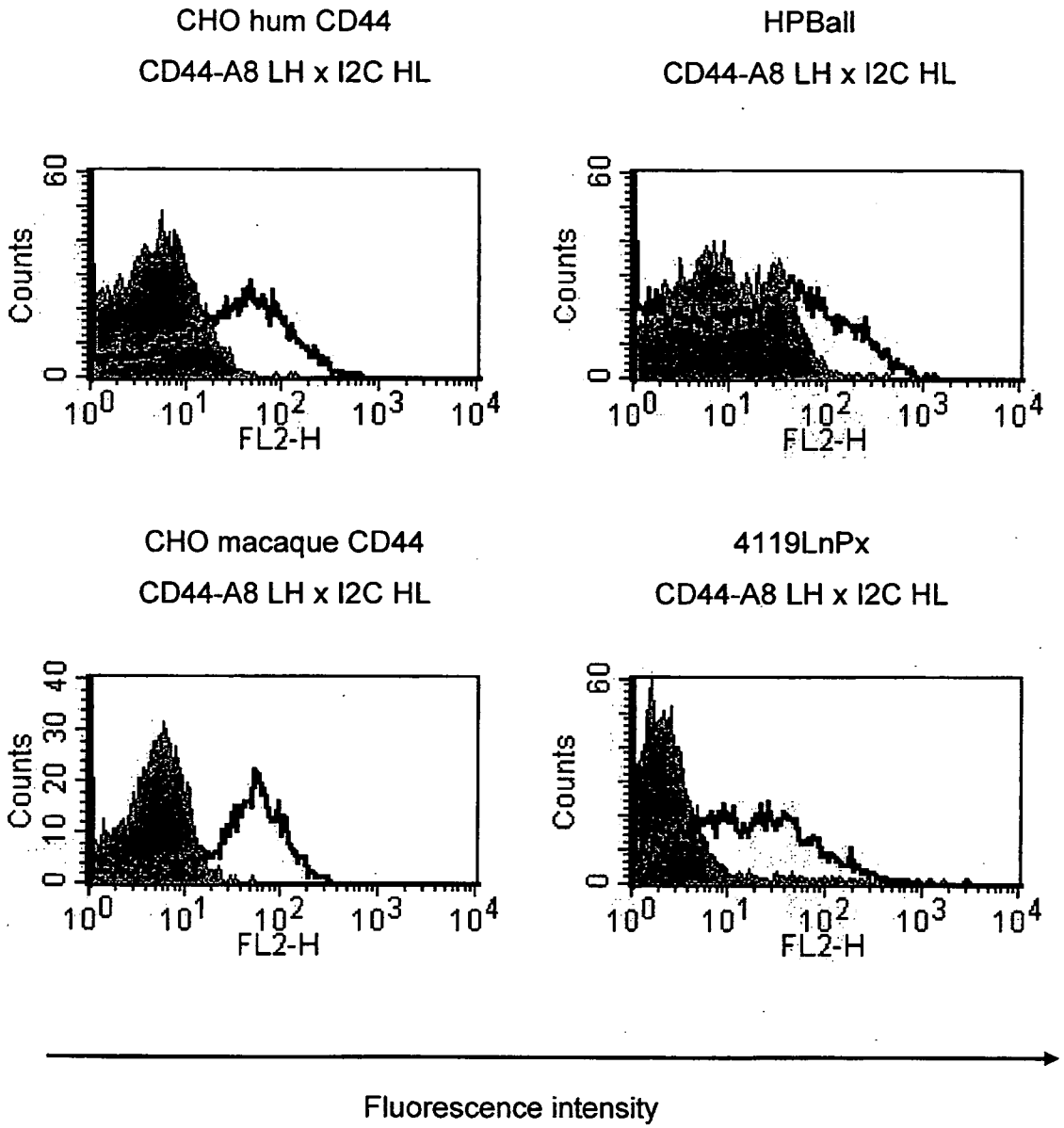

CHO hum CD44
CD44-A8 LH x I2C HL
HPBall
CD44-A8 LH x I2C HL
CHO macaque CD44
CD44-A8 LH x I2C HL
4119LnPx
CD44-A8 LH x I2C HL
Counts
FL2-H
Fluorescence intensity

