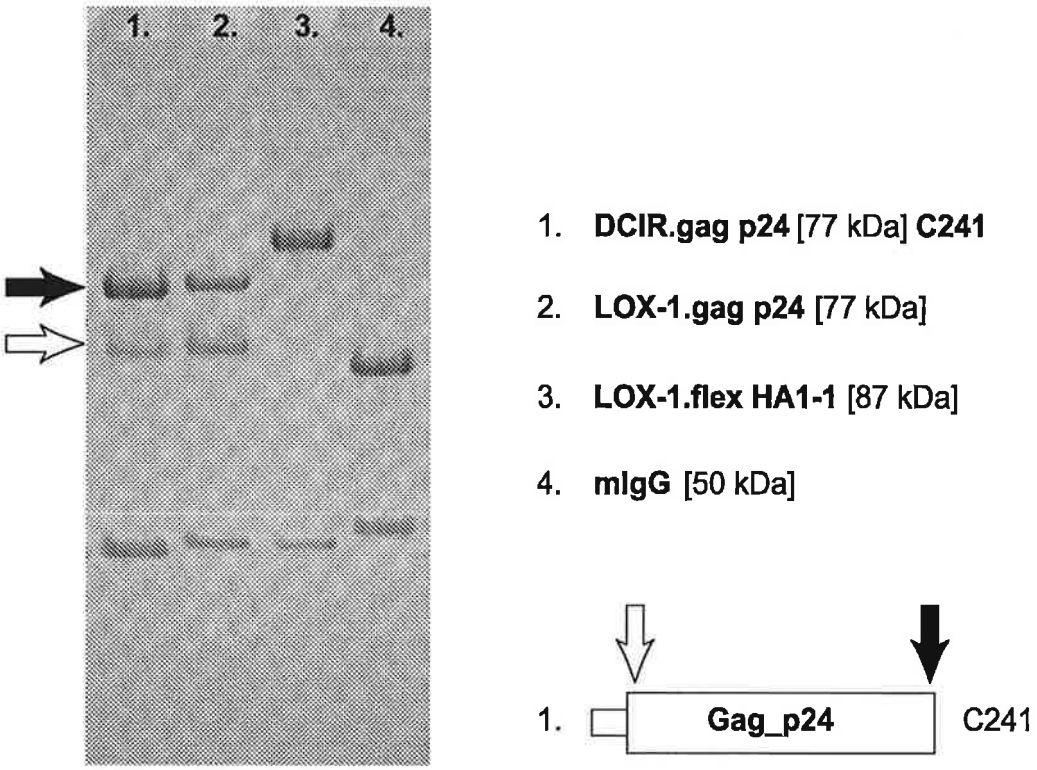

1.
2.
3.
4.
1. DCIR.gag p24 [77 kDa] C241
2. LOX-1.gag p24 [77 kDa]
3. LOX-1.flex HA1-1 [87 kDa]
4. mIgG [50 kDa]
1.
Gag_p24
C241

FIG. 1

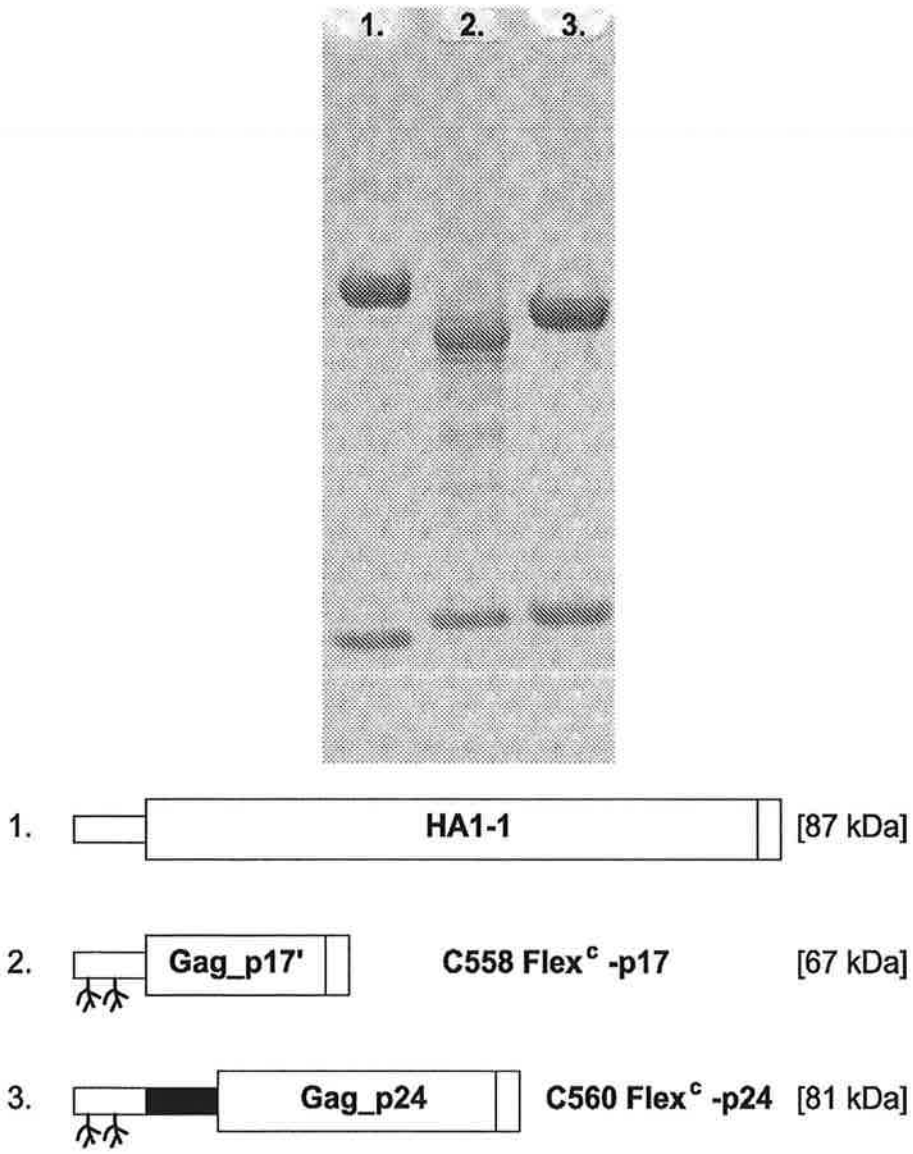

1.
2.
3.
1.
HA1-1
[87 kDa]
2.
Gag_p17'
C558 Flex^c -p17
[67 kDa]
3.
Gag_p24
C560 Flex^c -p24
[81 kDa]

