Figure 1

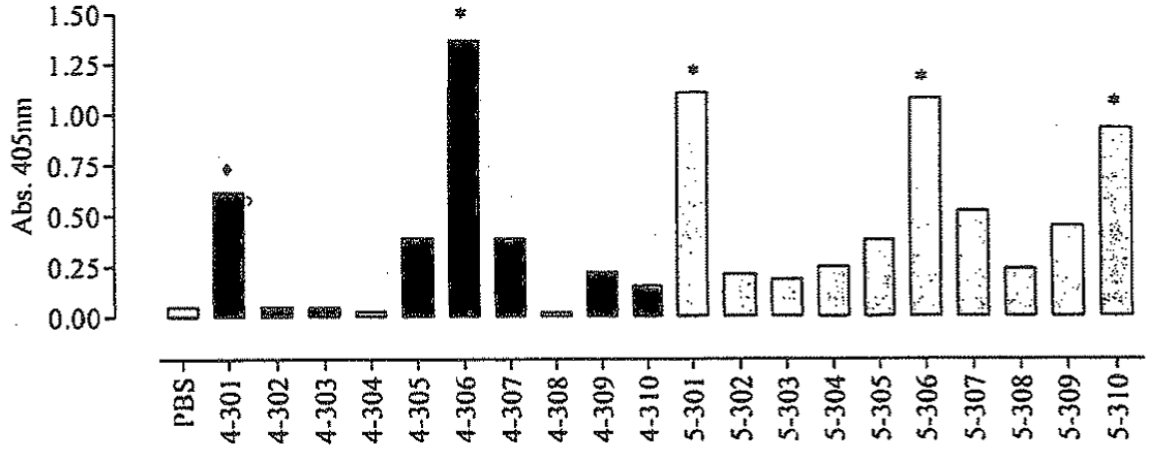

1.50
1.25
1.00
0.75
0.50
0.25
0.00
Abs. 405nm
*
*
*
*
PBS
4-301
4-302
4-303
4-304
4-305
4-306
4-307
4-308
4-309
4-310
5-301
5-302
5-303
5-304
5-305
5-306
5-307
5-308
5-309
5-310

Figure 2

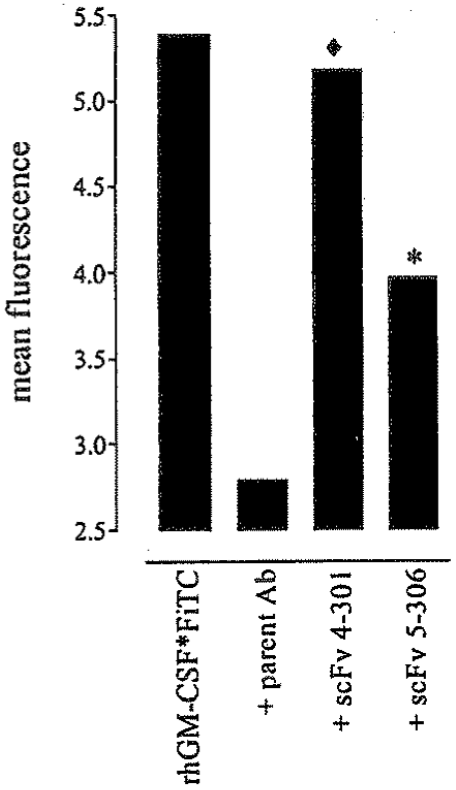

mean fluorescence
5.5
5.0
4.5
4.0
3.5
3.0
2.5
◆
*
rhGM-CSF*FITC
+ parent Ab
+ scFv 4-301
+ scFv 5-306

Figure 3

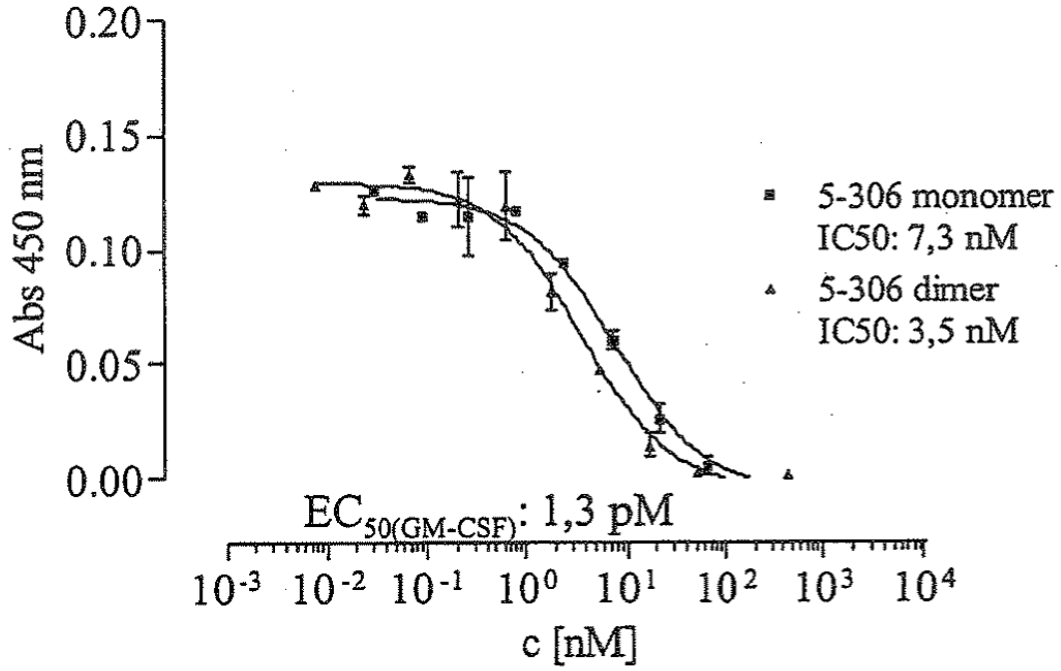

0.20
0.15
0.10
0.05
0.00
Abs 450 nm
5-306 monomer
IC50: 7,3 nM
5-306 dimer
IC50: 3,5 nM
EC50(GM-CSF): 1,3 pM
10-3 10-2 10-1 100 101 102 103 104
c [nM]

Figure 4

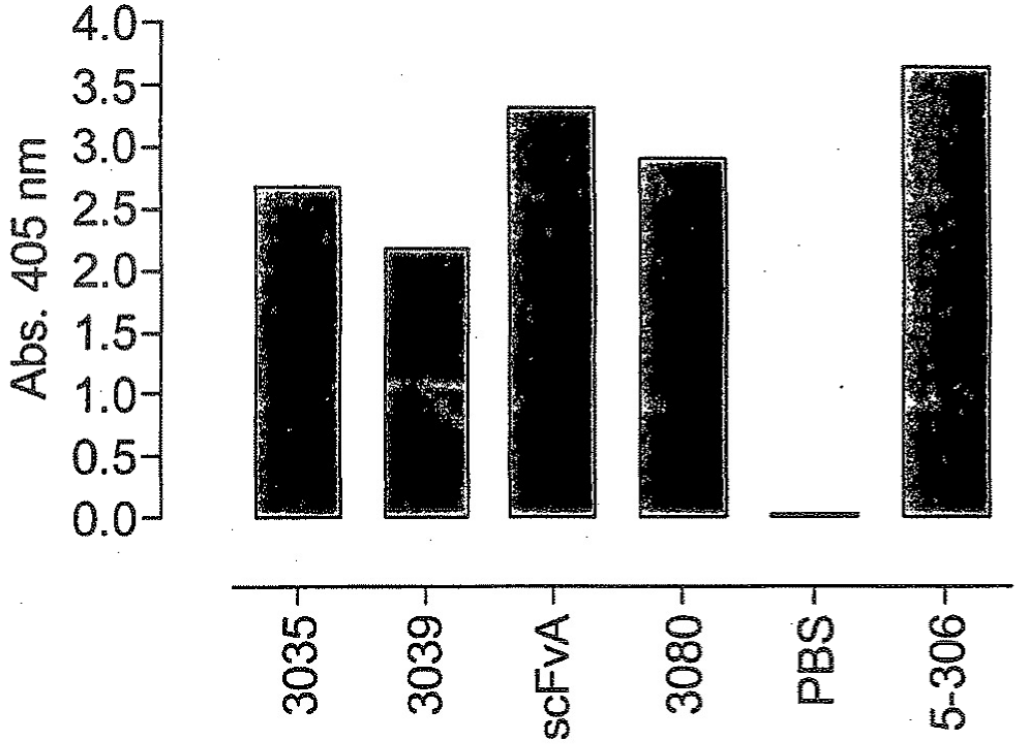

Abs. 405 nm
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
3035
3039
scFvA
3080
PBS
5-306

Figure 5

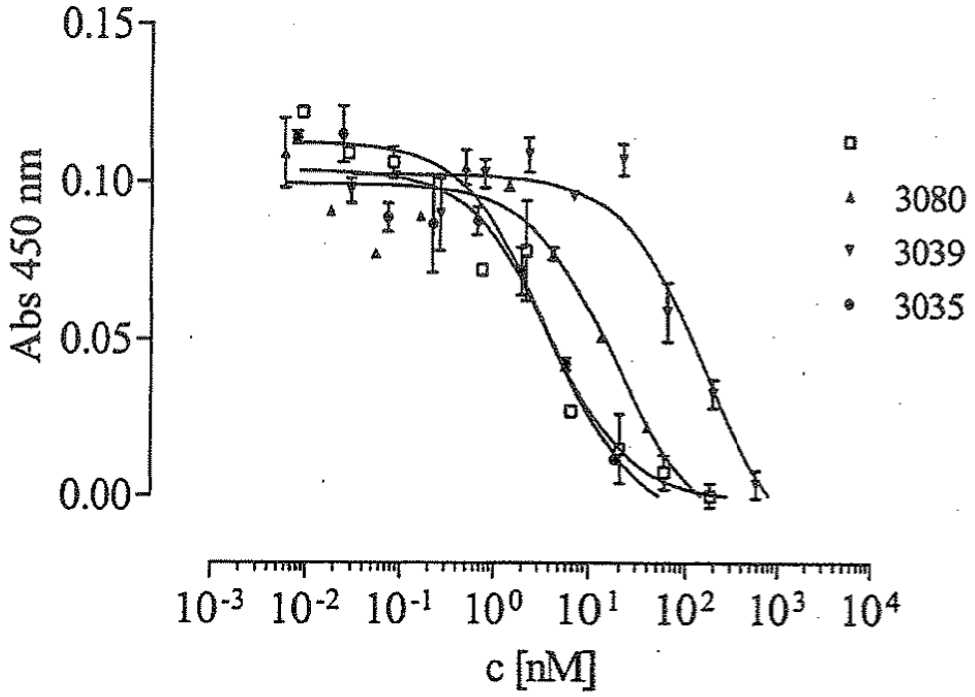

0.15
0.10
0.05
0.00
Abs 450 nm
3080
3039
3035
10-3 10-2 10-1 100 101 102 103 104
c [nM]