Figure 65a

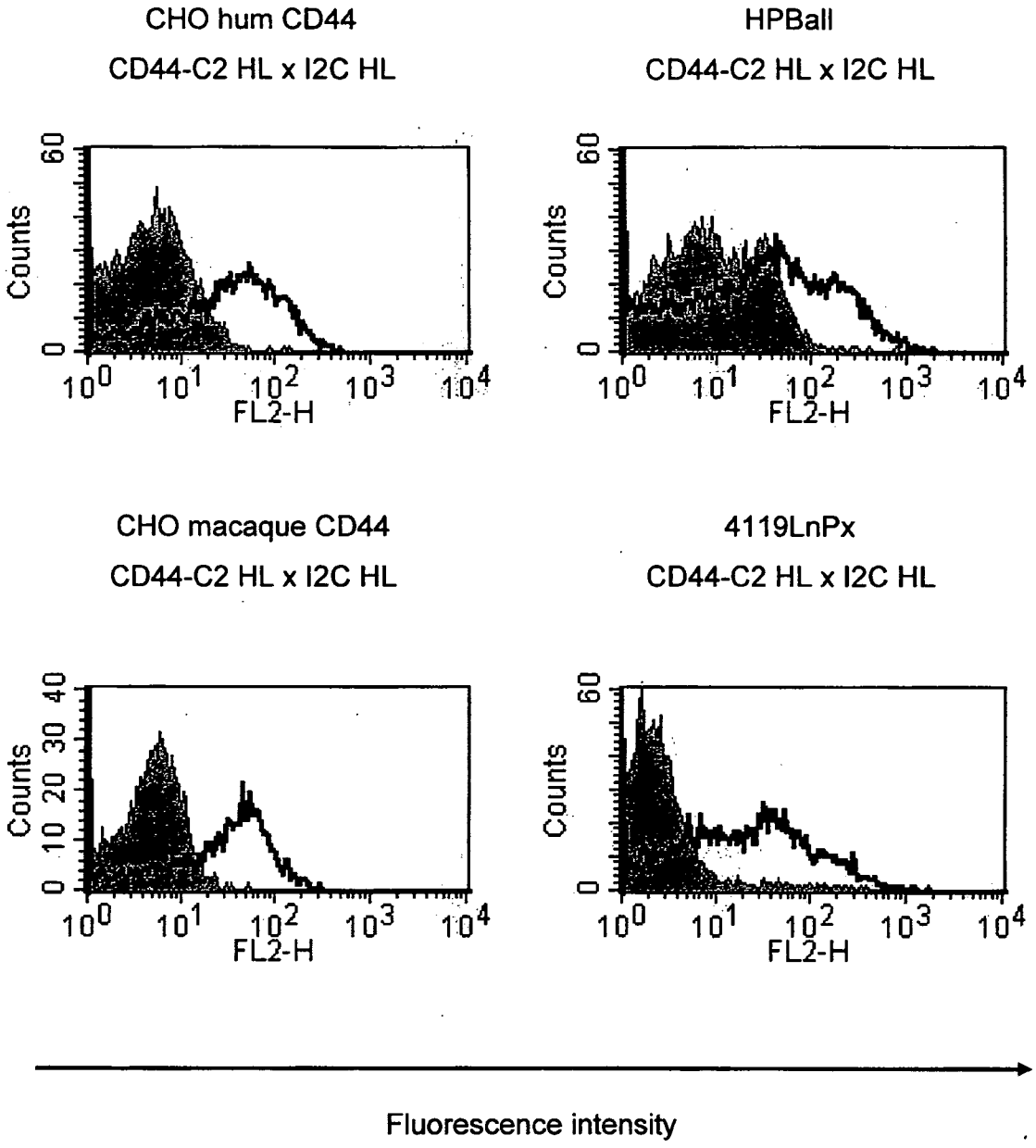

CHO hum CD44
CD44-C2 HL x I2C HL
HPBall
CD44-C2 HL x I2C HL
CHO macaque CD44
CD44-C2 HL x I2C HL
4119LnPx
CD44-C2 HL x I2C HL
Counts
FL2-H
Fluorescence intensity