FIG. 2

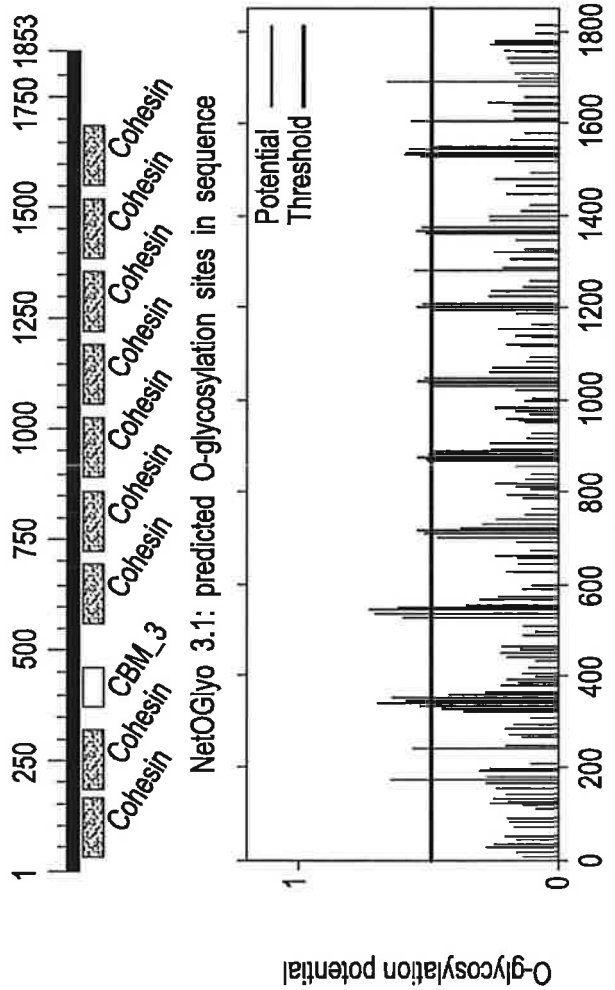


FIG. 3A

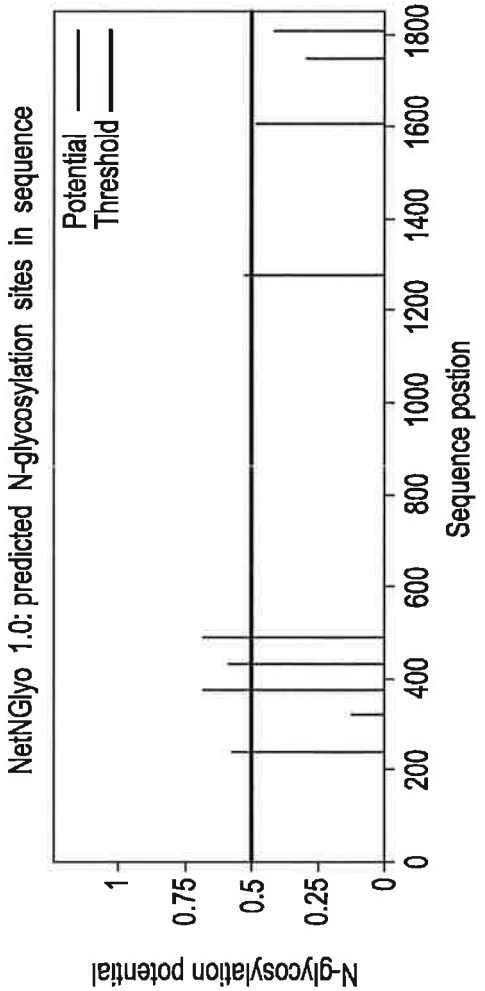


FIG. 3B

FIG. 3C

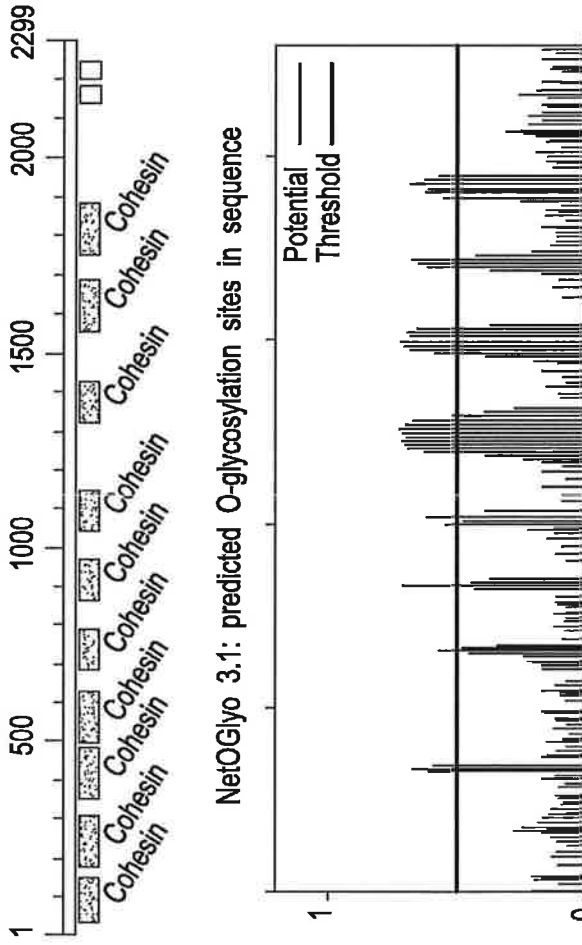


FIG. 4A

FIG. 4B

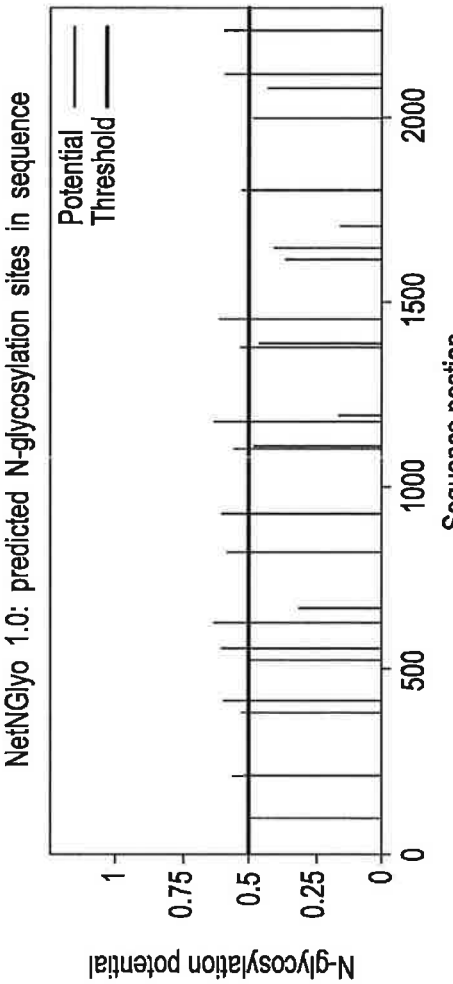
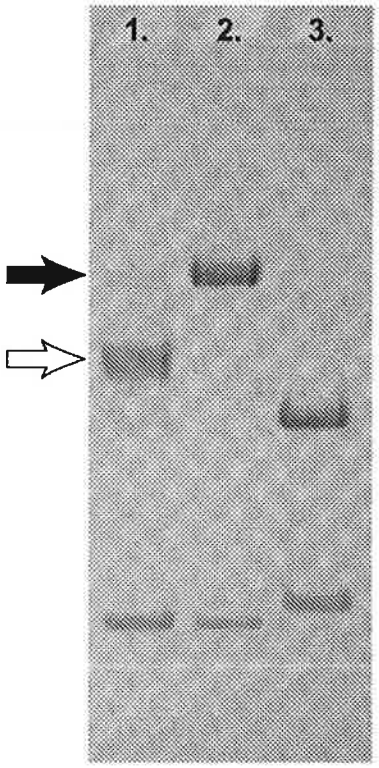
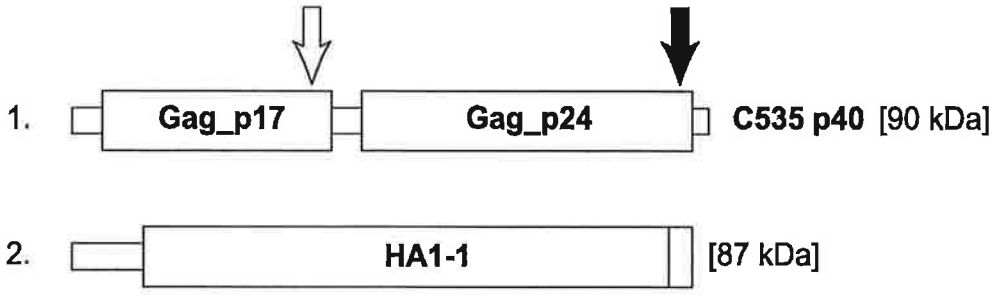


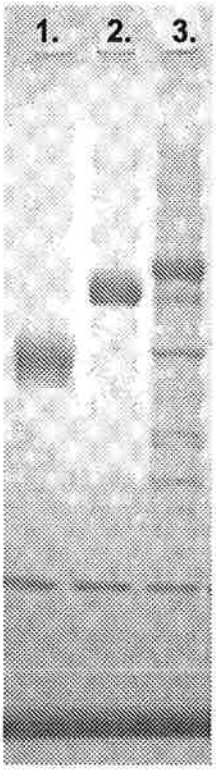
FIG. 4C





3. **mIgG** [50 kDa]

FIG. 5



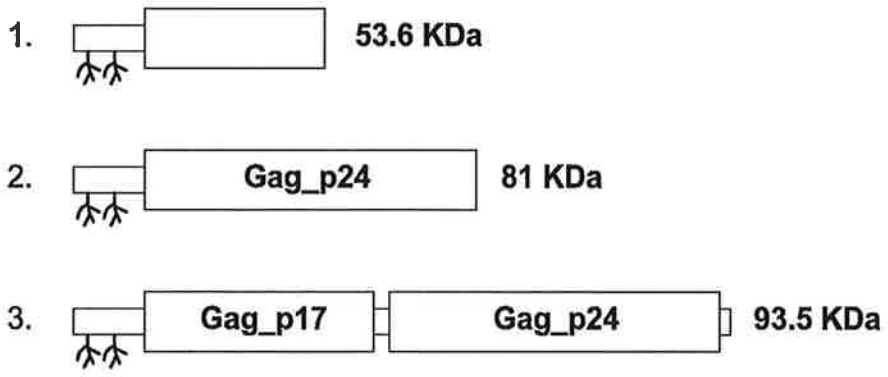
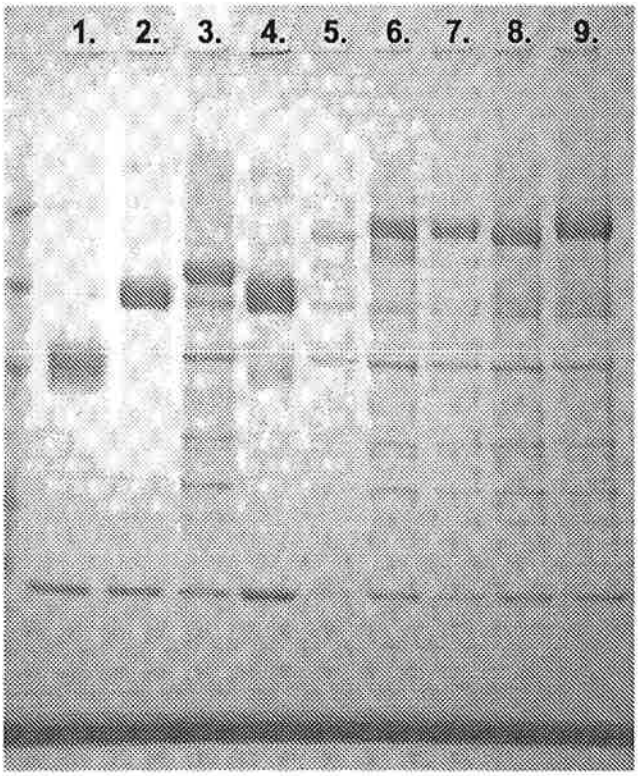


FIG. 6



1. 53.6 KDa
2. Gag_p24 — 81 KDa
3. Gag_p17 | Gag_p24 — 93.5 KDa
4. Gag_p24 — 76.4 KDa
5. Gag_p17 | Gag_p24 | Nef — 117 KDa
6. Gag_p17 | Gag_p24 | Nef — 119 KDa
7. Gag_p17 | Nef | Gag_p24 — 119.7 KDa
8. Gag_p17 | Nef | Gag_p24 — 119.7 KDa
9. Gag_p17 | Nef | Gag_p24 — 122.3 KDa

FIG. 7

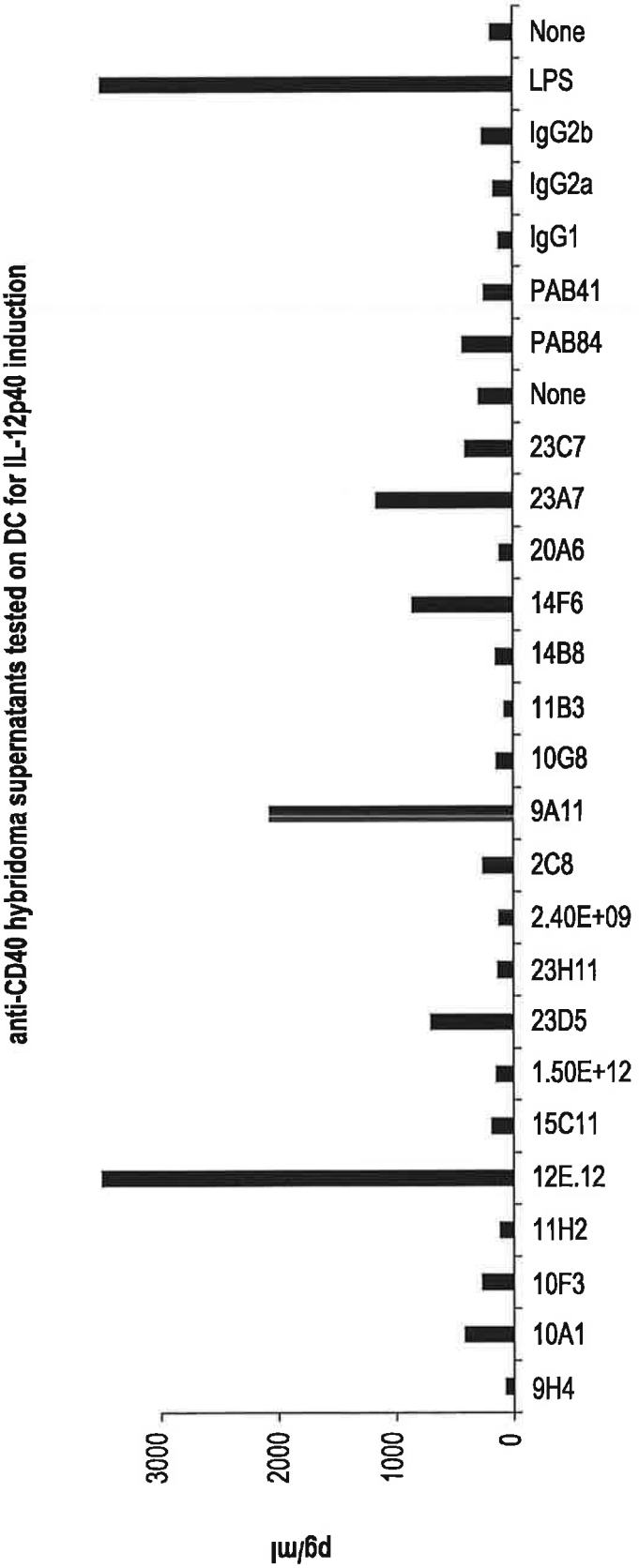

anti-CD40 hybridoma supernatants tested on DC for IL-12p40 induction
None
LPS
IgG2b
IgG2a
IgG1
PAB41
PAB84
None
23C7
23A7
20A6
14F6
14B8
11B3
10G8
9A11
2C8
2.40E+09
23H11
23D5
1.50E+12
15C11
12E.12
11H2
10F3
10A1
9H4
3000
2000
1000
0
pg/ml