Figure 6 A

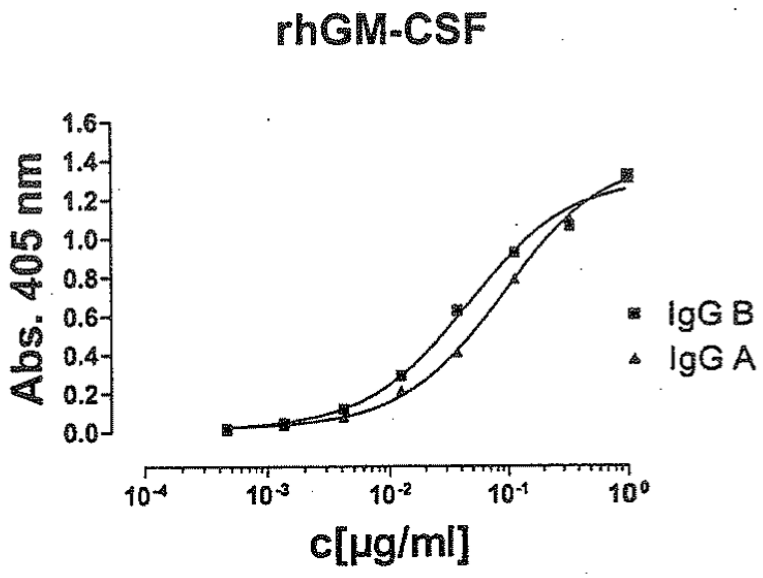

rhGM-CSF
Abs. 405 nm
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
10⁻⁴
10⁻³
10⁻²
10⁻¹
10⁰
c[µg/ml]
IgG B
IgG A

Figure 6 B

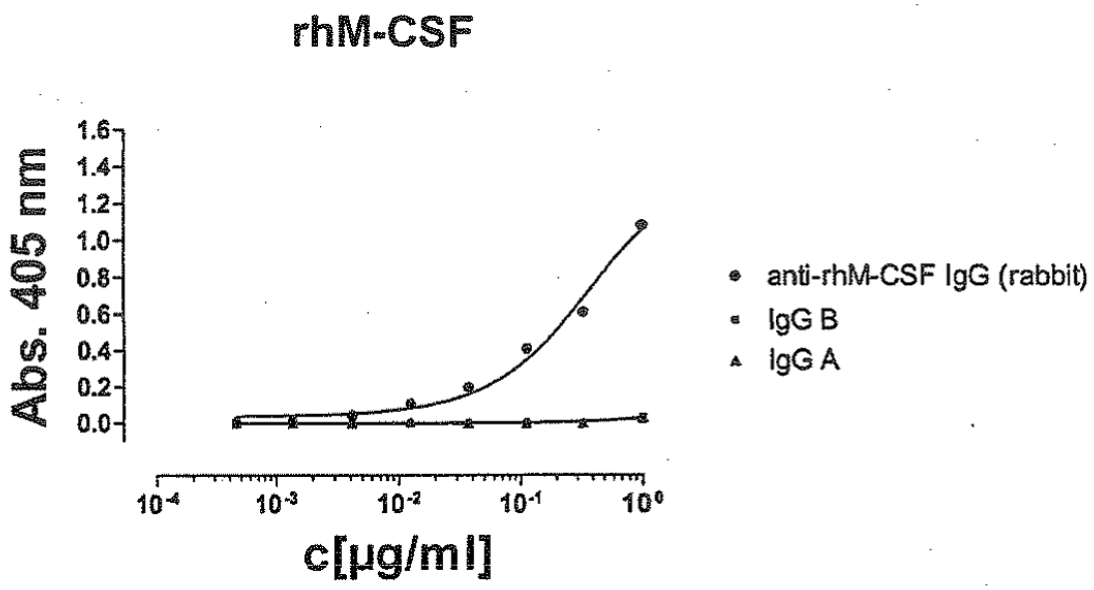

rhM-CSF
Abs. 405 nm
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
10⁻⁴
10⁻³
10⁻²
10⁻¹
10⁰
c[µg/ml]
anti-rhM-CSF IgG (rabbit)
IgG B
IgG A

Figure 6 C

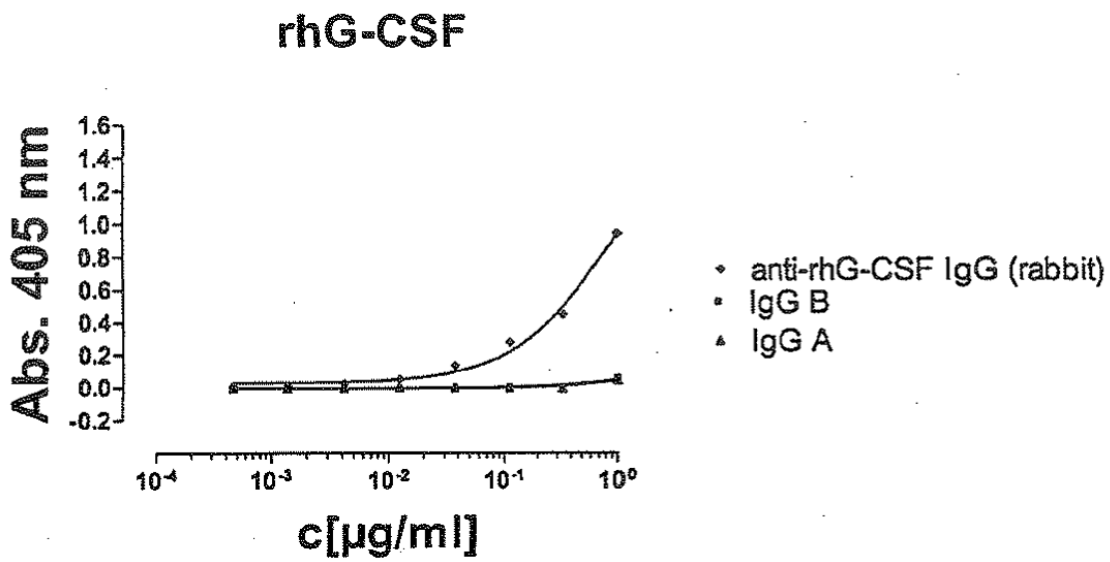

rhG-CSF
Abs. 405 nm
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
10⁻⁴
10⁻³
10⁻²
10⁻¹
10⁰
c[µg/ml]
anti-rhG-CSF IgG (rabbit)
IgG B
IgG A