Figure 65b

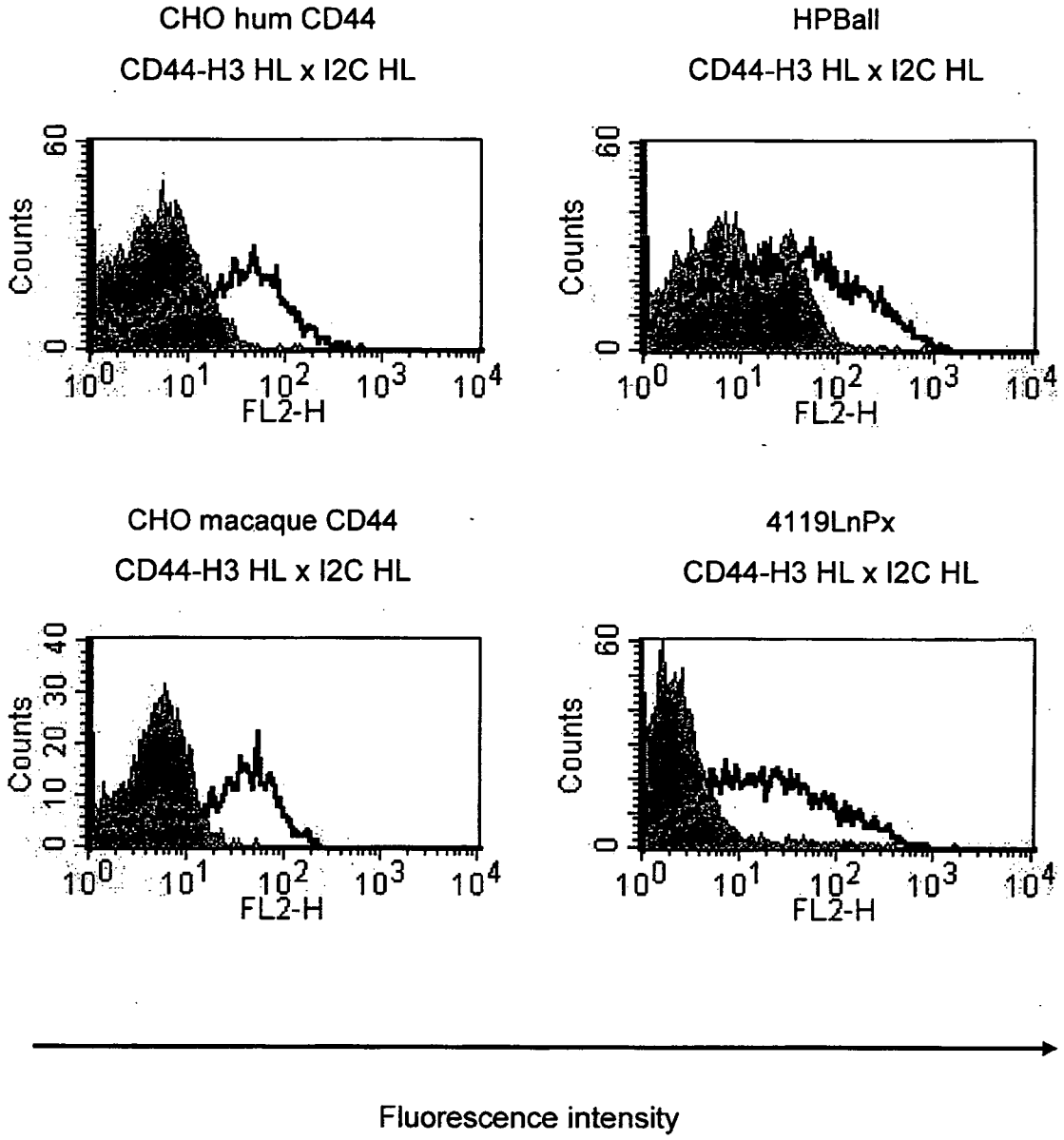

CHO hum CD44
CD44-H3 HL x I2C HL
HPBall
CD44-H3 HL x I2C HL
CHO macaque CD44
CD44-H3 HL x I2C HL
4119LnPx
CD44-H3 HL x I2C HL
Counts
FL2-H
Fluorescence intensity