FIG. 8

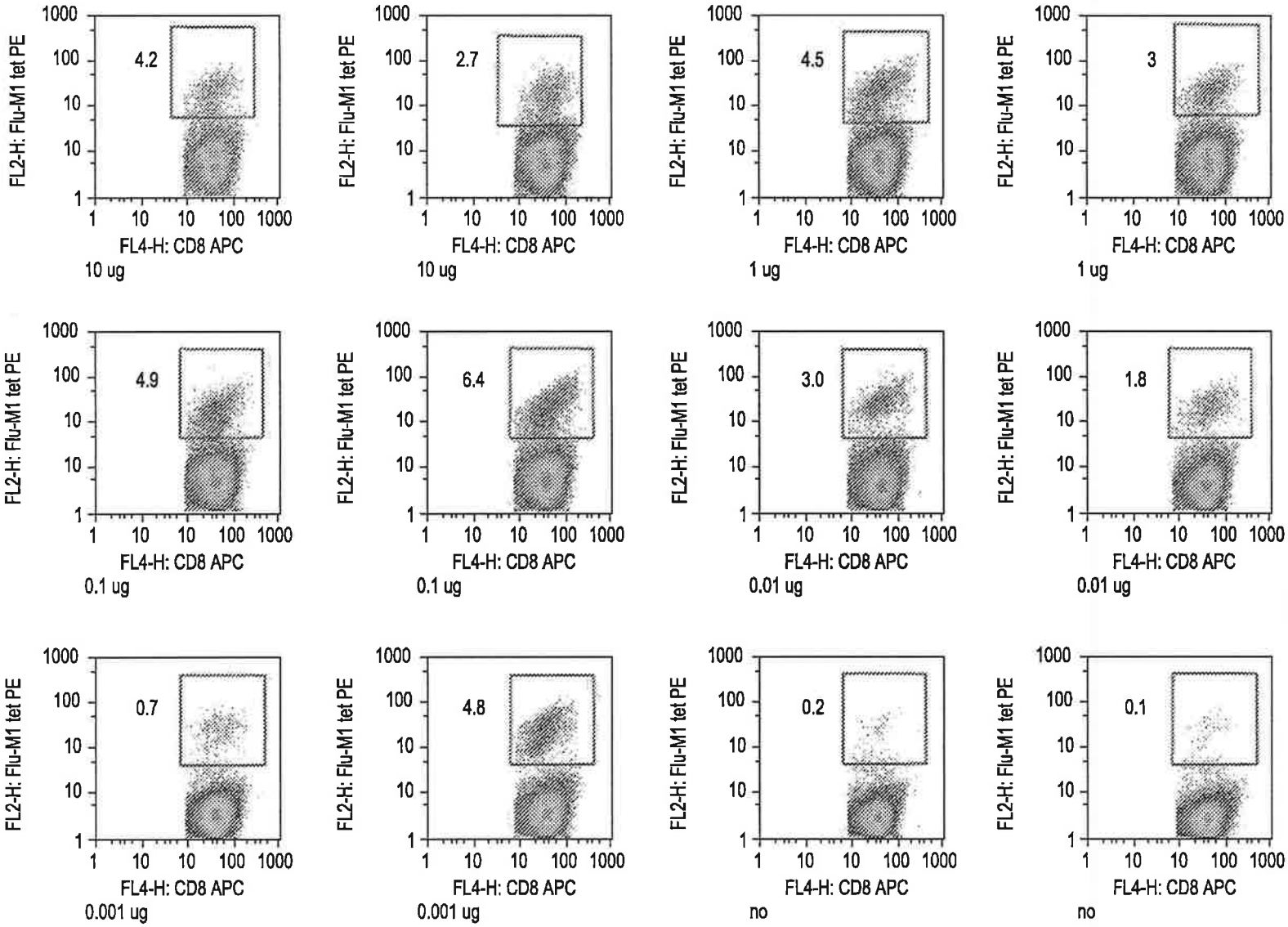

FL2-H: Flu-M1 tet PE
FL4-H: CD8 APC
4.2
10 ug
2.7
10 ug
4.5
1 ug
3
1 ug
4.9
0.1 ug
6.4
0.1 ug
3.0
0.01 ug
1.8
0.01 ug
0.7
0.001 ug
4.8
0.001 ug
0.2
no
0.1
no

FIG. 9

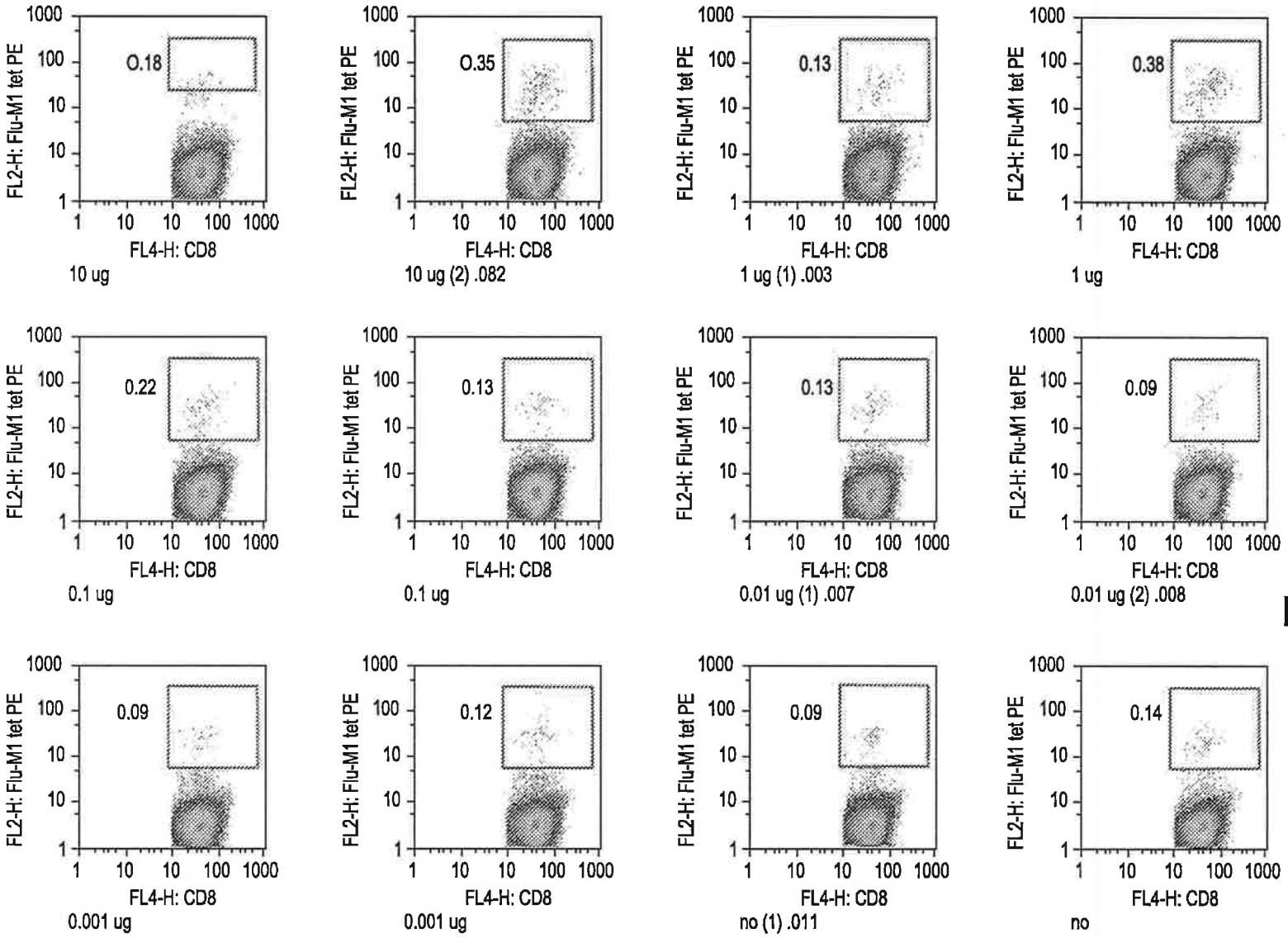

FL2-H: Flu-M1 tet PE
FL4-H: CD8
0.18
10 ug
0.35
10 ug (2) .082
0.13
1 ug (1) .003
0.38
1 ug
0.22
0.1 ug
0.13
0.1 ug
0.13
0.01 ug (1) .007
0.09
0.01 ug (2) .008
0.09
0.001 ug
0.12
0.001 ug
0.09
no (1) .011
0.14
no

FIG. 10

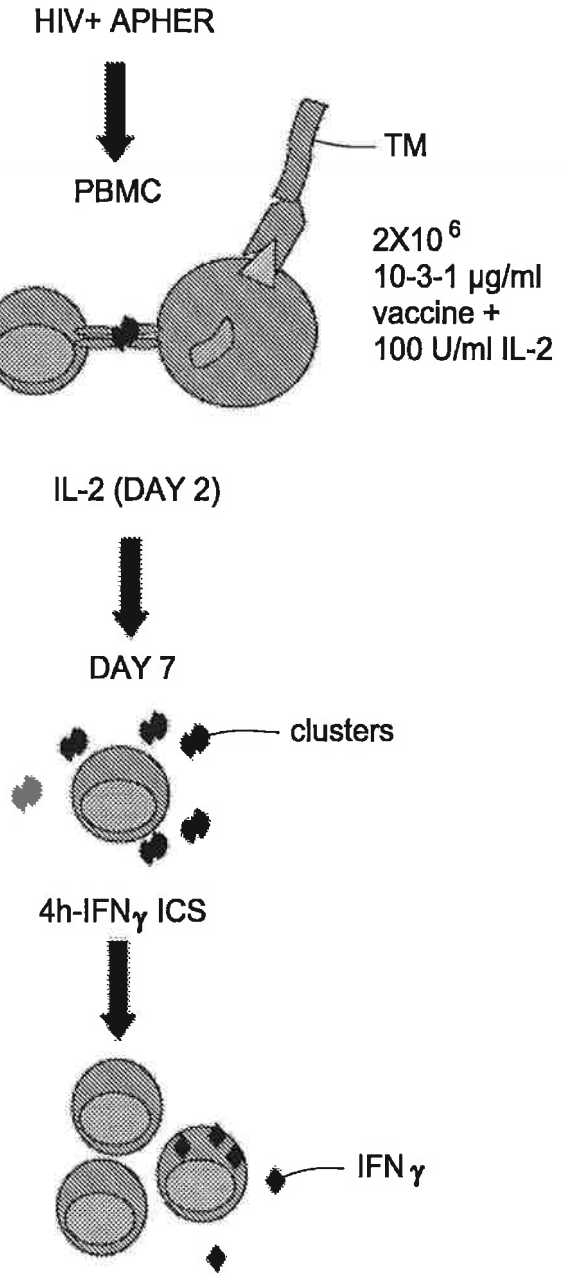

HIV+ APHER
PBMC
TM
2X10 6
10-3-1 µg/ml
vaccine +
100 U/ml IL-2
IL-2 (DAY 2)
DAY 7
clusters
4h-IFNγ ICS
IFNγ