Figure 7A

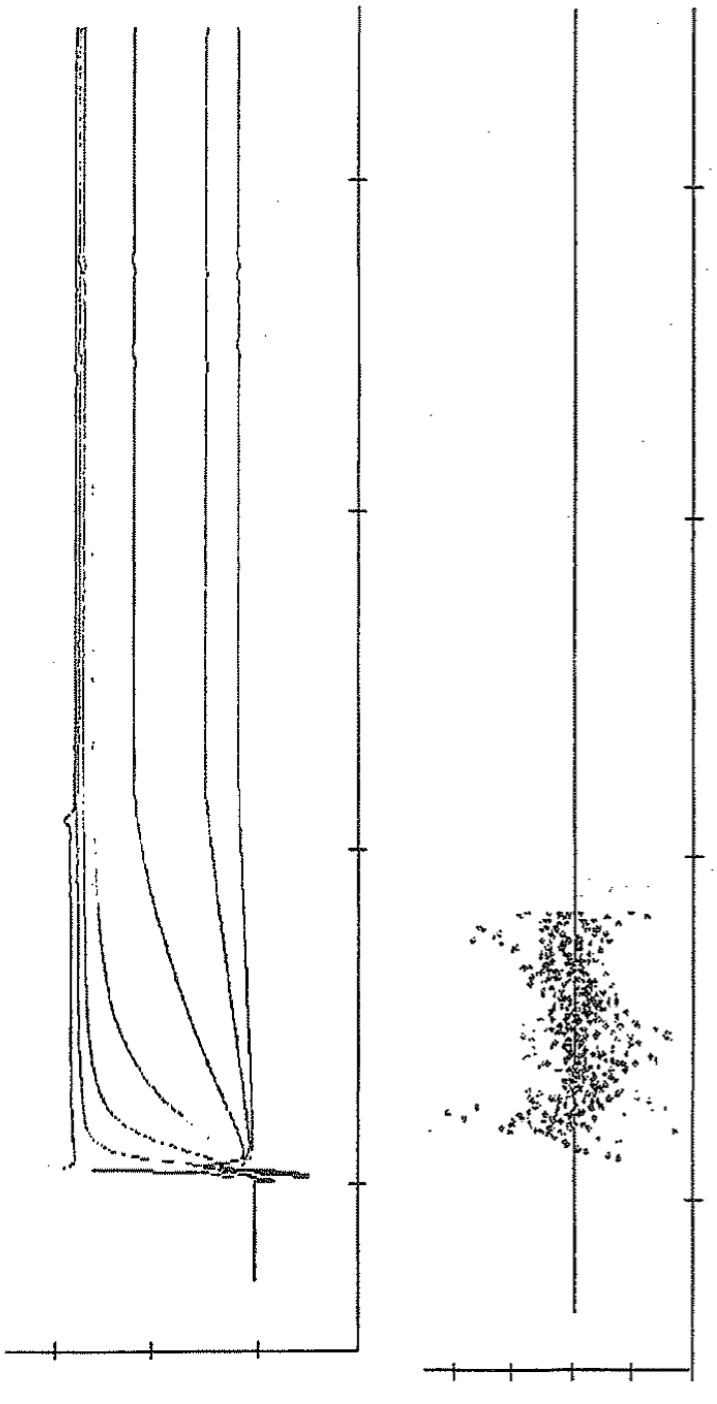


Figure 7B



Figure 7C

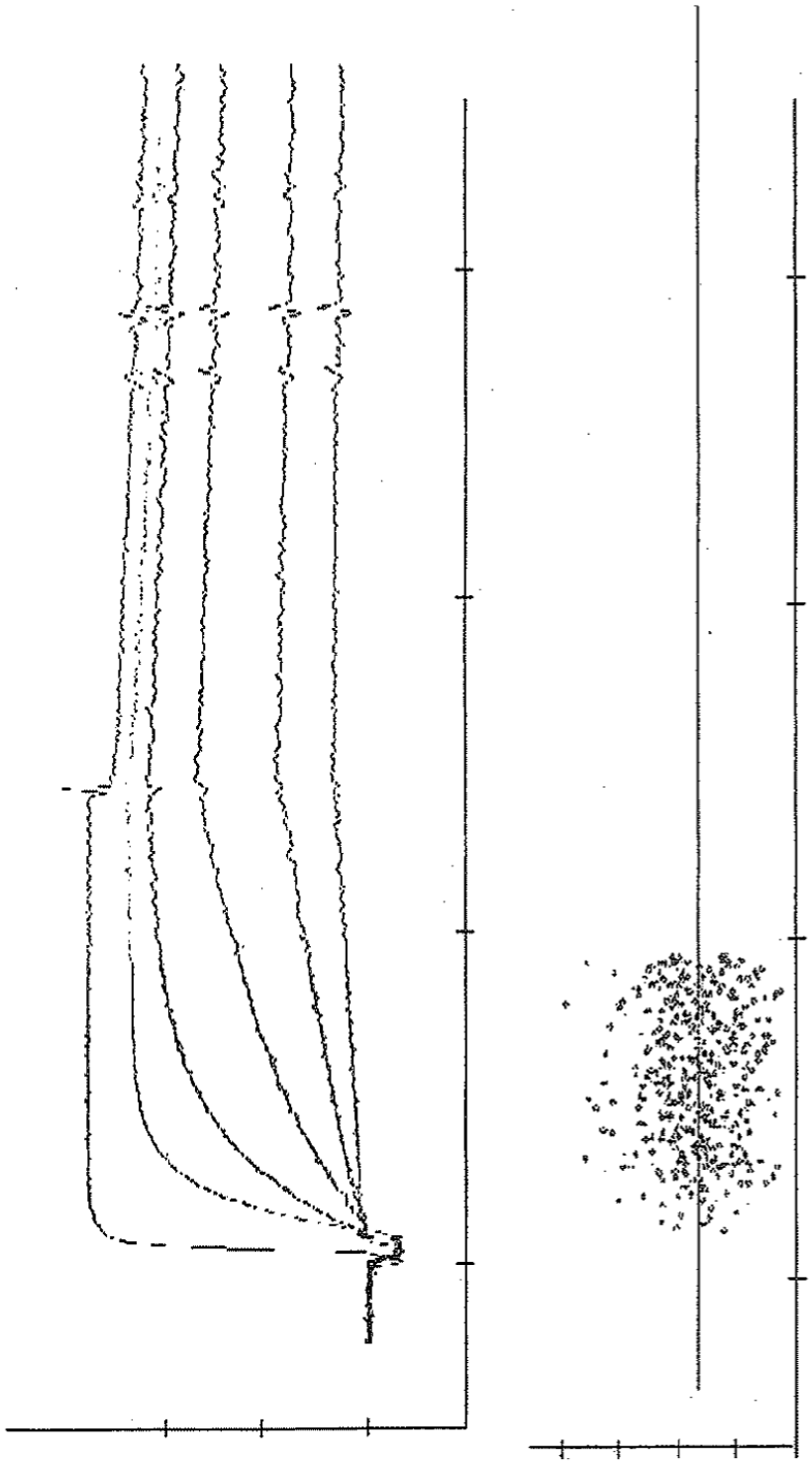


Figure 7D

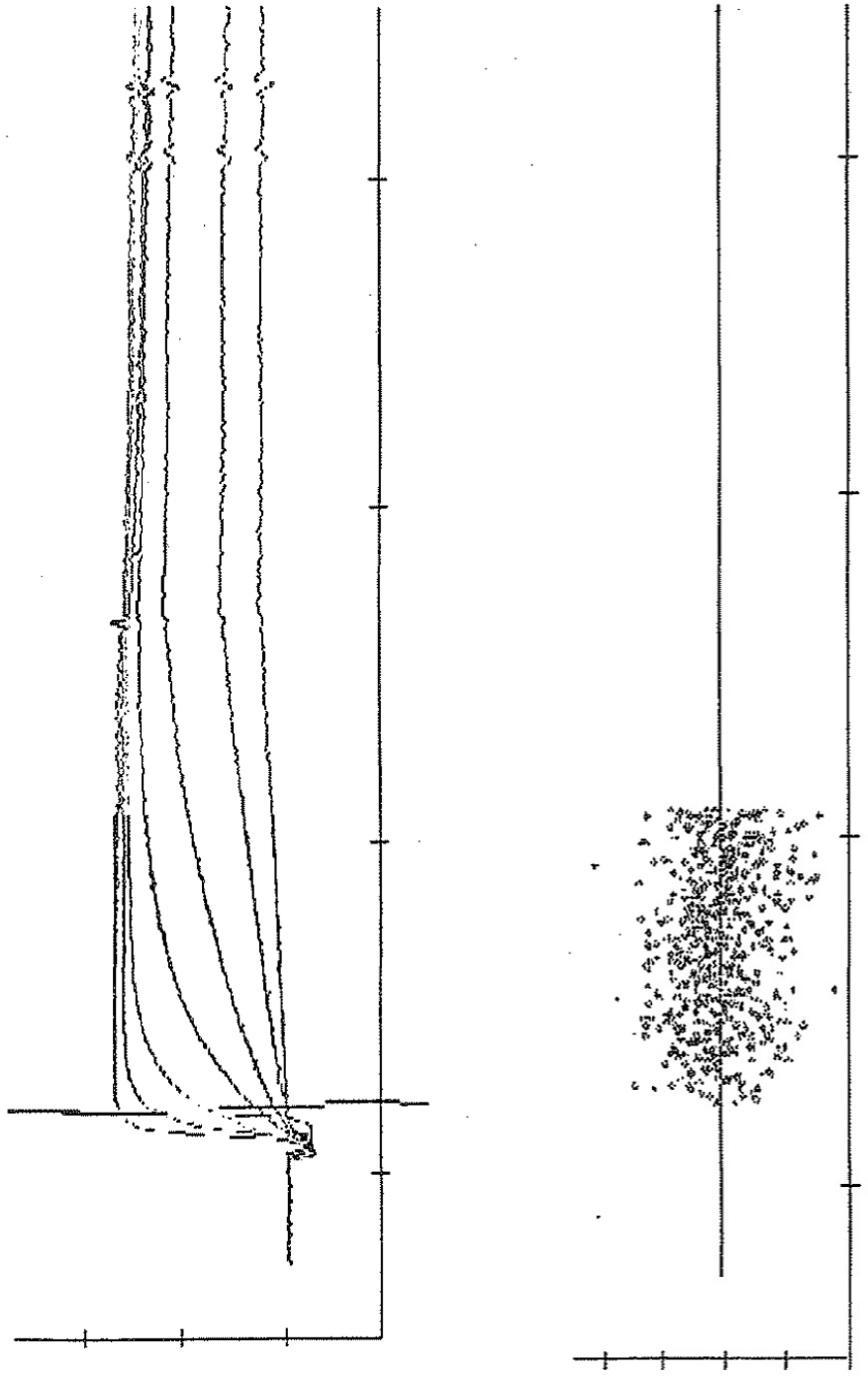


Figure 7E

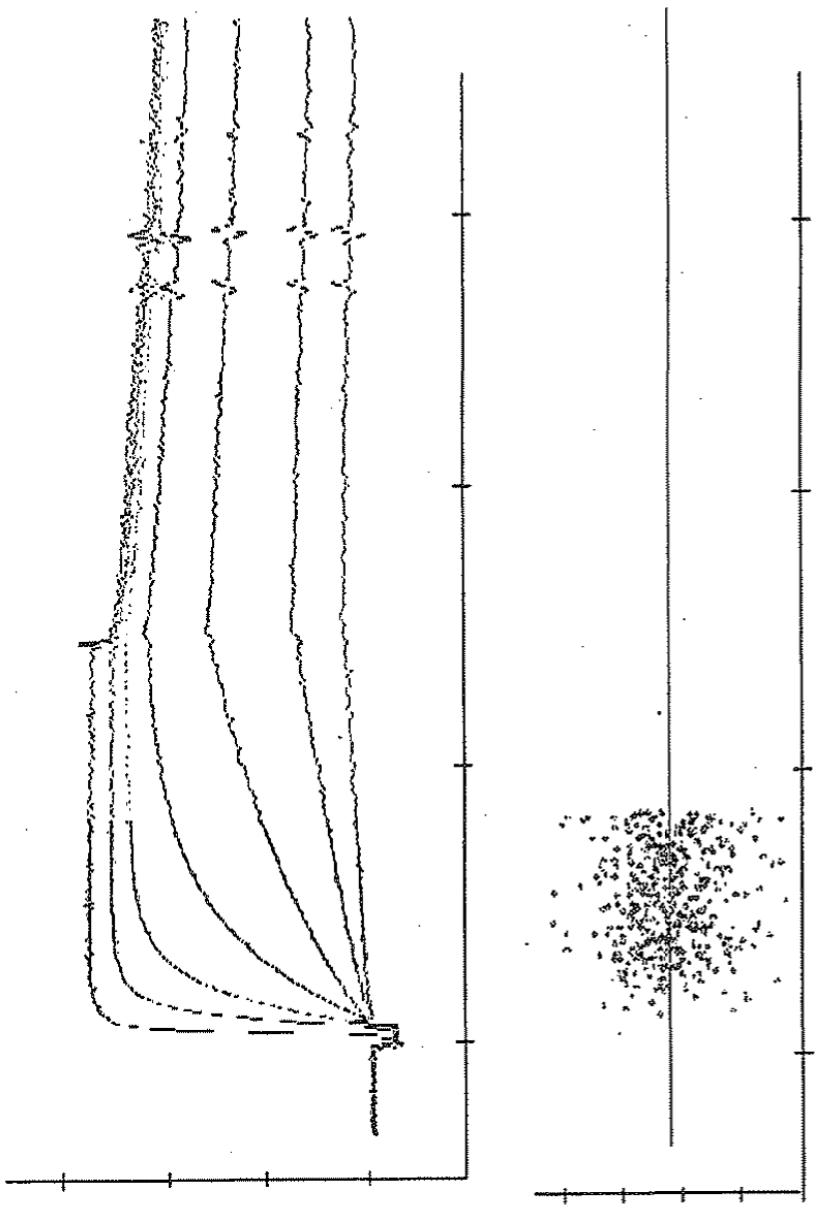


Figure 7F

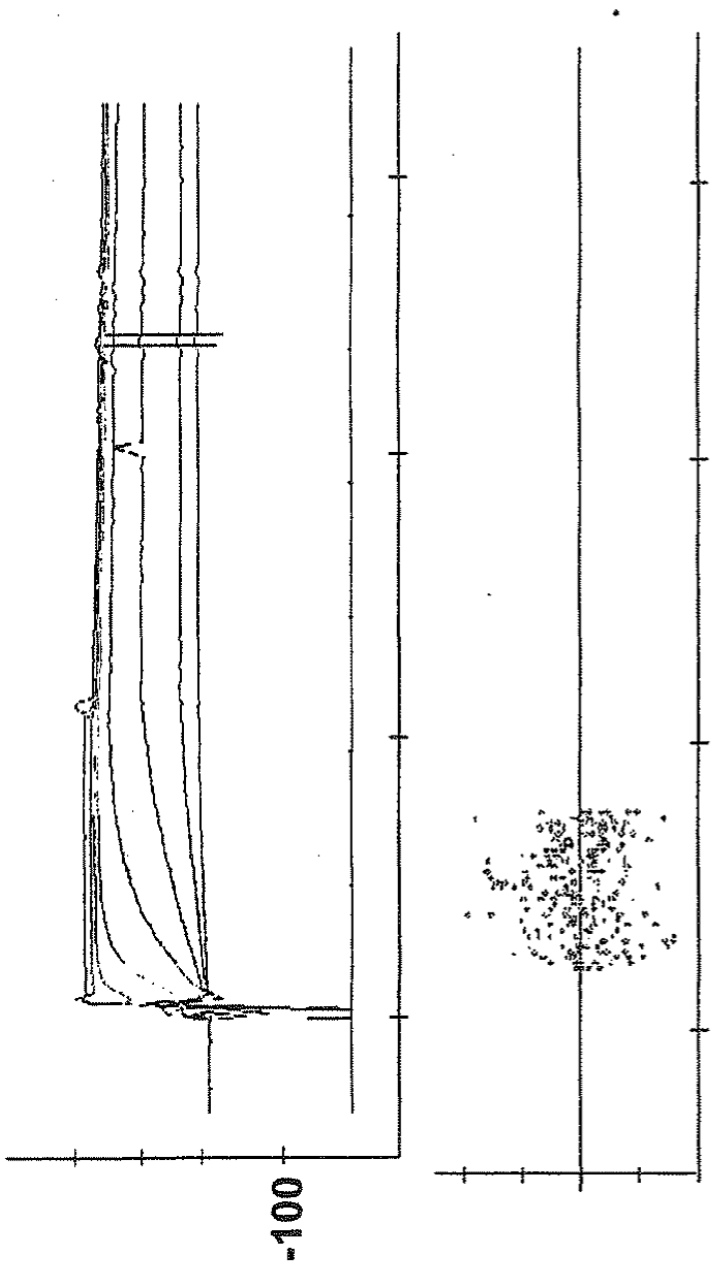


Figure 7G

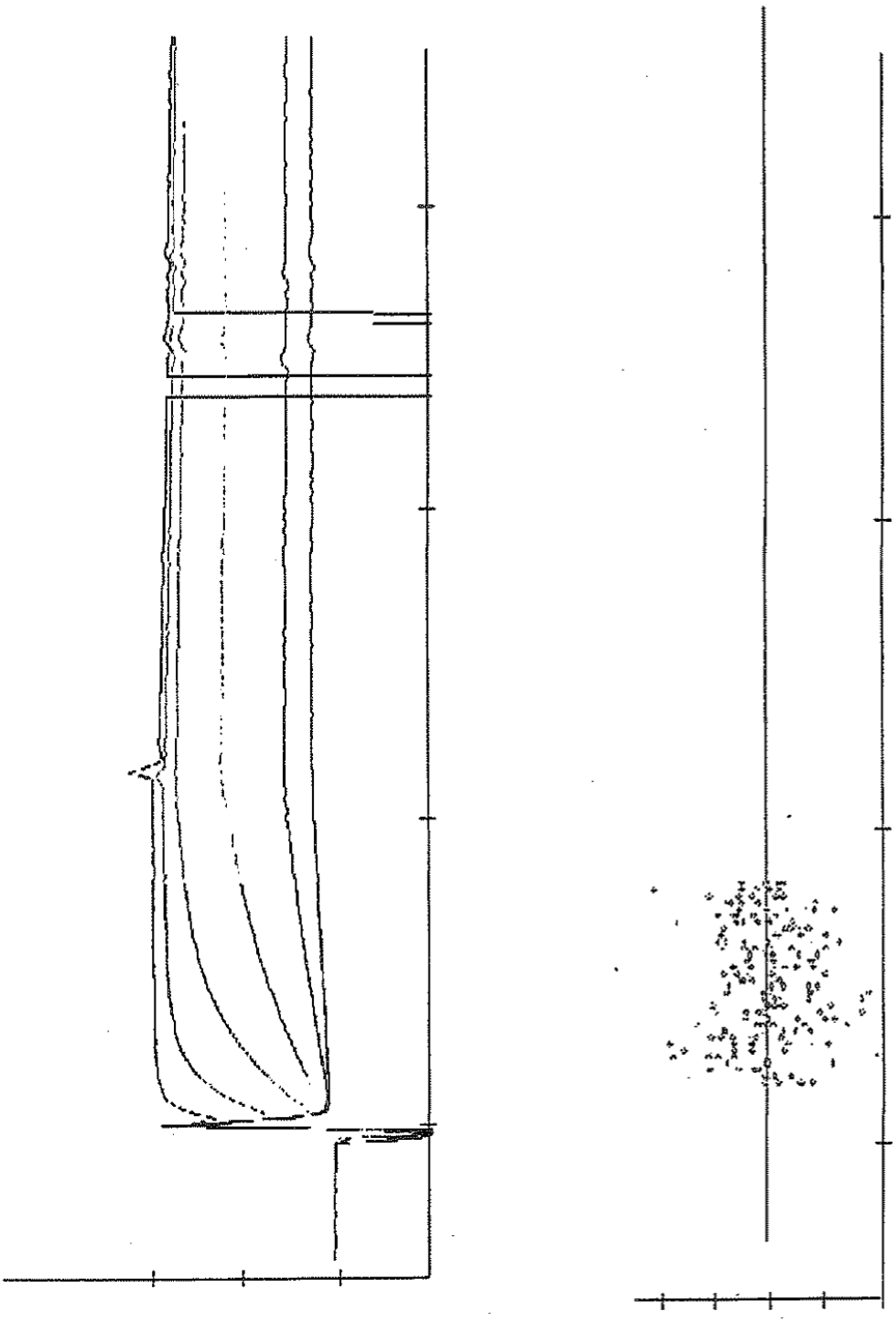


Figure 7H

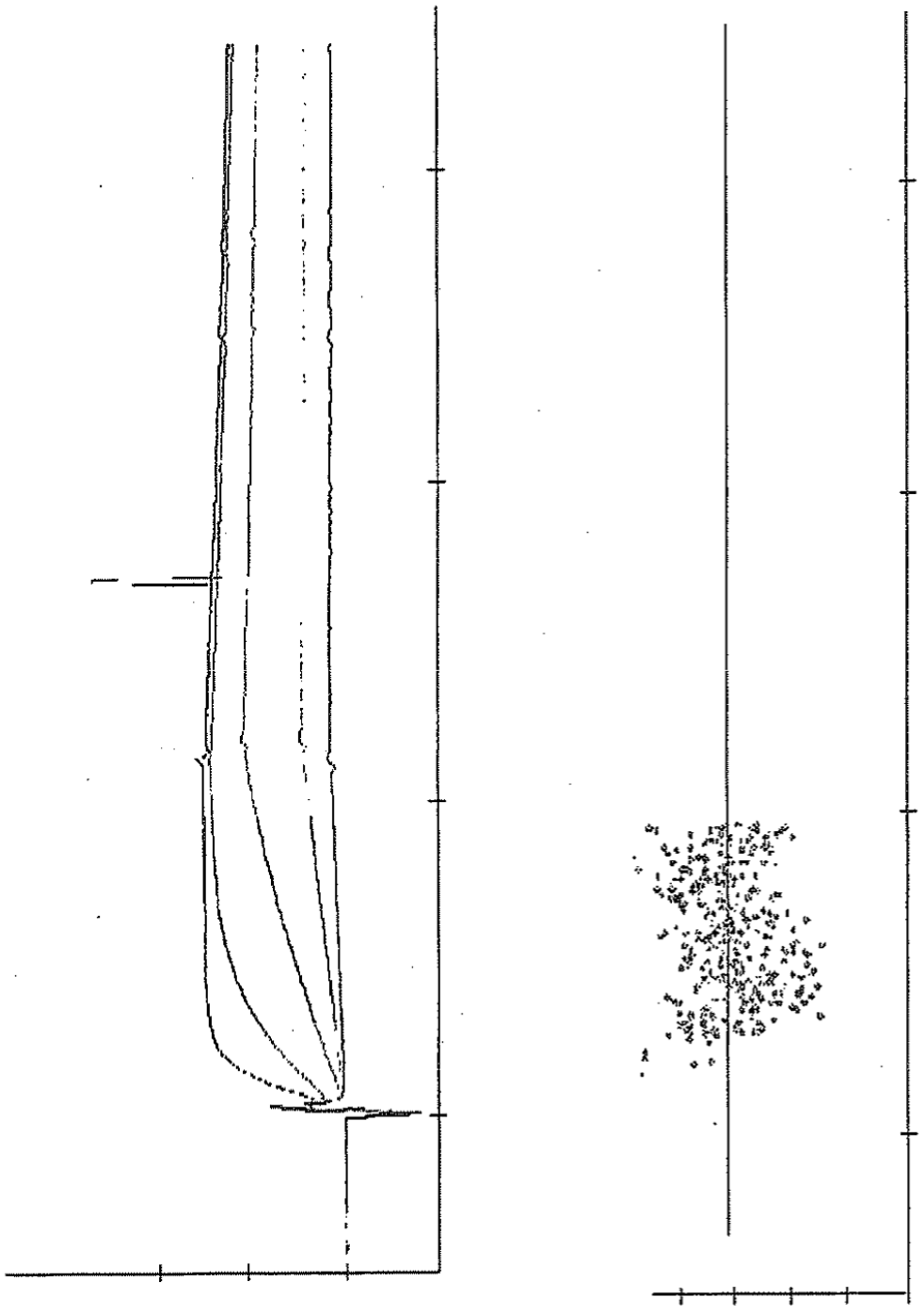


Figure 7I

Figure 8A

```
Human GM-CSF:     APARSPSPST QPWEHVNAIQ EARRLLNLSR DTAAEMNETV
Macaca GM-CSF:    APARSPSPGT QPWEHVNAIQ EARRLLNLSR DTAAEMNKTV
Gibbon GM-CSF:    APSRSPSPST QPWEHVNAIQ EARRLLNLSR DTAAEINETV