Figure 65c

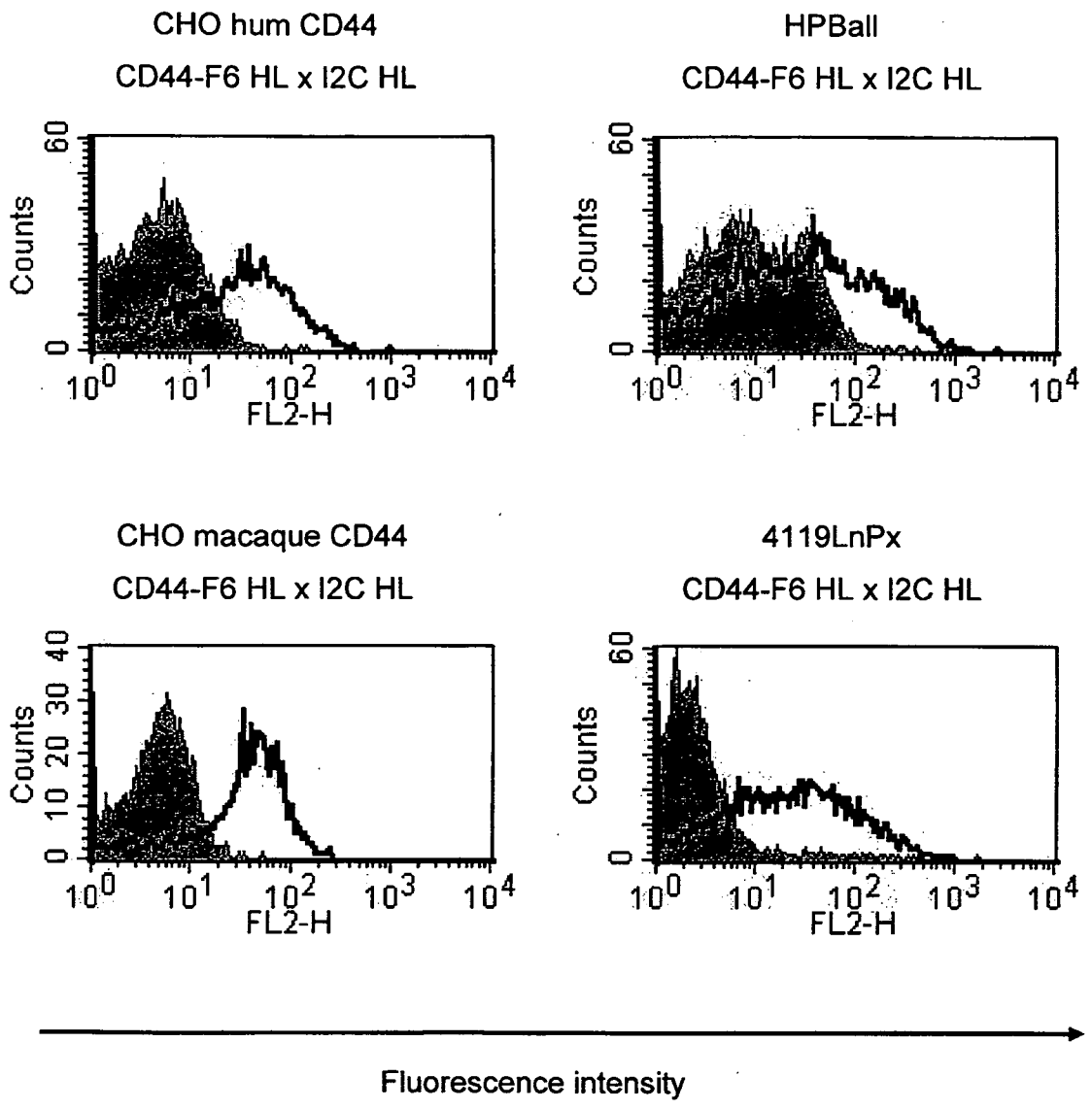

CHO hum CD44
CD44-F6 HL x I2C HL
HPBall
CD44-F6 HL x I2C HL
CHO macaque CD44
CD44-F6 HL x I2C HL
4119LnPx
CD44-F6 HL x I2C HL
Counts
FL2-H
Fluorescence intensity