FIG. 11

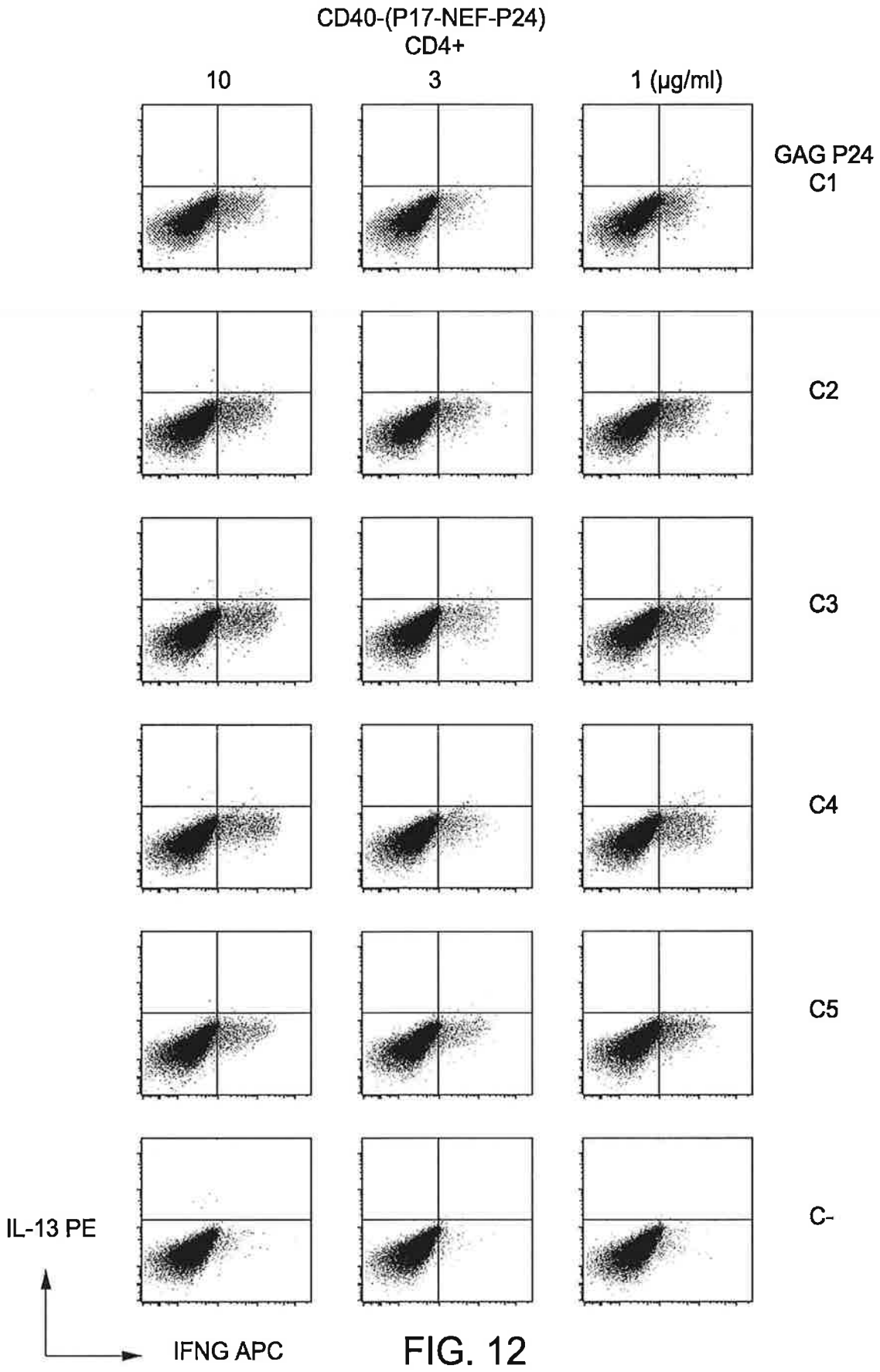

CD40-(P17-NEF-P24)
CD4+
10
3
1 (µg/ml)
GAG P24
C1
C2
C3
C4
C5
C-
IL-13 PE
IFNG APC

FIG. 12

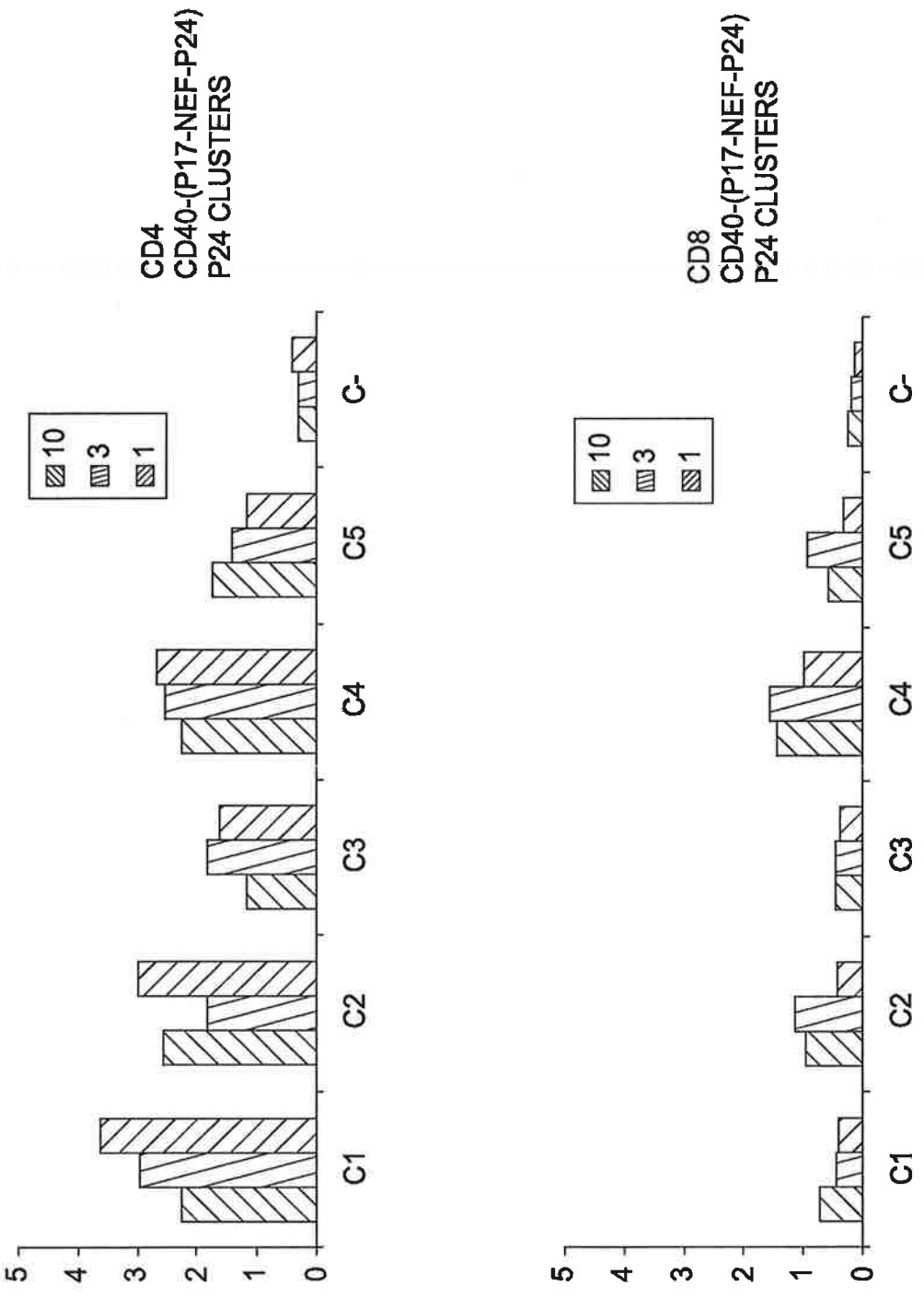

CD4
CD40-(P17-NEF-P24)
P24 CLUSTERS
10
3
1
0
1
2
3
4
5
C1
C2
C3
C4
C5
C-
CD8
CD40-(P17-NEF-P24)
P24 CLUSTERS
10
3
1
0
1
2
3
4
5
C1
C2
C3
C4
C5
C-

FIG. 13

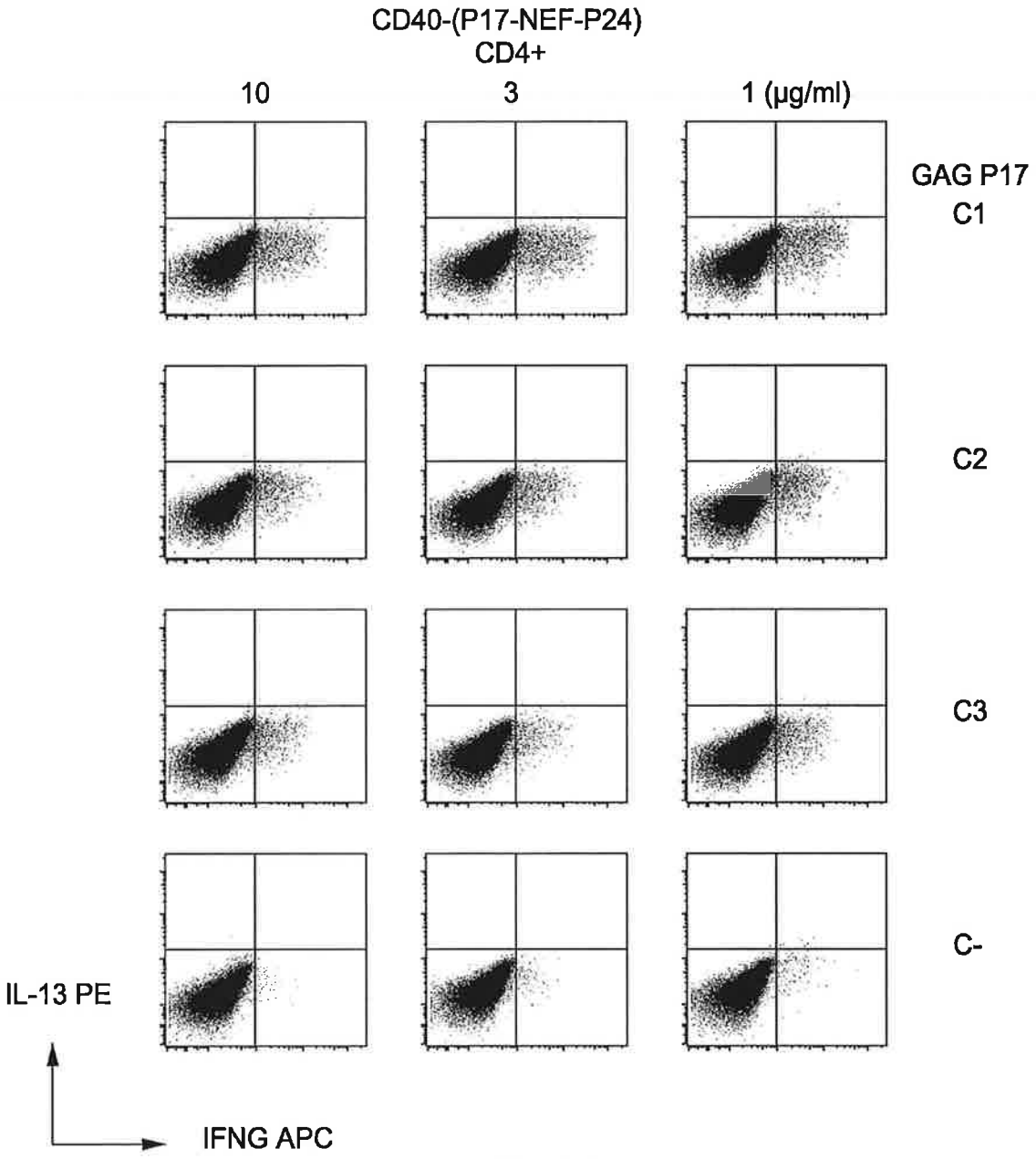
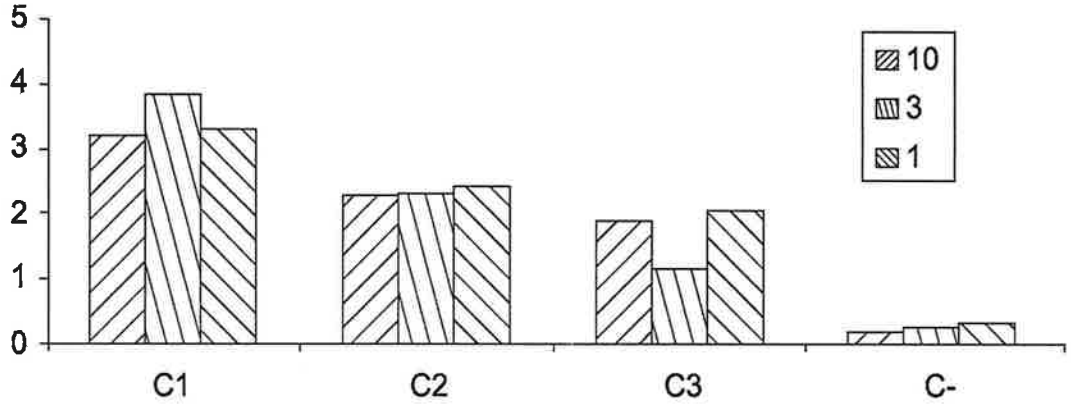
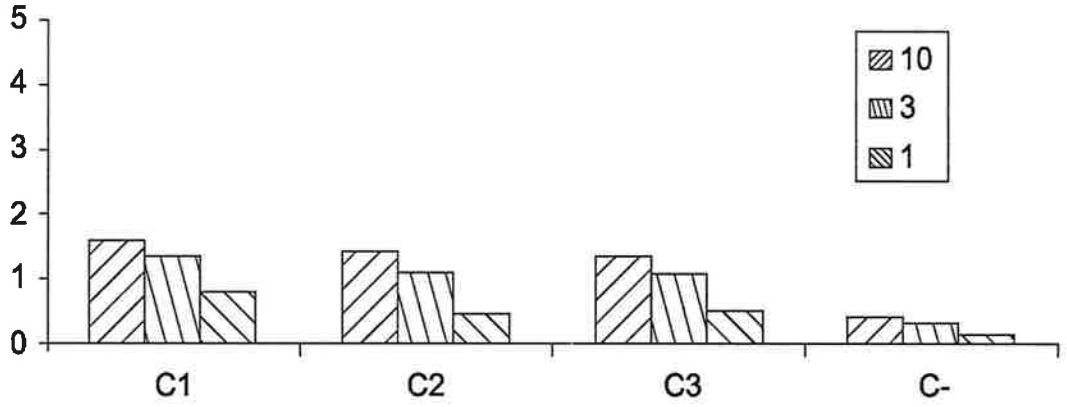