Human GM-CSF:     EVISEMFDLQ EPTCLQTRLE LYKQGLRGSL TKLKGPLTMM
Macaca GM-CSF:    EVVSEMFDLQ EPSCLQTRLE LYKQGLQGSL TKLKGPLTMM
Gibbon GM-CSF:    EVVSEMFDLQ EPTCLQTRLE LYKQGLRGSL TKLKGPLTMM

Human GM-CSF:     ASHYKQHCPP TPETSCATQI ITFESFKENL KDFLLVIPFD
Macaca GM-CSF:    ASHYKQHCPP TPETSCATQI ITFQSFKENL KDFLLVIPFD
Gibbon GM-CSF:    ASHYKQHCPP TPETSCATQI IIFESFKENL KDFLLVIPFD

Human GM-CSF:     CWEPVQE
Macaca GM-CSF:    CWEPVQE
Gibbon GM-CSF:    CWEPVQG
```

Figure 8B

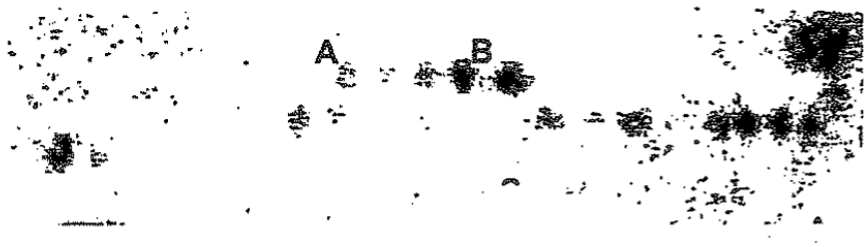


Figure 9 A

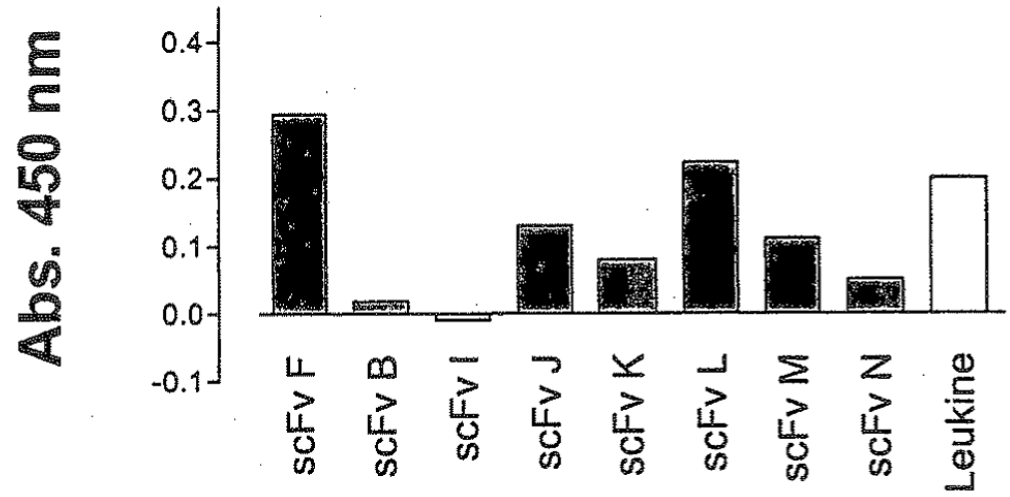