Figure 65d

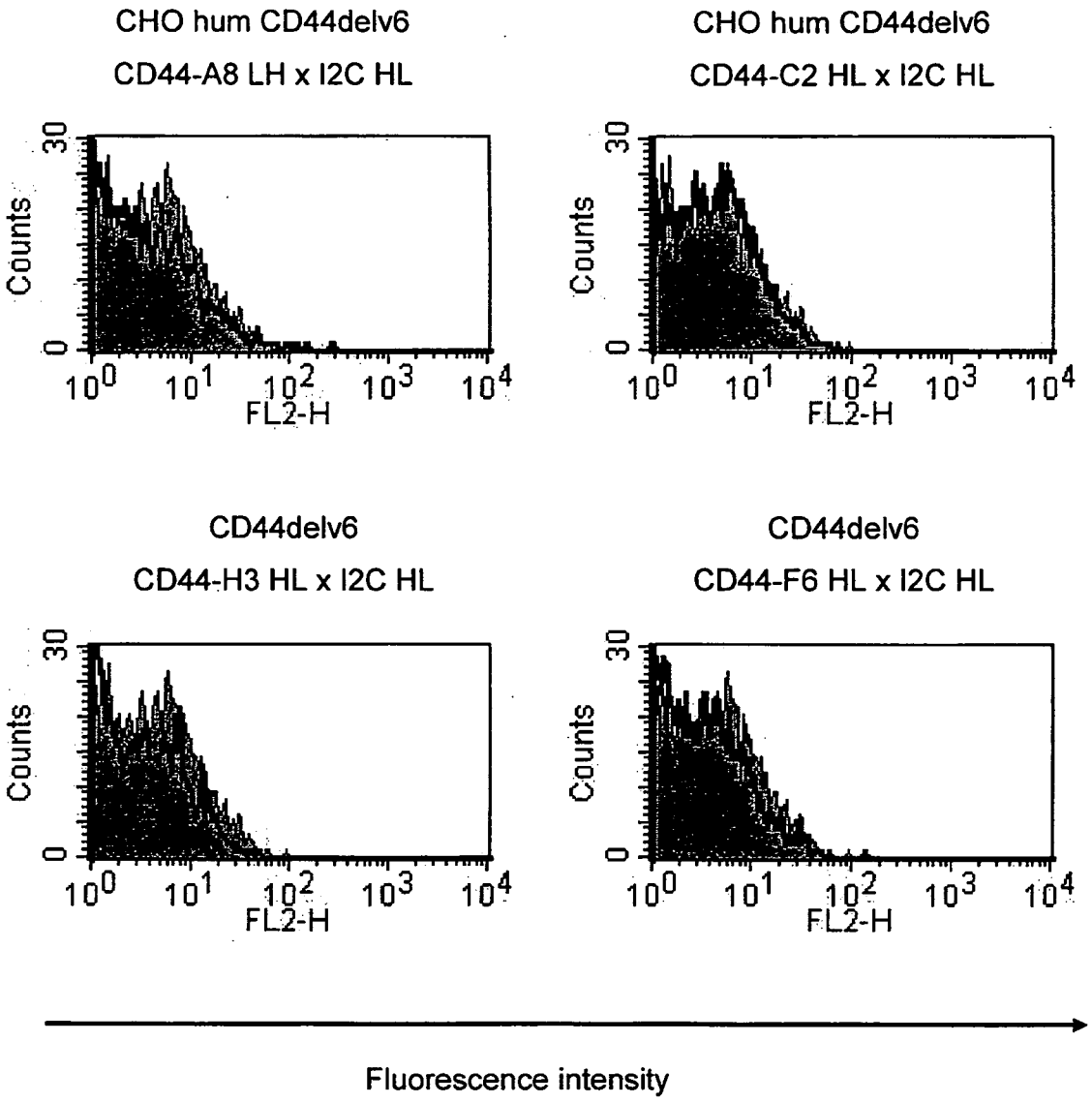

CHO hum CD44delv6
CD44-A8 LH x I2C HL
CHO hum CD44delv6
CD44-C2 HL x I2C HL
CD44delv6
CD44-H3 HL x I2C HL
CD44delv6
CD44-F6 HL x I2C HL
Counts
30
0
10^0 10^1 10^2 10^3 10^4
FL2-H
Fluorescence intensity

Figure 65e

Effector cells: stimulated human CD4/CD56 depleted human PBMC
Target cells: CHO transfected with human CD44
E:T ratio: 10:1