CD40-(P17-NEF-P24)
CD4+
10
3
1 (µg/ml)
GAG P17
C1
C2
C3
C-
IL-13 PE
IFNG APC

FIG. 14



CD4
CD40-(P17-NEF-P24)
P17 CLUSTERS



CD8
CD40-(P17-NEF-P24)
P17 CLUSTERS

FIG. 15

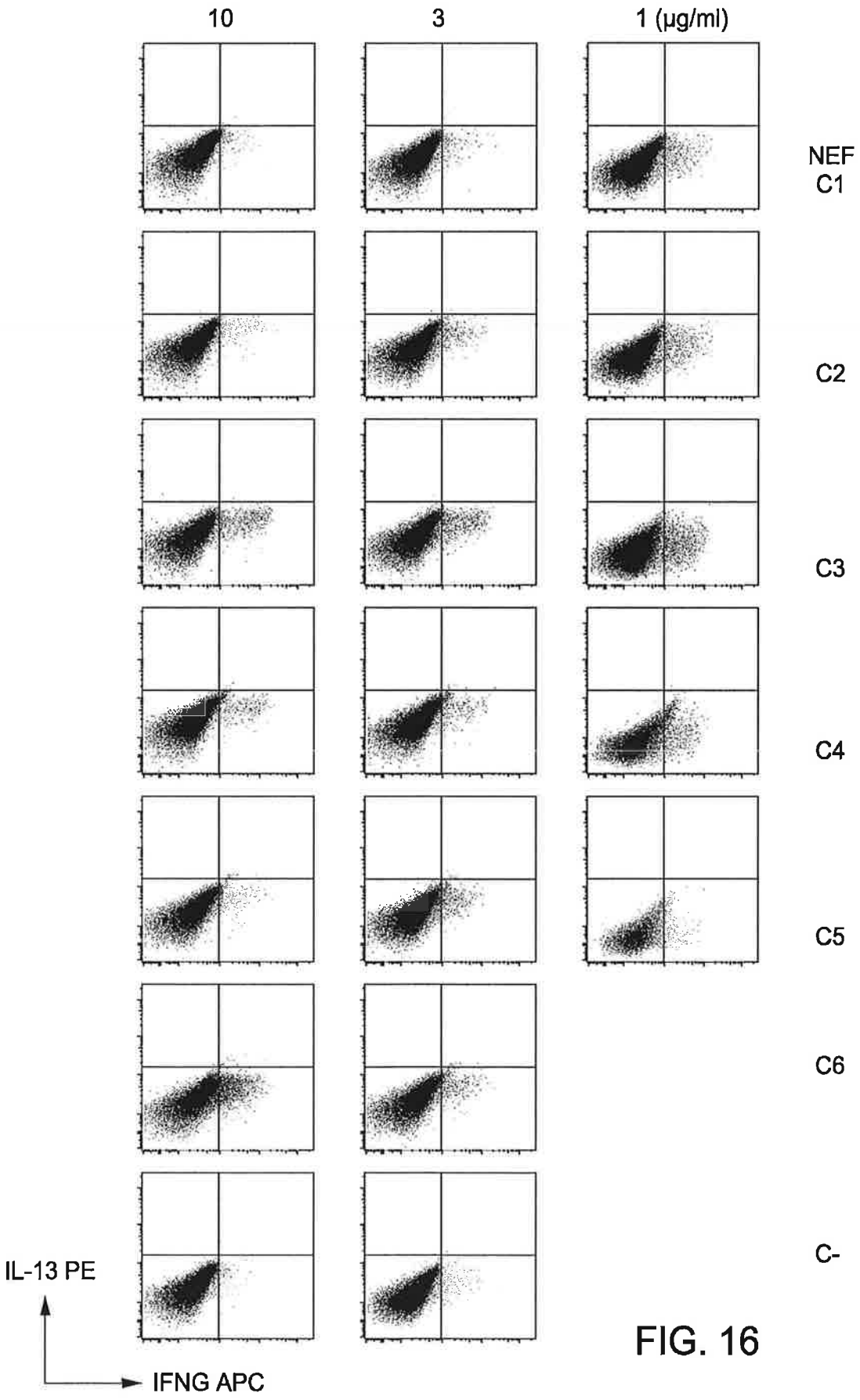


FIG. 16

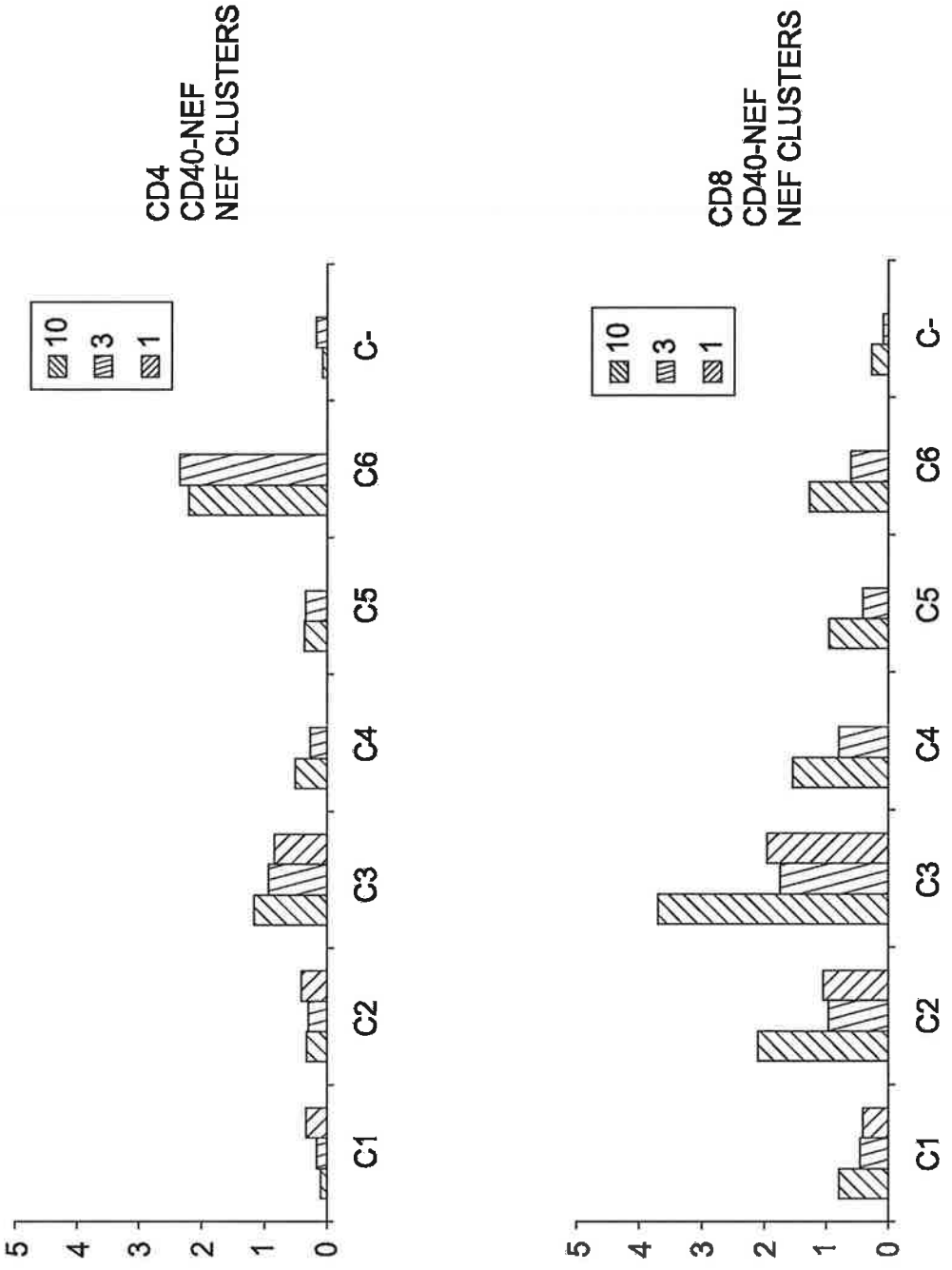

CD4
CD40-NEF
NEF CLUSTERS
10
3
1
0
1
2
3
4
5
C1
C2
C3
C4
C5
C6
C-
CD8
CD40-NEF
NEF CLUSTERS
10
3
1
0
1
2
3
4
5
C1
C2
C3
C4
C5
C6
C-