Abs. 450 nm
0.4
0.3
0.2
0.1
0.0
-0.1
scFv F
scFv B
scFv I
scFv J
scFv K
scFv L
scFv M
scFv N
Leukine

Figure 9 B

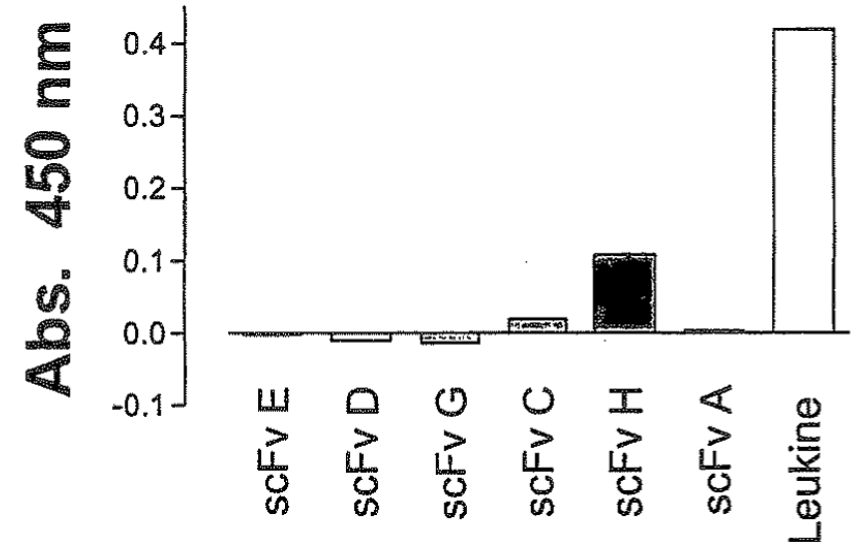

Abs. 450 nm
0.4
0.3
0.2
0.1
0.0
-0.1
scFv E
scFv D
scFv G
scFv C
scFv H
scFv A
Leukine

Figure 10 A

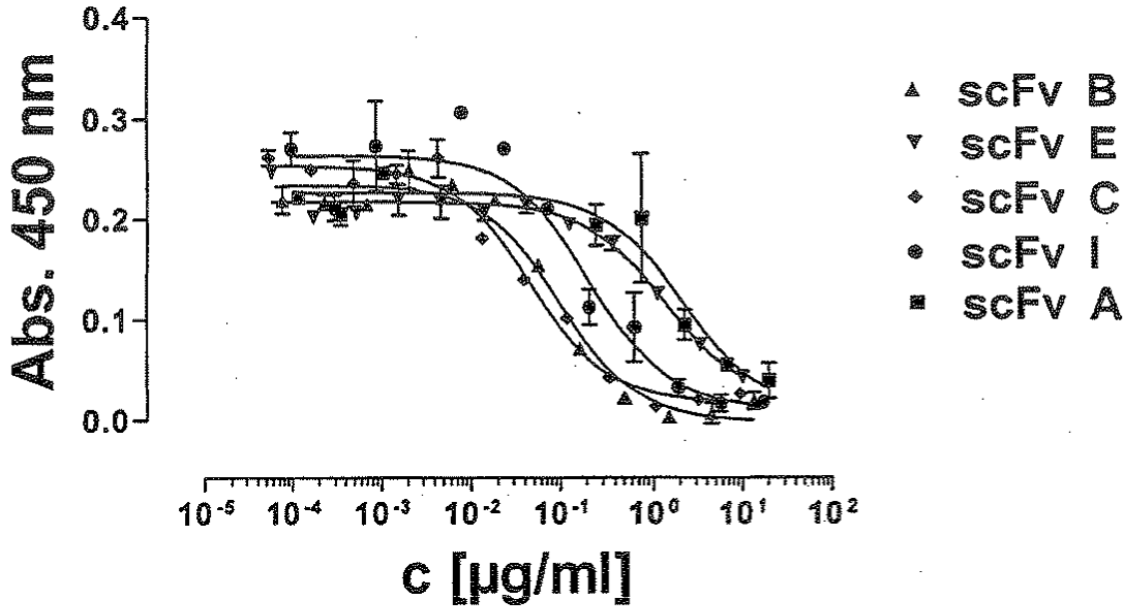

Abs. 450 nm
0.4
0.3
0.2
0.1
0.0
10-5 10-4 10-3 10-2 10-1 100 101 102
c [µg/ml]
scFv B
scFv E
scFv C
scFv I
scFv A

Figure 10 B

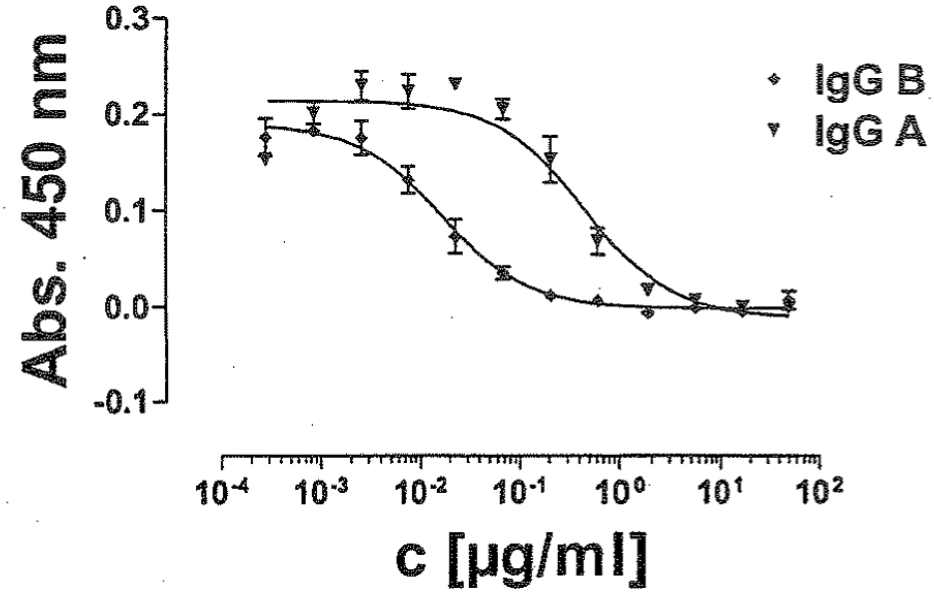

Abs. 450 nm
0.3
0.2
0.1
0.0
-0.1
IgG B
IgG A
10-4
10-3
10-2
10-1
100
101
102
c [µg/ml]