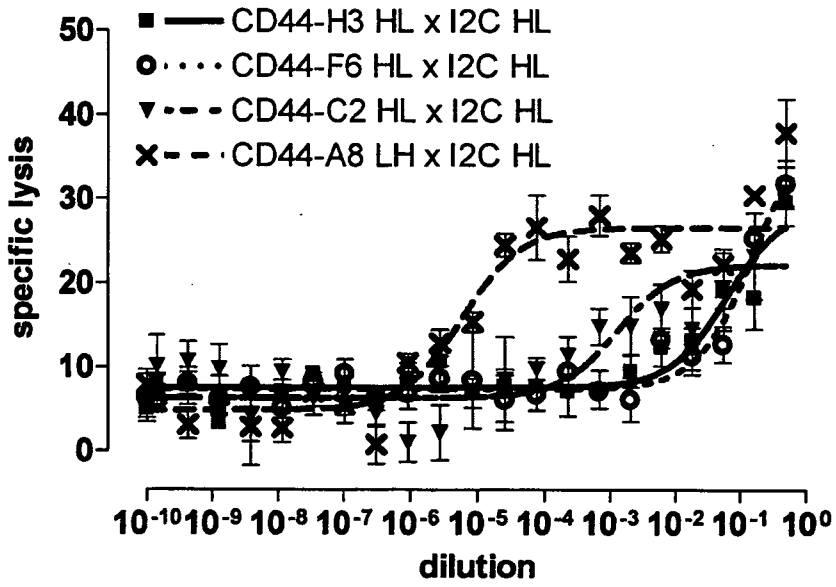


Figure 66

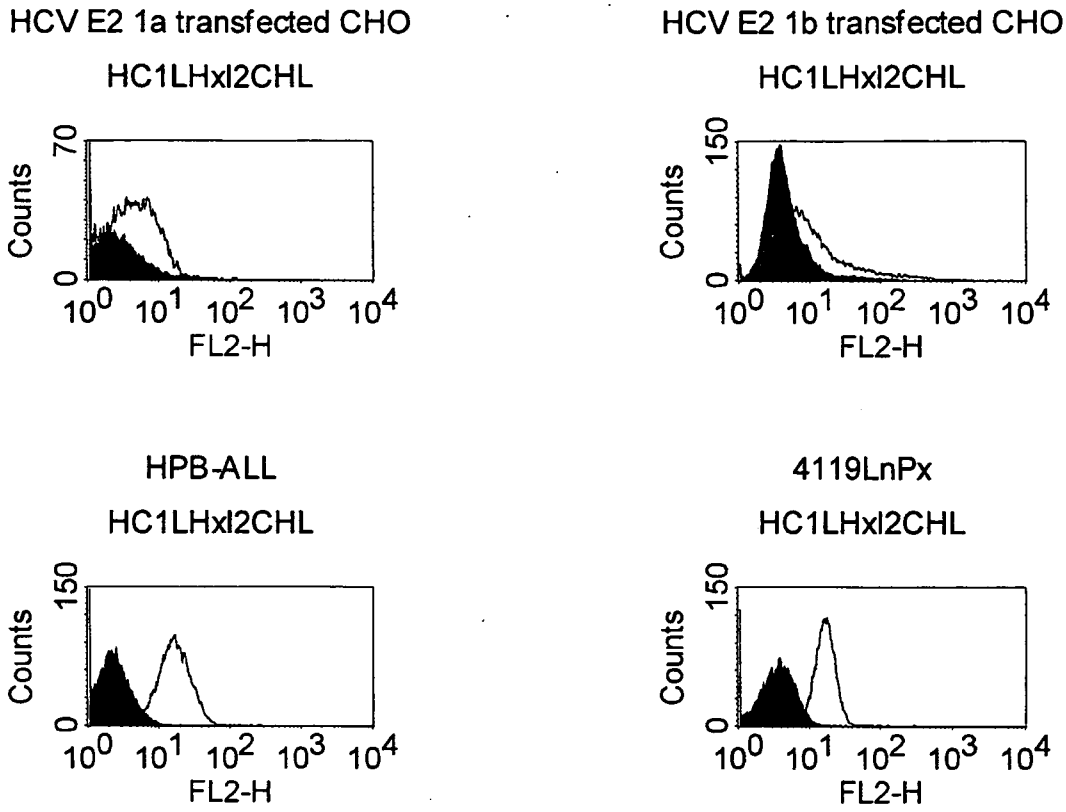
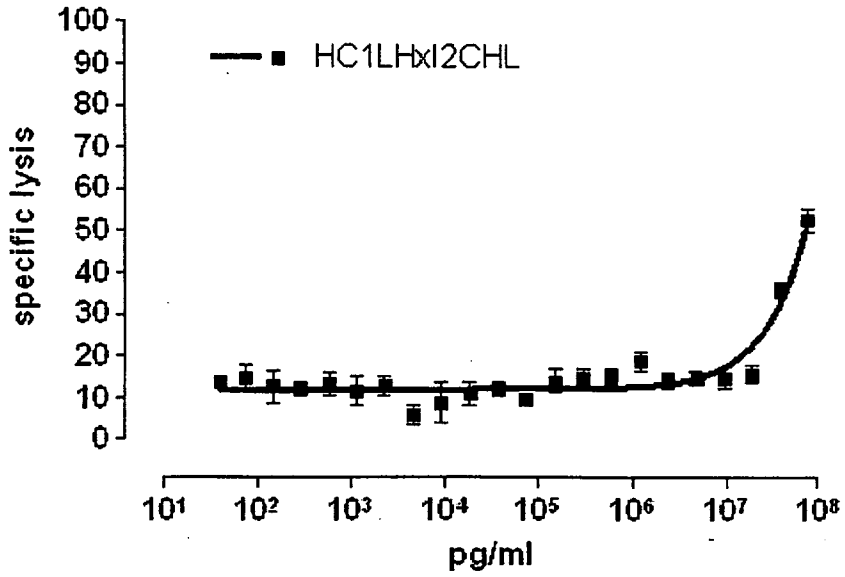