FIG. 17

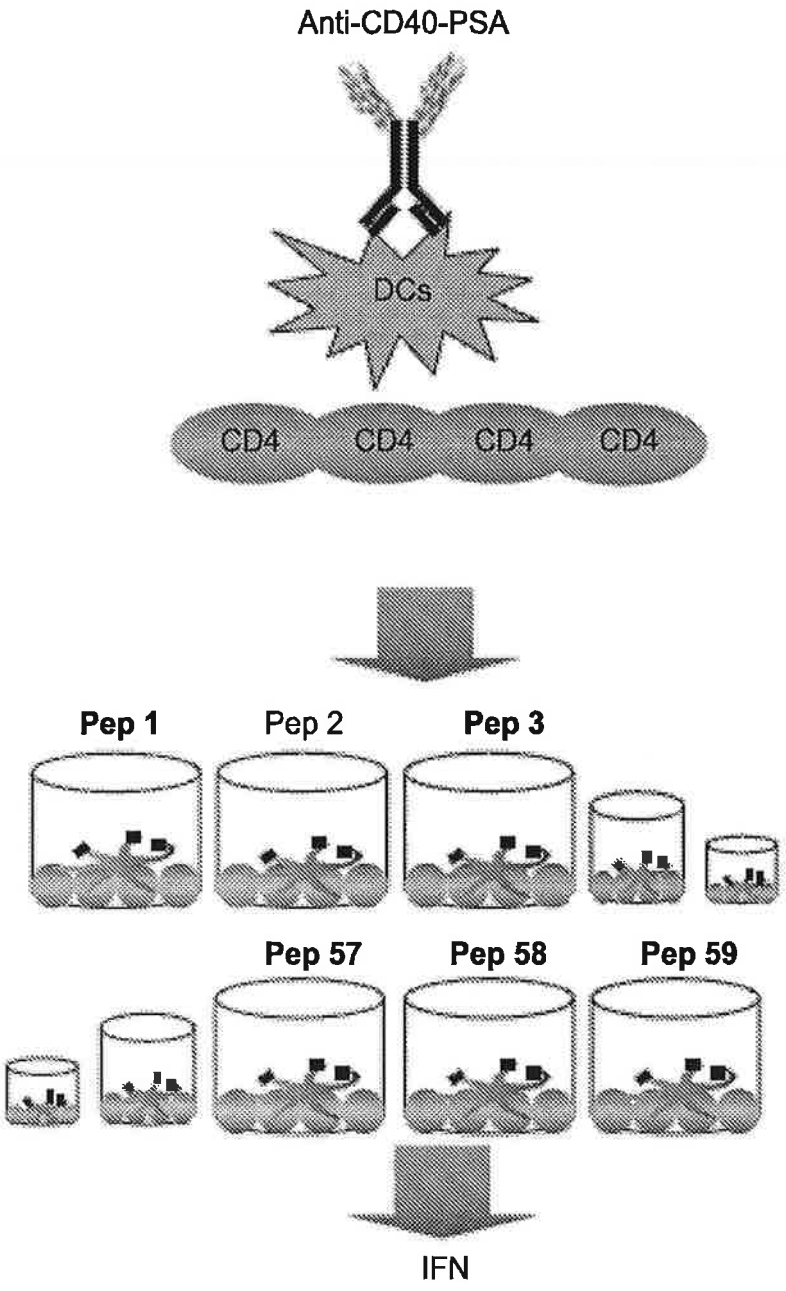

Anti-CD40-PSA
DCs
CD4
CD4
CD4
CD4
Pep 1
Pep 2
Pep 3
Pep 57
Pep 58
Pep 59
IFN

FIG. 18

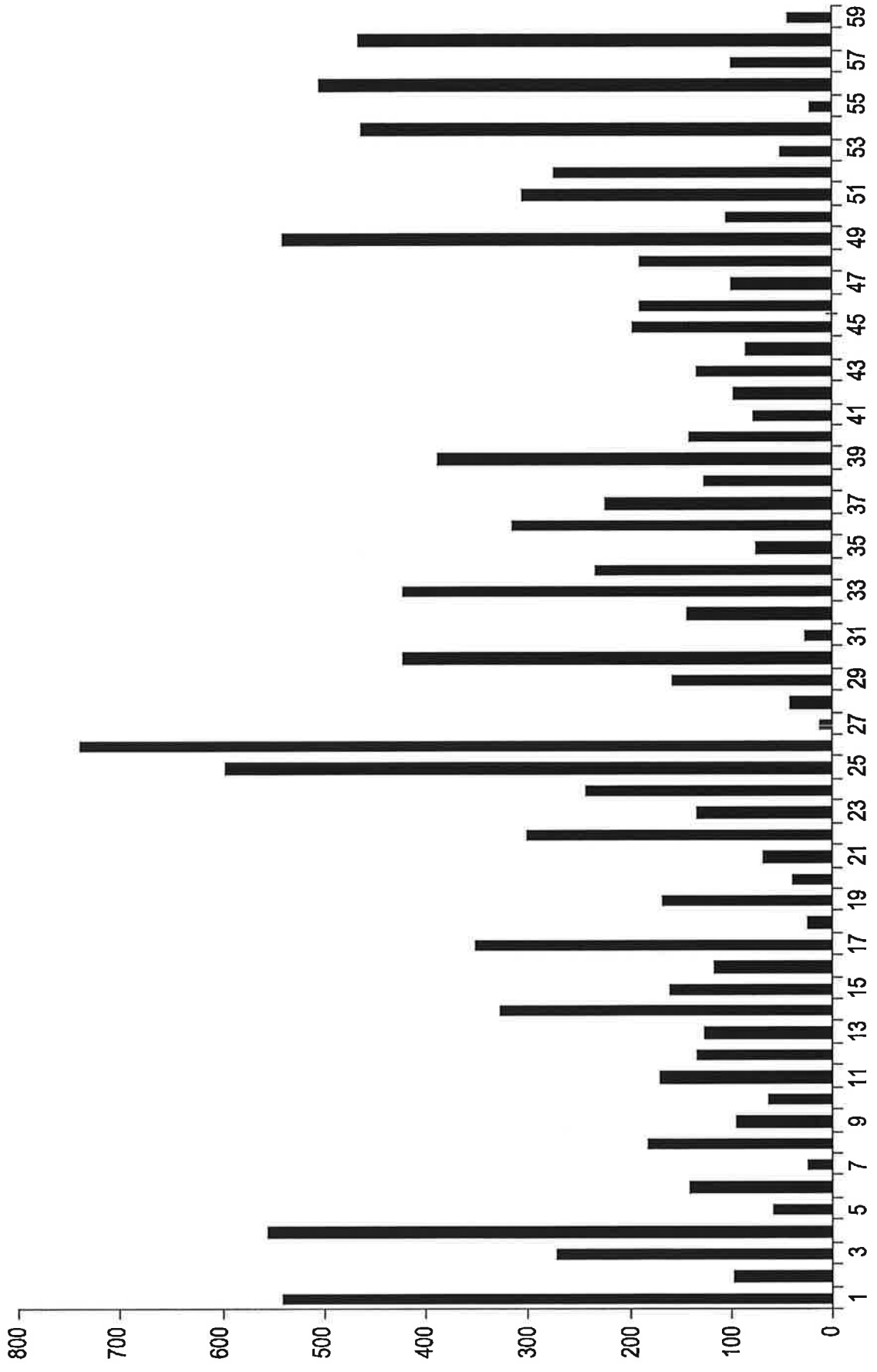

800
700
600
500
400
300
200
100
0
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
35
37
39
41
43
45
47
49
51
53
55
57
59
PSA-derived peptide (15 mers overlapping 11 amino acids), 5

FIG. 19

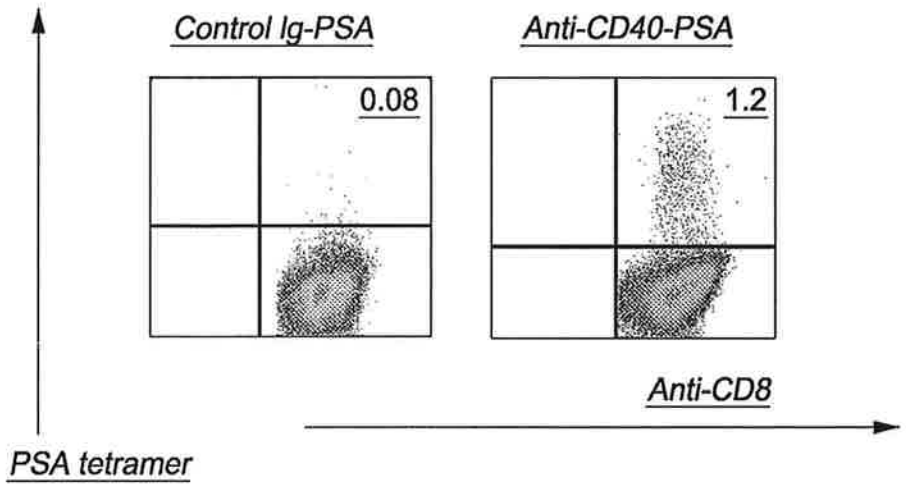


FIG. 20

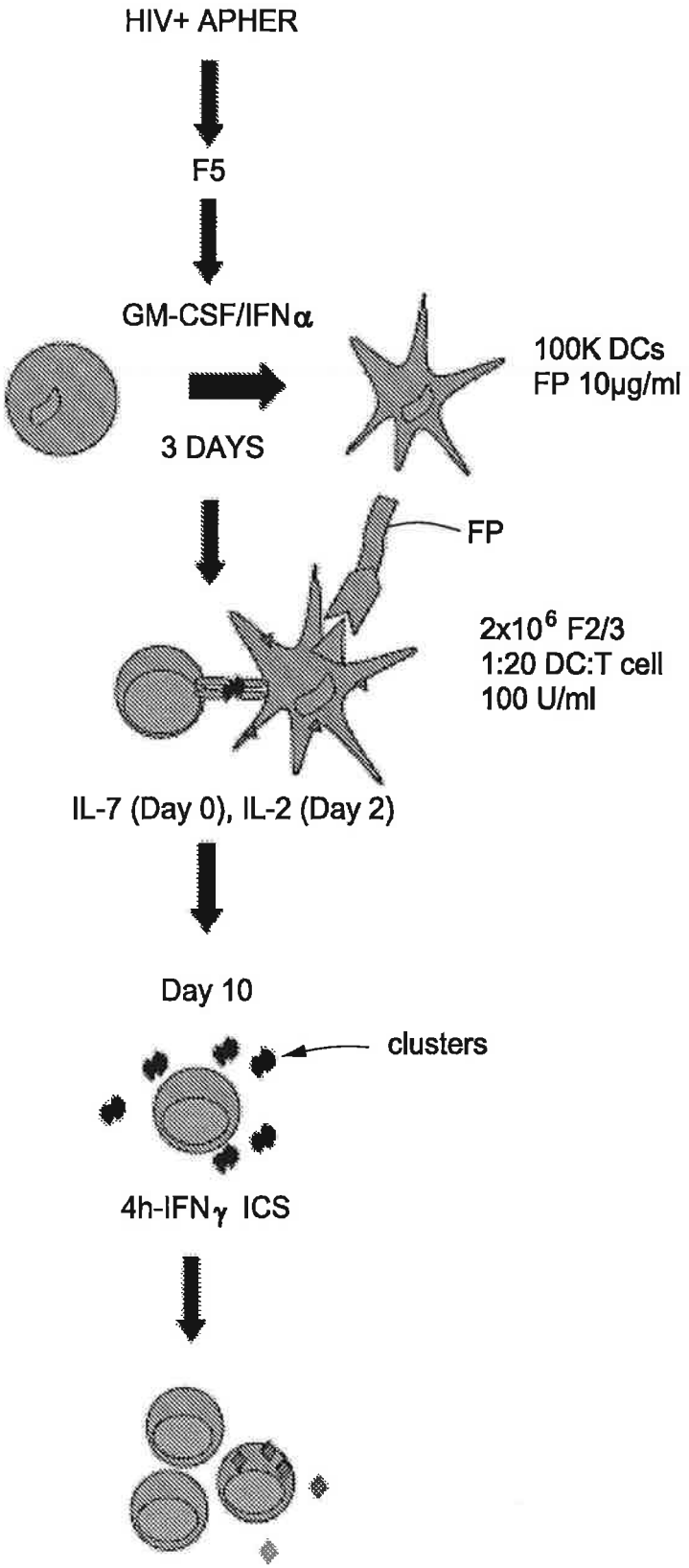

HIV+ APHER
F5
GM-CSF/IFNα
3 DAYS
100K DCs
FP 10µg/ml
FP
2x10^6 F2/3
1:20 DC:T cell
100 U/ml
IL-7 (Day 0), IL-2 (Day 2)
Day 10
clusters
4h-IFNγ ICS