Figure 10 C

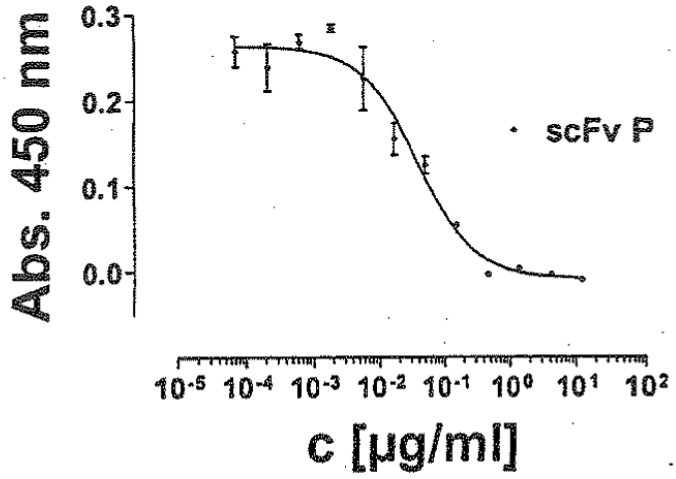

Abs. 450 nm
0.3
0.2
0.1
0.0
scFv P
10-5 10-4 10-3 10-2 10-1 100 101 102
c [µg/ml]

Figure 10 D

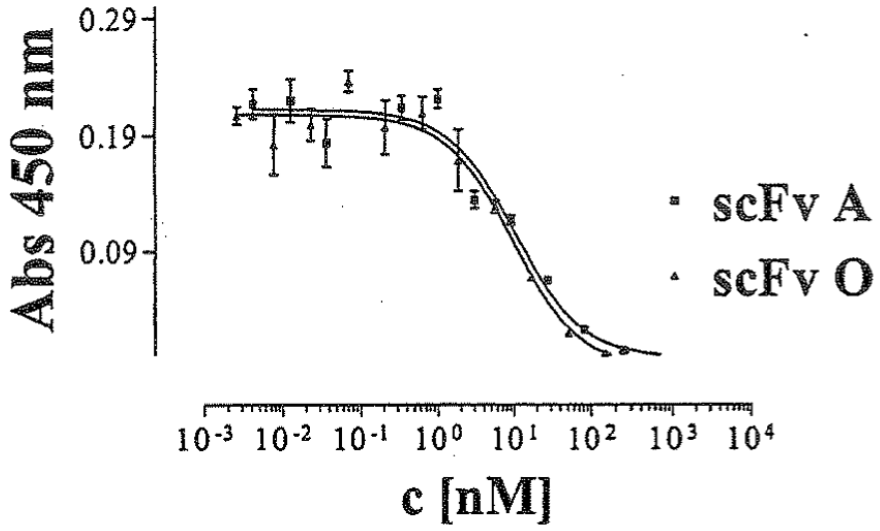

Abs 450 nm
0.29
0.19
0.09
scFv A
scFv O
10-3 10-2 10-1 100 101 102 103 104
c [nM]

Figure 11

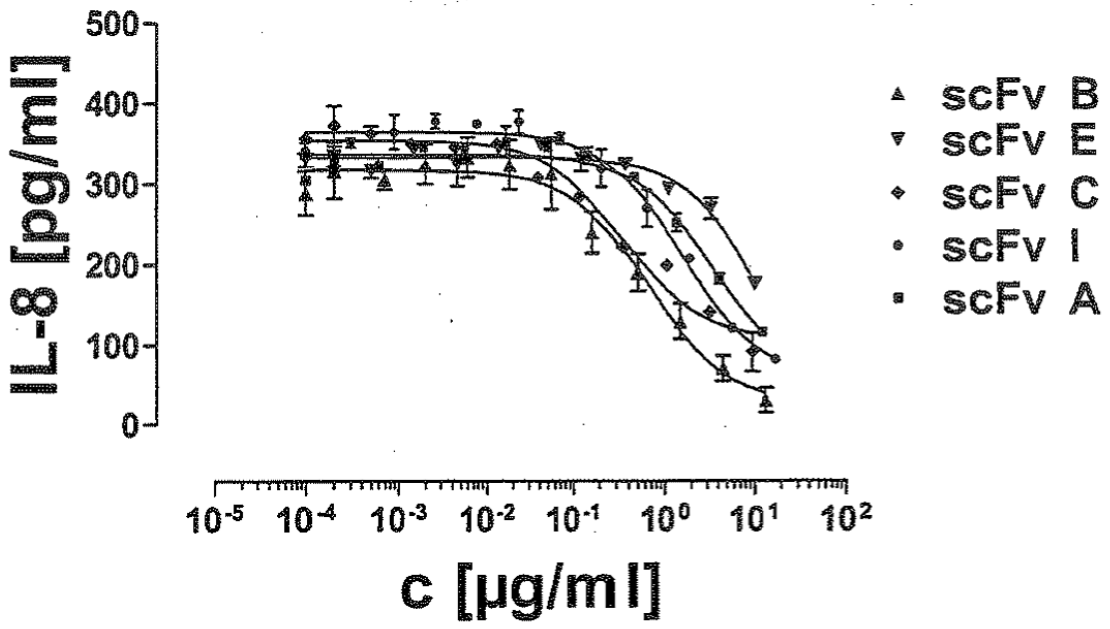

IL-8 [pg/ml]
500
400
300
200
100
0
10-5 10-4 10-3 10-2 10-1 100 101 102
c [µg/ml]
scFv B
scFv E
scFv C
scFv I
scFv A

Figure 12 A

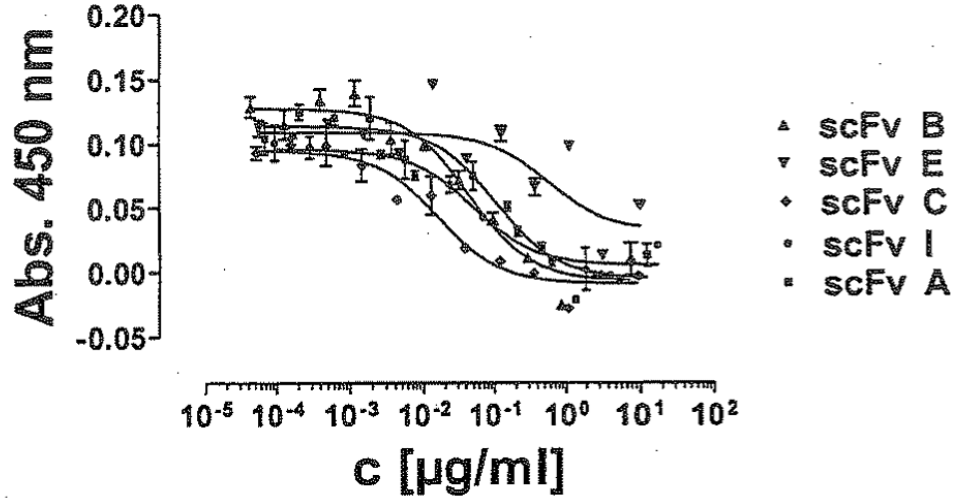

Abs. 450 nm
0.20
0.15
0.10
0.05
0.00
-0.05
10-5 10-4 10-3 10-2 10-1 100 101 102
c [µg/ml]
scFv B
scFv E
scFv C
scFv I
scFv A

Figure 12 B

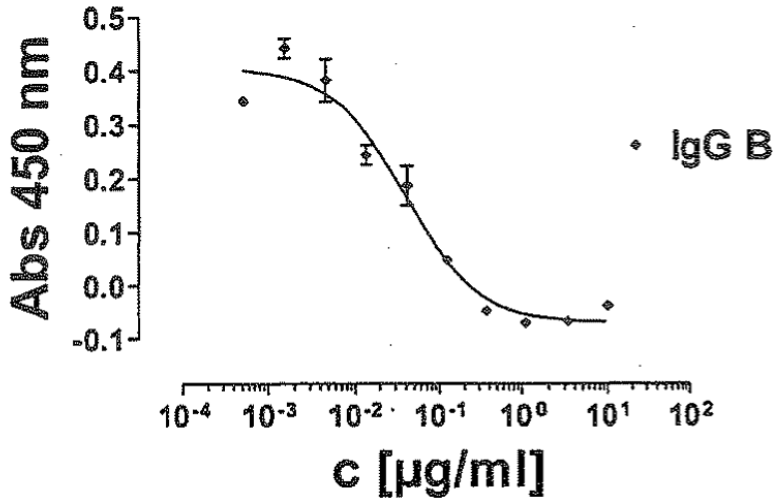

Abs 450 nm
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
IgG B
10-4 10-3 10-2 10-1 100 101 102
c [µg/ml]

Figure 13

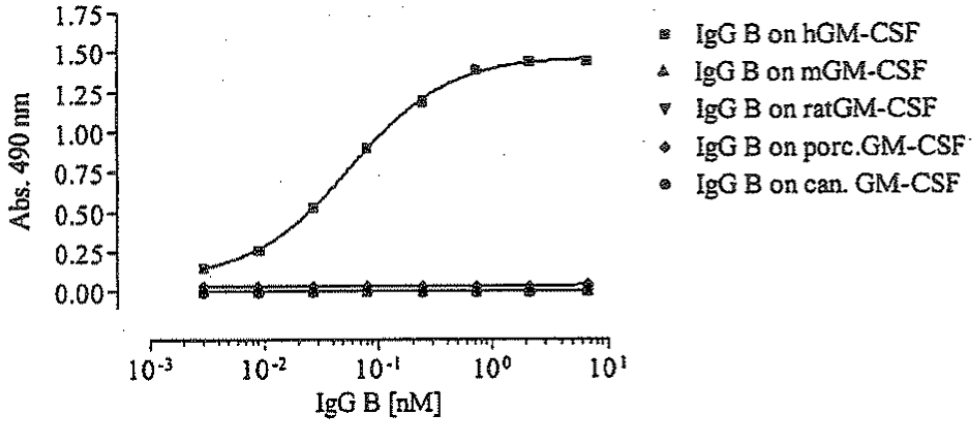

1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
Abs. 490 nm
10-3
10-2
10-1
100
101
IgG B [nM]
IgG B on hGM-CSF
IgG B on mGM-CSF
IgG B on ratGM-CSF
IgG B on porc.GM-CSF
IgG B on can. GM-CSF