HCV E2 1a transfected CHO
HC1LHxl2CHL
Counts
70
0
10^0 10^1 10^2 10^3 10^4
FL2-H
HCV E2 1b transfected CHO
HC1LHxl2CHL
Counts
150
0
10^0 10^1 10^2 10^3 10^4
FL2-H
HPB-ALL
HC1LHxl2CHL
Counts
150
0
10^0 10^1 10^2 10^3 10^4
FL2-H
4119LnPx
HC1LHxl2CHL
Counts
150
0
10^0 10^1 10^2 10^3 10^4
FL2-H

Figure 67

Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: HCV E2 1b transfected CHO



Effector cells: stimulated CD4/CD56 depleted human PBMC

Target cells: HCV E2 1b transfected CHO

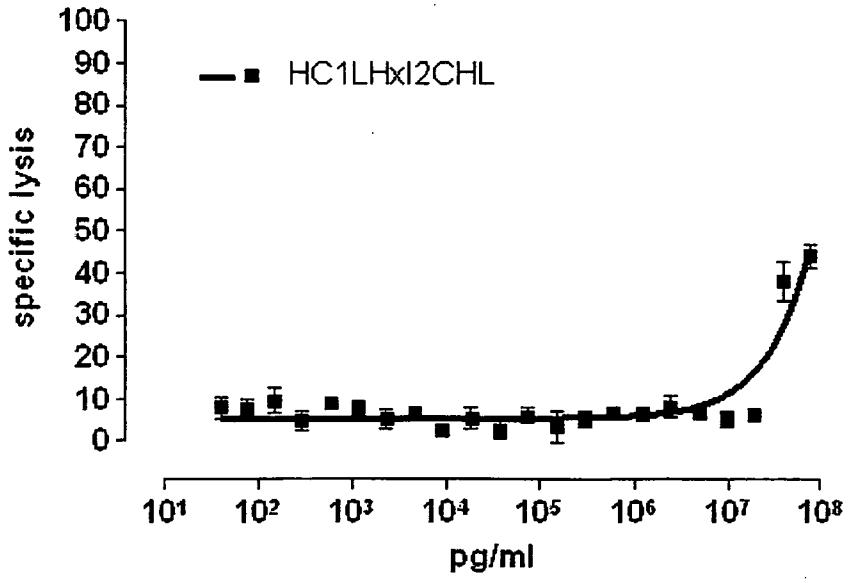


Figure 68