FIG. 21

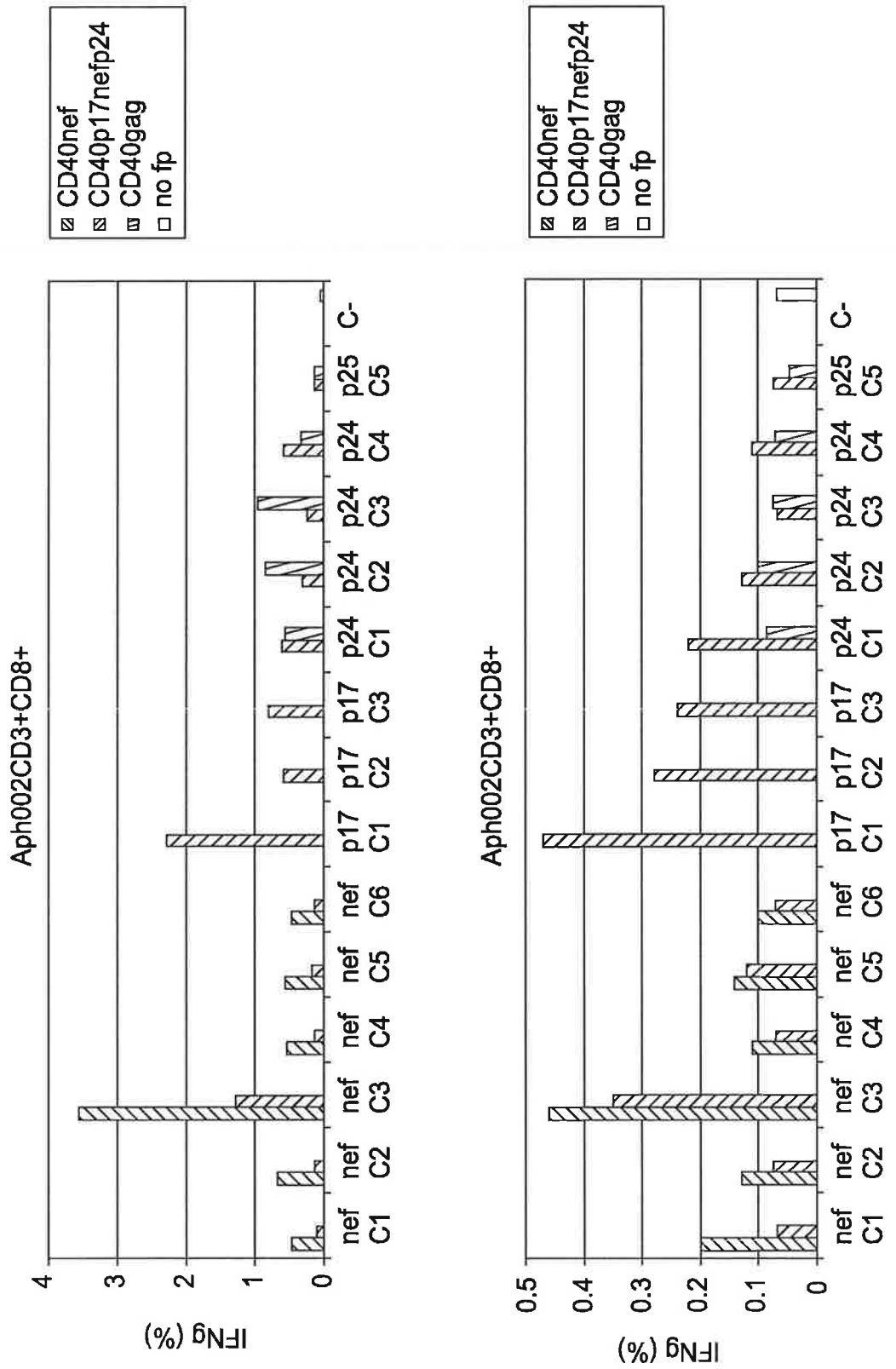

Aph002CD3+CD8+
IFNg (%)
0
1
2
3
4
nef C1
nef C2
nef C3
nef C4
nef C5
nef C6
p17 C1
p17 C2
p17 C3
p24 C1
p24 C2
p24 C3
p24 C4
p25 C5
C-
CD40nef
CD40p17nefp24
CD40gag
no fp
Aph002CD3+CD8+
IFNg (%)
0
0.1
0.2
0.3
0.4
0.5
nef C1
nef C2
nef C3
nef C4
nef C5
nef C6
p17 C1
p17 C2
p17 C3
p24 C1
p24 C2
p24 C3
p24 C4
p25 C5
C-
CD40nef
CD40p17nefp24
CD40gag
no fp

FIG. 22

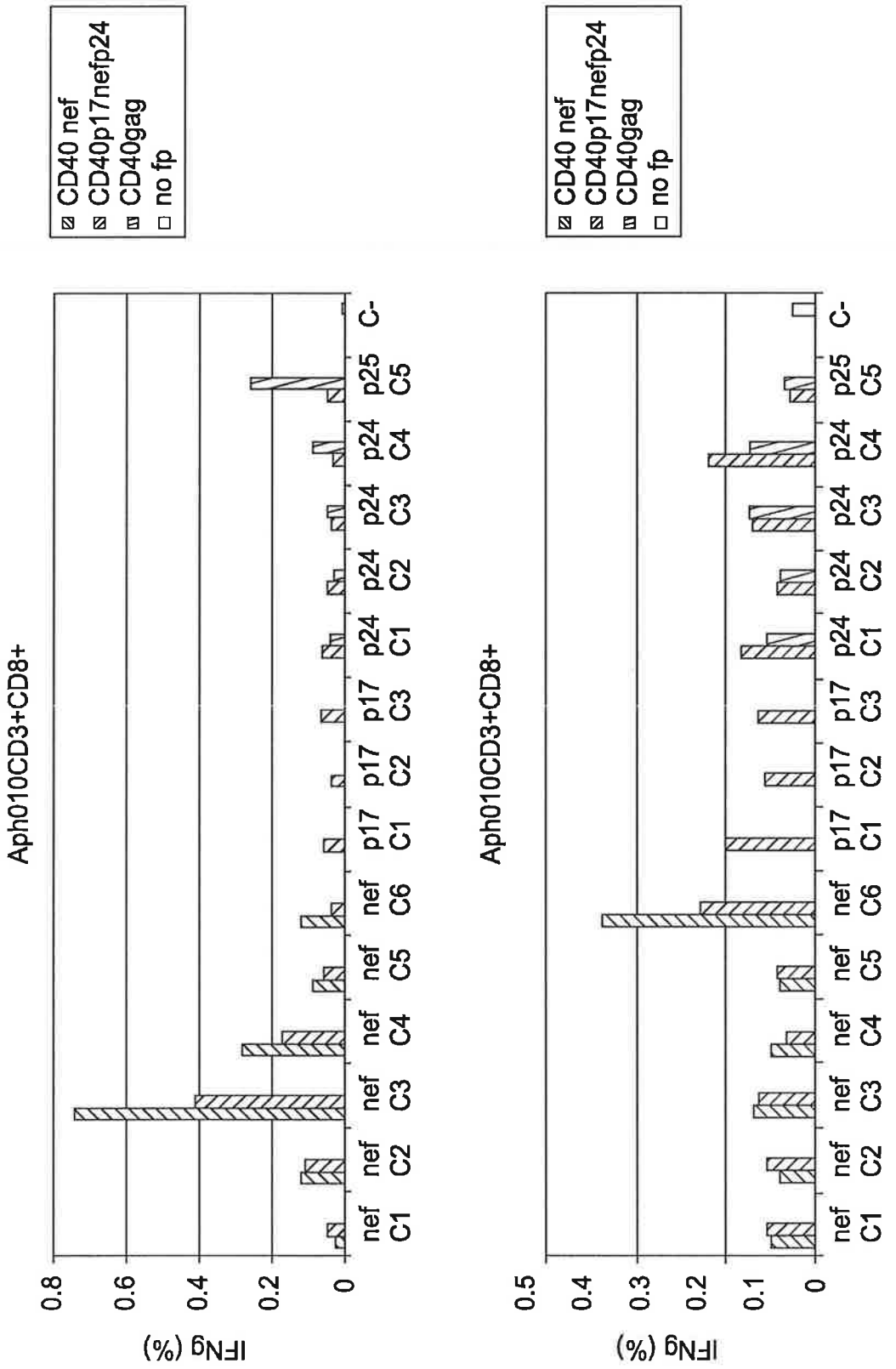

Aph010CD3+CD8+
IFNg (%)
0.8
0.6
0.4
0.2
0
CD40 nef
CD40p17nefp24
CD40gag
no fp
nef C1
nef C2
nef C3
nef C4
nef C5
nef C6
p17 C1
p17 C2
p17 C3
p24 C1
p24 C2
p24 C3
p24 C4
p25 C5
C-
Aph010CD3+CD8+
IFNg (%)
0.5
0.4
0.3
0.2
0.1
0
CD40 nef
CD40p17nefp24
CD40gag
no fp
nef C1
nef C2
nef C3
nef C4
nef C5
nef C6
p17 C1
p17 C2
p17 C3
p24 C1
p24 C2
p24 C3
p24 C4
p25 C5
C-

FIG. 23

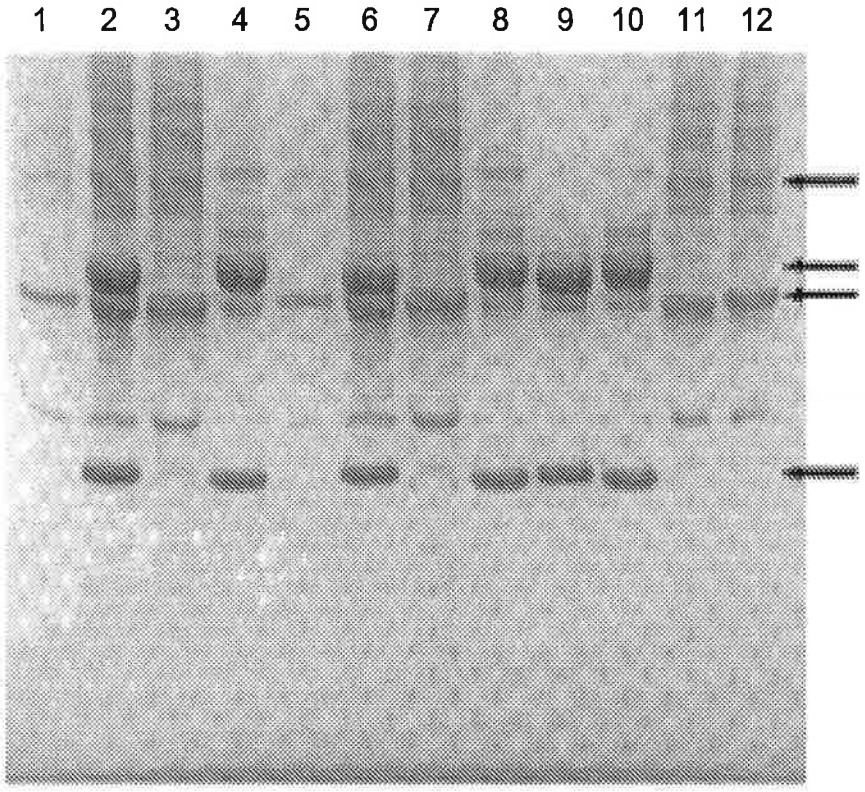

1
2
3
4
5
6
7
8
9
10
11
12

FIG. 24

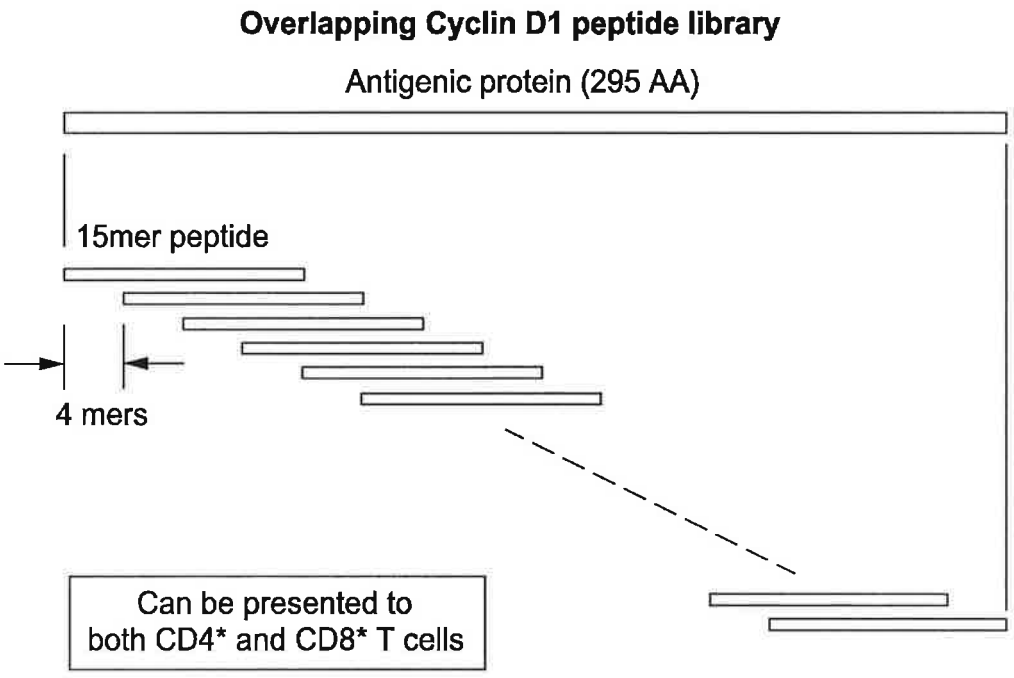

Overlapping Cyclin D1 peptide library
Antigenic protein (295 AA)
15mer peptide
4 mers
Can be presented to
both CD4* and CD8* T cells