Figure 14

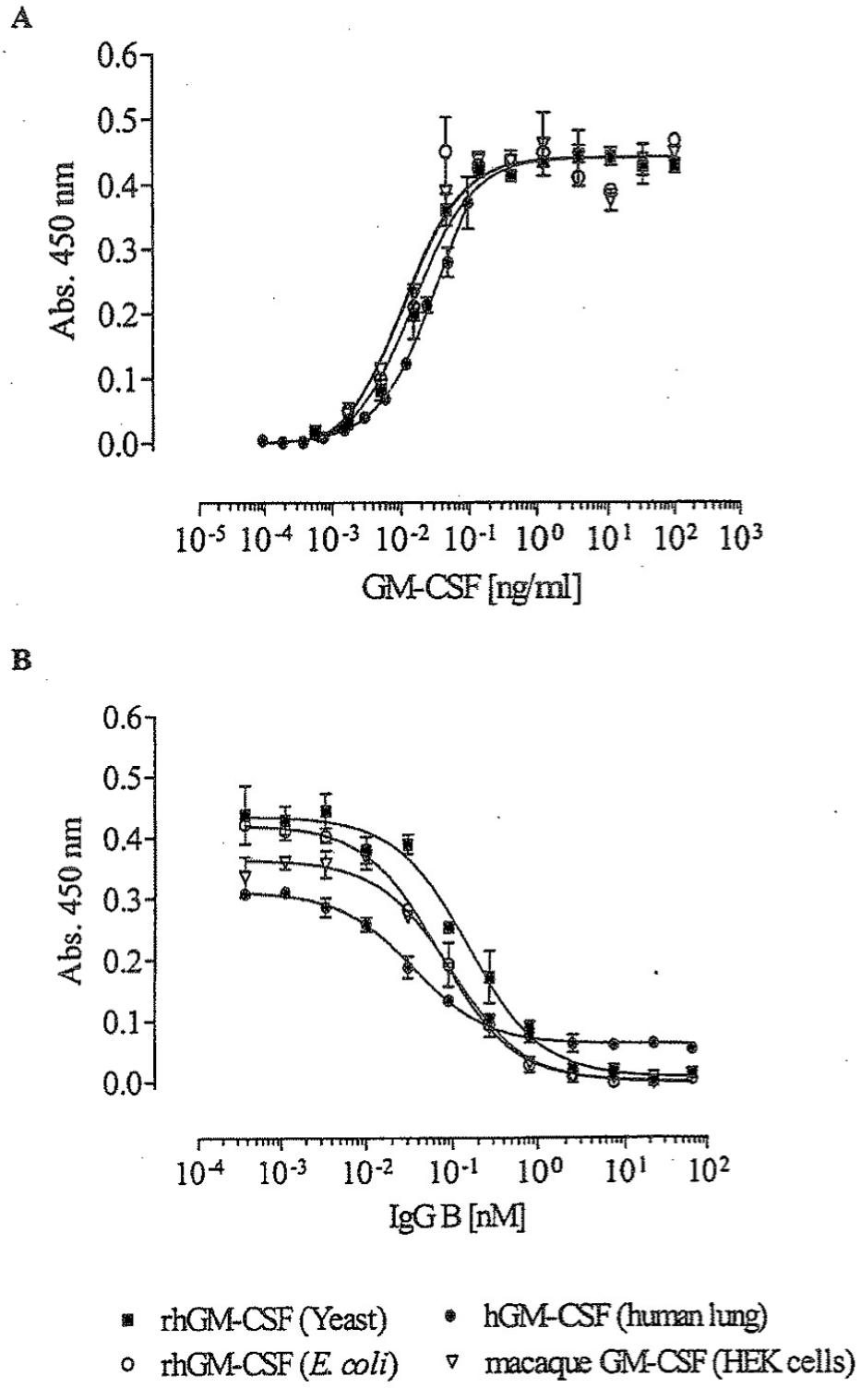
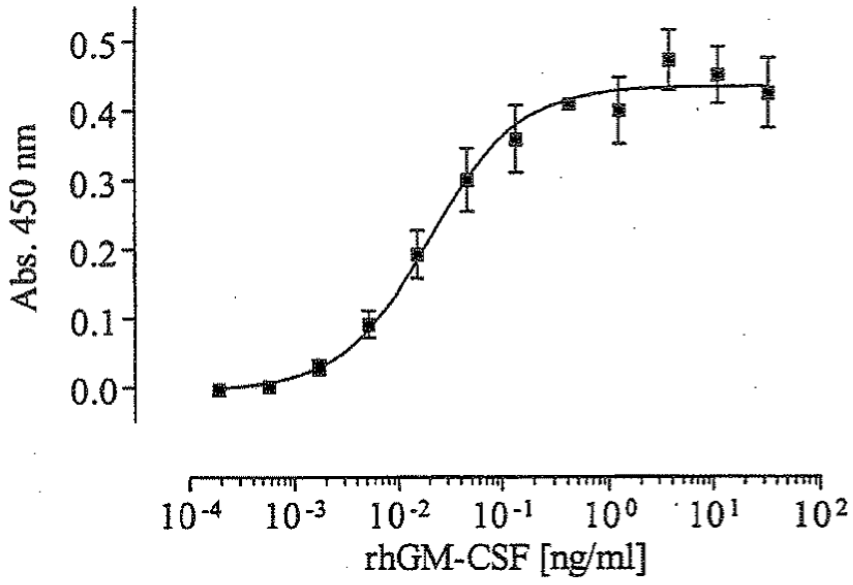

A
Abs. 450 nm
0.6
0.5
0.4
0.3
0.2
0.1
0.0
10-5 10-4 10-3 10-2 10-1 100 101 102 103
GM-CSF [ng/ml]
B
Abs. 450 nm
0.6
0.5
0.4
0.3
0.2
0.1
0.0
10-4 10-3 10-2 10-1 100 101 102
IgG B [nM]
rhGM-CSF (Yeast)
hGM-CSF (human lung)
rhGM-CSF (E. coli)
macaque GM-CSF (HEK cells)

Figure 15

A


Abs. 450 nm
0.5
0.4
0.3
0.2
0.1
0.0
10-4 10-3 10-2 10-1 100 101 102
rhGM-CSF [ng/ml]

B

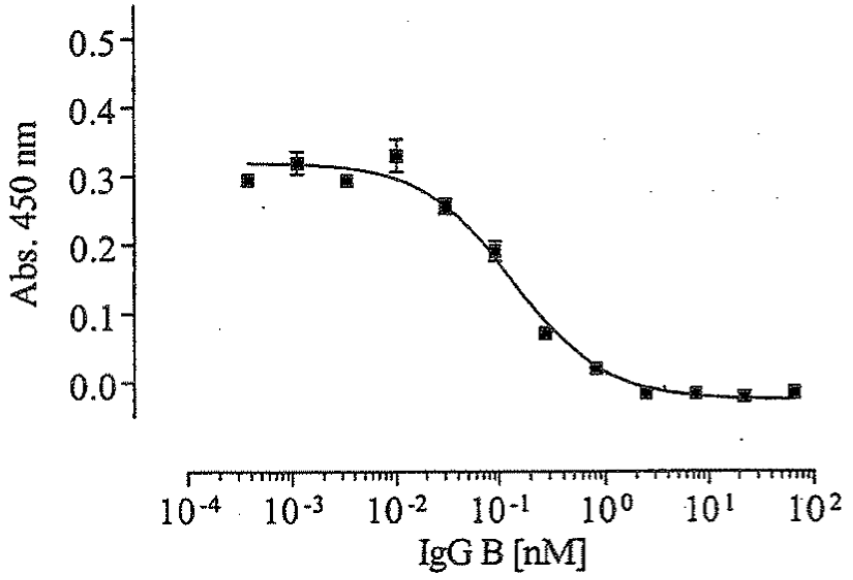
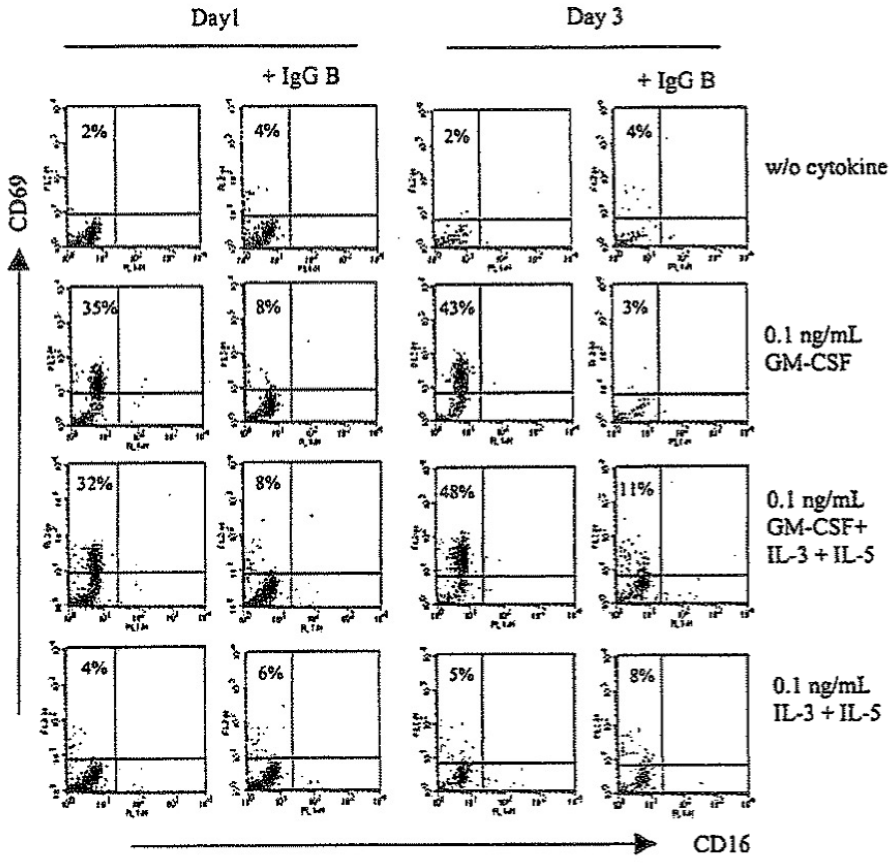

Abs. 450 nm
0.5
0.4
0.3
0.2
0.1
0.0
10-4 10-3 10-2 10-1 100 101 102
IgG B [nM]

Figure 16

A


Day1
Day 3
+ IgG B
+ IgG B
CD69
2%
4%
2%
4%
w/o cytokine
35%
8%
43%
3%
0.1 ng/mL GM-CSF
32%
8%
48%
11%
0.1 ng/mL GM-CSF+ IL-3 + IL-5
4%
6%
5%
8%
0.1 ng/mL IL-3 + IL-5
CD16

B

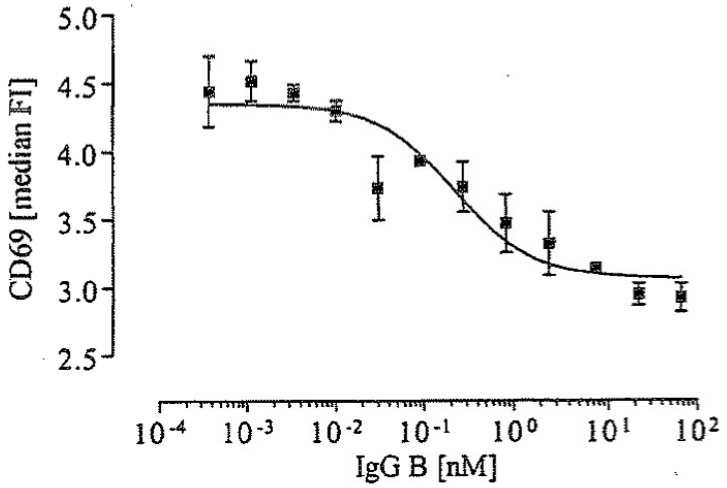

CD69 [median FI]
5.0
4.5
4.0
3.5
3.0
2.5
10-4
10-3
10-2
10-1
100
101
102
IgG B [nM]

Figure 17

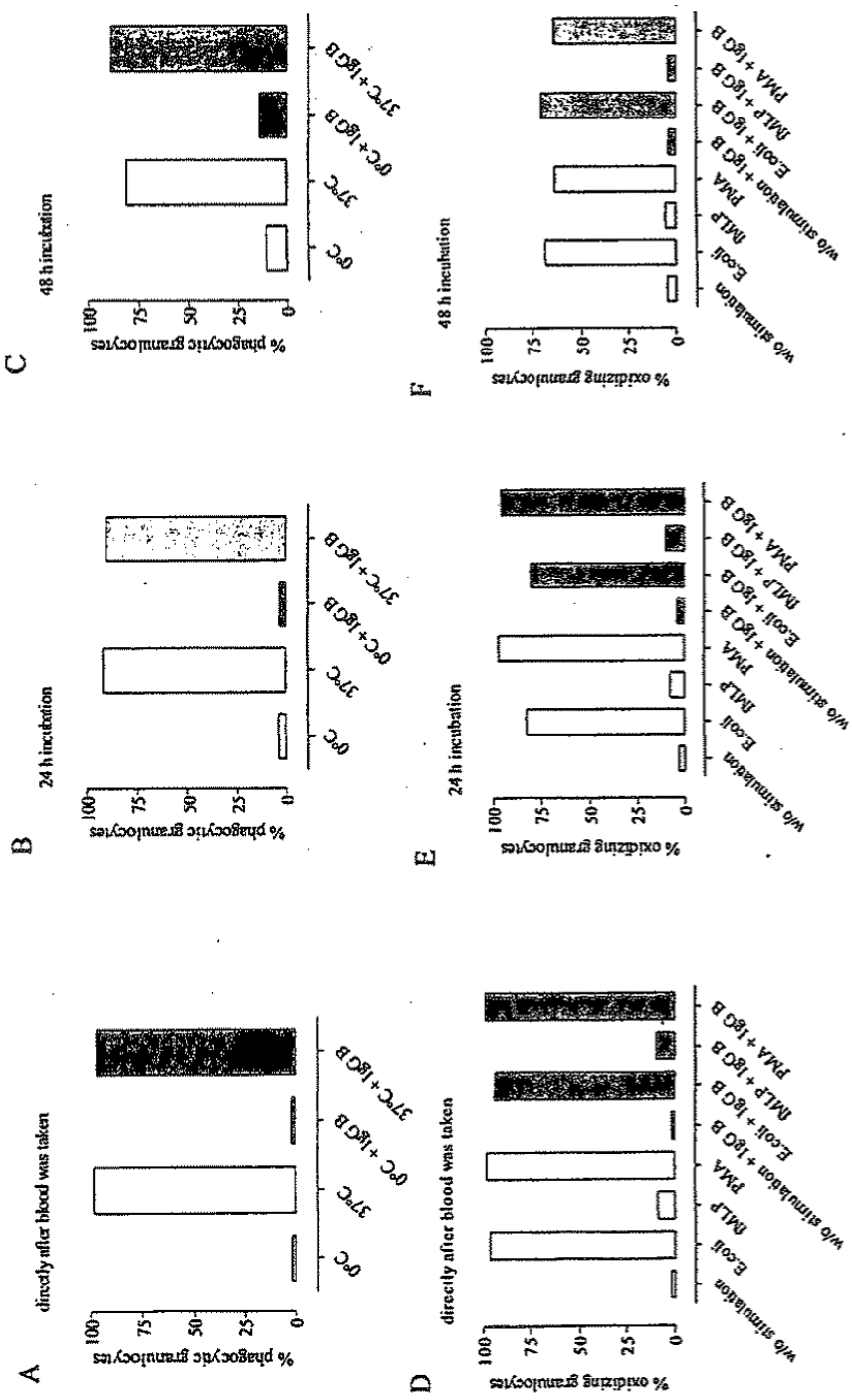
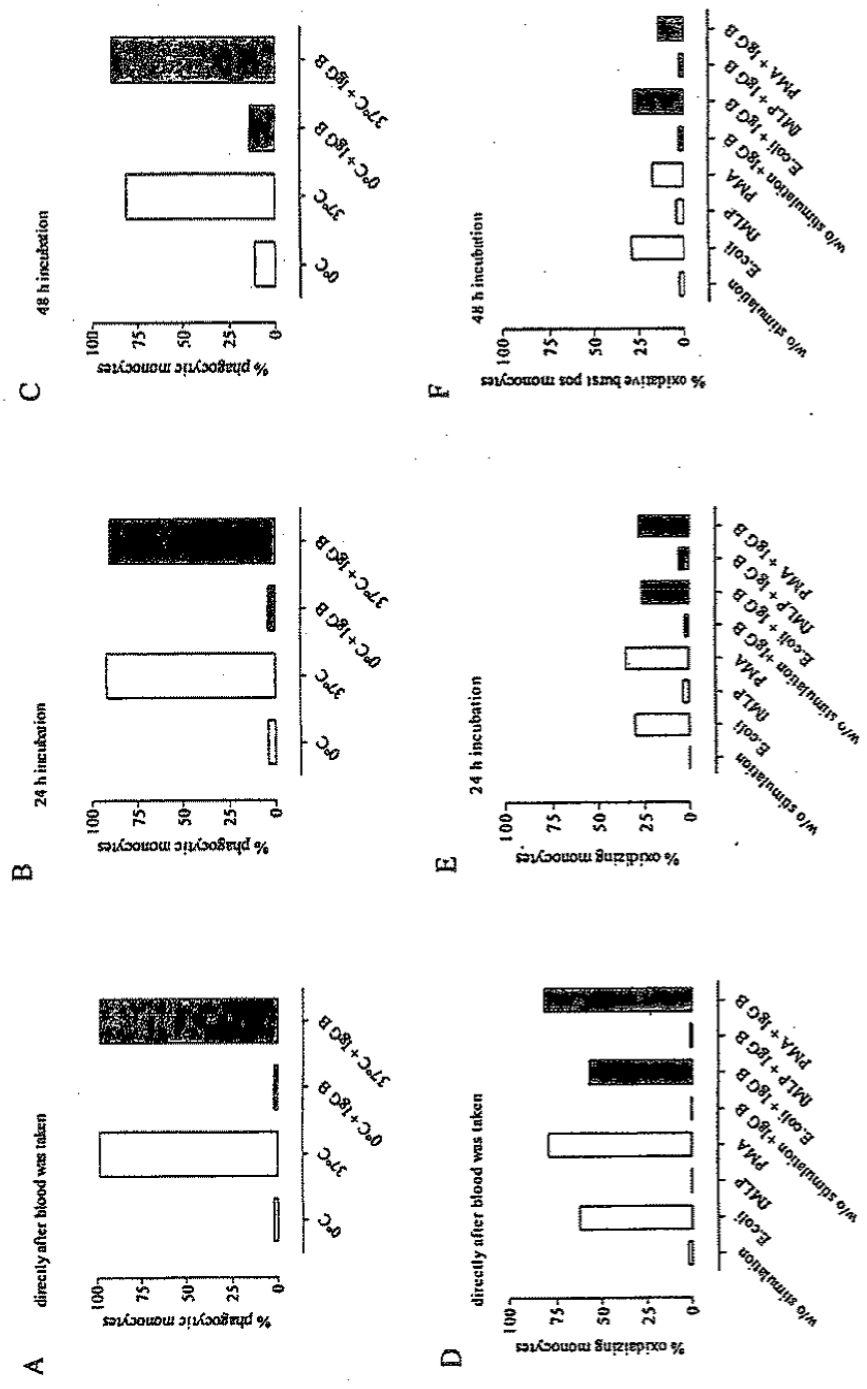

A
directly after blood was taken
% phagocytic granulocytes
100
75
50
25
0
0°C
37°C
0°C + IgG B
37°C + IgG B
B
24 h incubation
% phagocytic granulocytes
C
48 h incubation
% phagocytic granulocytes
D
directly after blood was taken
% oxidizing granulocytes
w/o stimulation
E.coli
MLP
PMA
w/o stimulation + IgG B
E.coli + IgG B
MLP + IgG B
PMA + IgG B
E
24 h incubation
% oxidizing granulocytes
F
48 h incubation
% oxidizing granulocytes

Figure 18


A
directly after blood was taken
% phagocytic monocytes
100
75
50
25
0
0°C
37°C
0°C+IgG B
37°C+IgG B
B
24 h incubation
% phagocytic monocytes
C
48 h incubation
% phagocytic monocytes
D
directly after blood was taken
% oxidizing monocytes
w/o stimulation
E.coli
MLP
PMA
w/o stimulation +IgG B
E.coli + IgG B
MLP + IgG B
PMA + IgG B
E
24 h incubation
% oxidizing monocytes
F
48 h incubation
% oxidative burst pos monocytes