FIG. 25

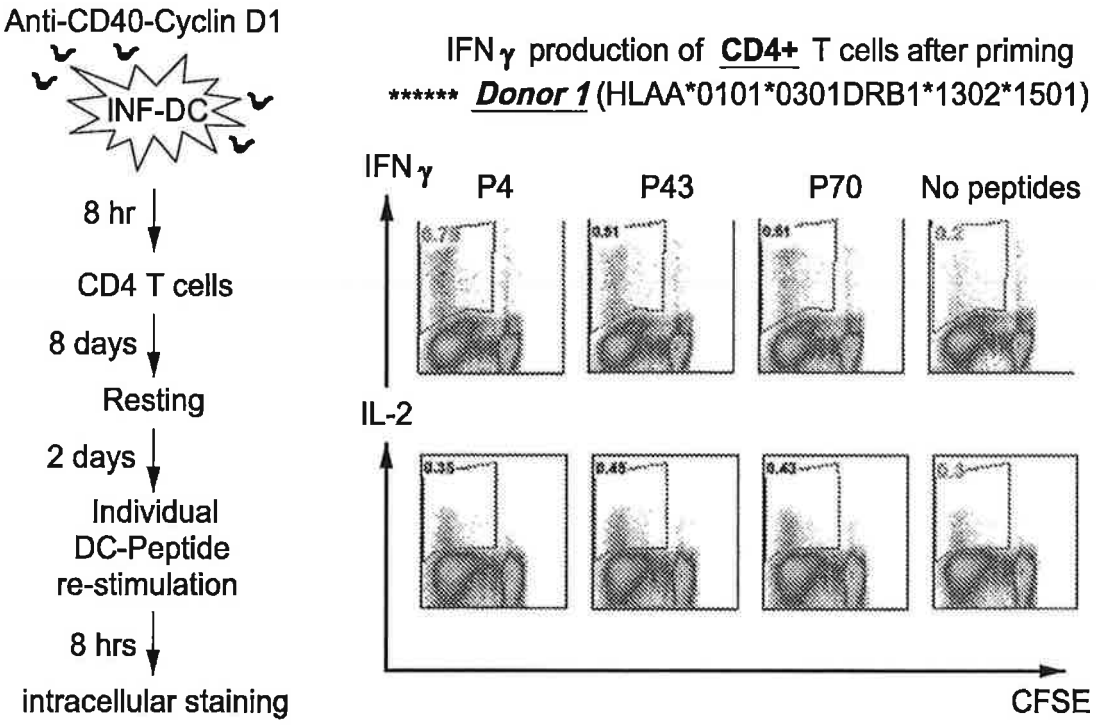

Anti-CD40-Cyclin D1
INF-DC
8 hr
CD4 T cells
8 days
Resting
2 days
Individual
DC-Peptide
re-stimulation
8 hrs
intracellular staining
IFNγ production of CD4+ T cells after priming
****** Donor 1 (HLAA*0101*0301DRB1*1302*1501)
IFNγ
P4
P43
P70
No peptides
IL-2
CFSE

FIG. 26

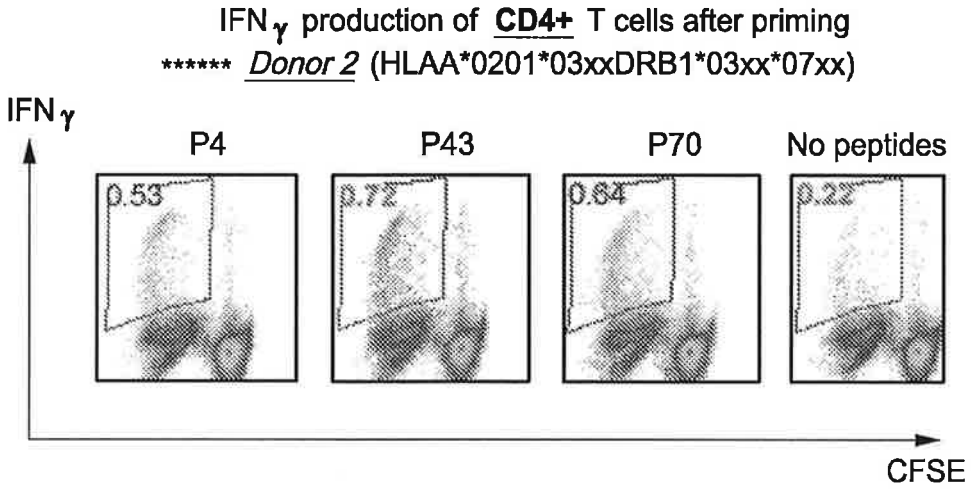

IFNγ production of CD4+ T cells after priming
****** Donor 2 (HLAA*0201*03xxDRB1*03xx*07xx)
IFNγ
P4
P43
P70
No peptides
0.53
0.72
0.64
0.22
CFSE

FIG. 27

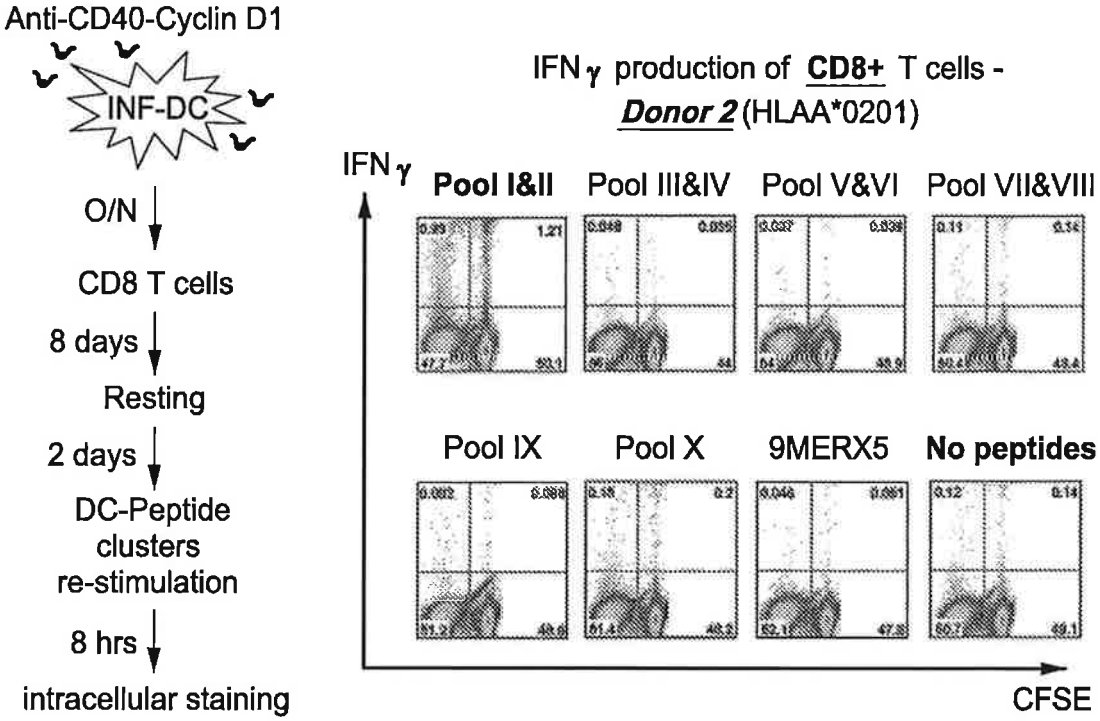

Anti-CD40-Cyclin D1
INF-DC
O/N
CD8 T cells
8 days
Resting
2 days
DC-Peptide clusters re-stimulation
8 hrs
intracellular staining
IFN γ production of CD8+ T cells - Donor 2 (HLAA*0201)
IFN γ
Pool I&II
Pool III&IV
Pool V&VI
Pool VII&VIII
Pool IX
Pool X
9MERX5
No peptides
CFSE

FIG. 28

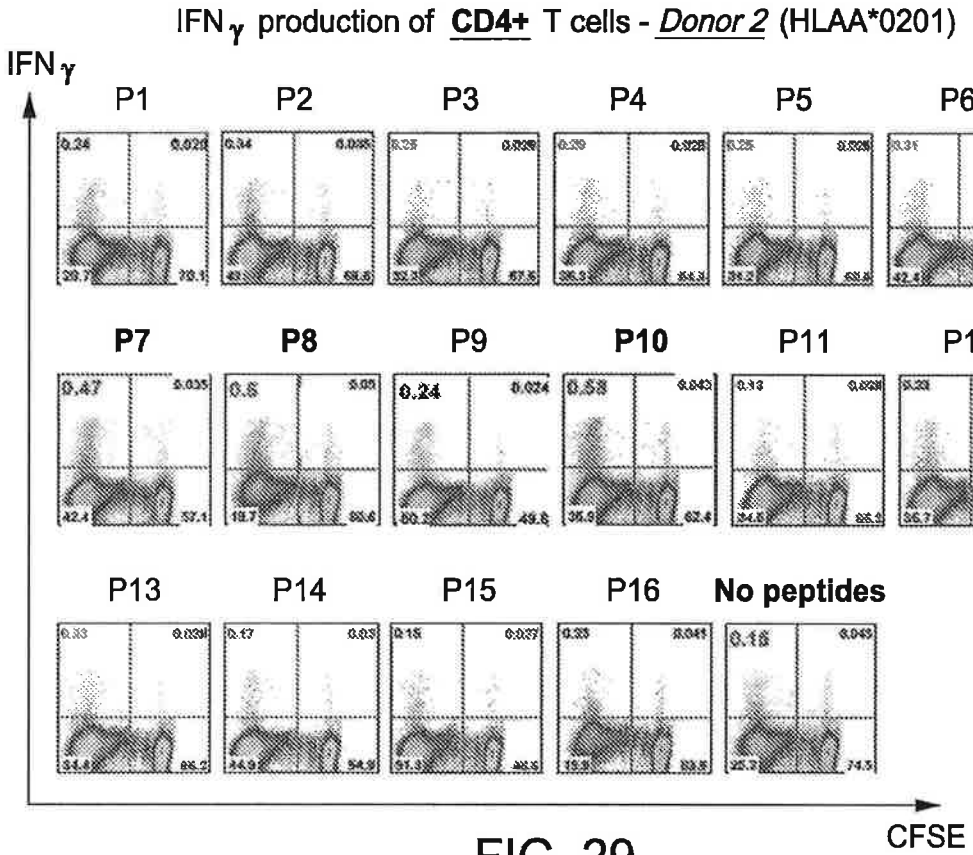

IFN γ production of CD4+ T cells - Donor 2 (HLAA*0201)
IFN γ
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
P13
P14
P15
P16
No peptides
CFSE

FIG. 29