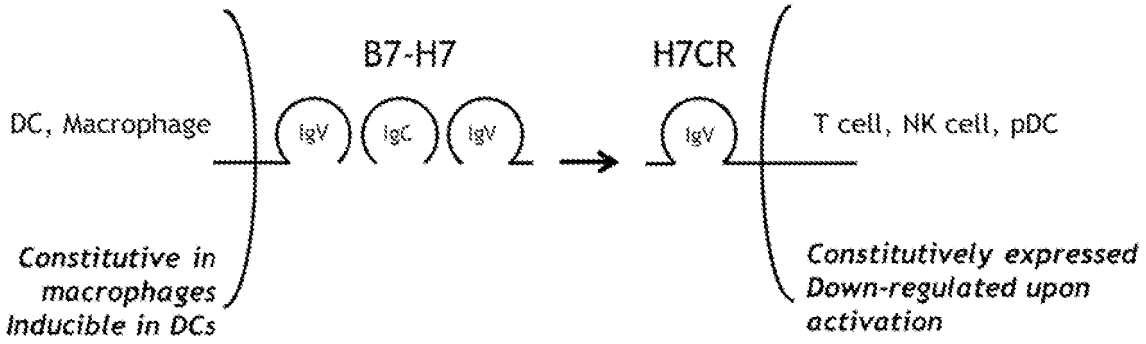

B7-H7
H7CR
DC, Macrophage
IgV
IgC
IgV
IgV
T cell, NK cell, pDC
Constitutive in macrophages Inducible in DCs
Constitutively expressed Down-regulated upon activation

FIG. 1

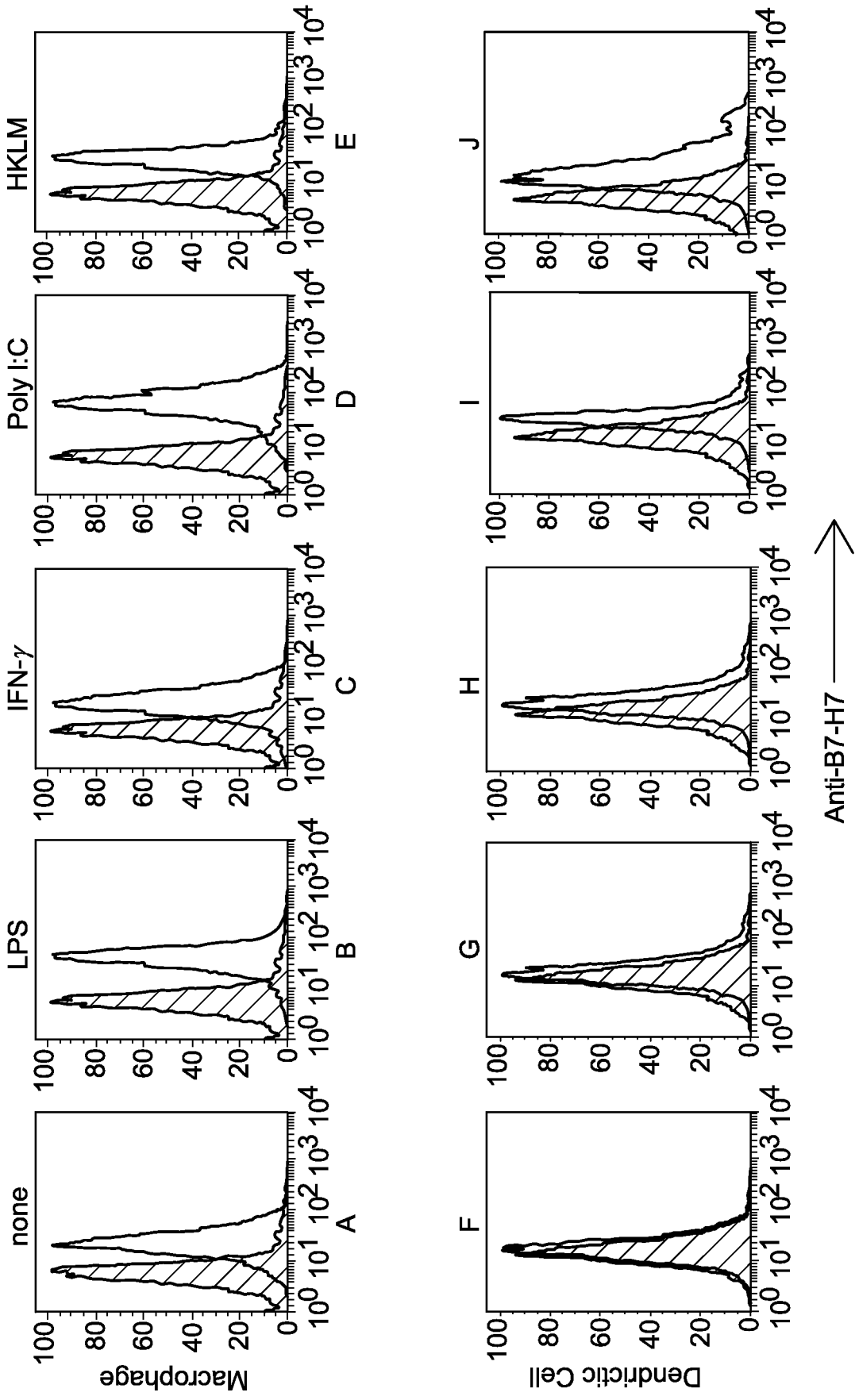

none
LPS
IFN-γ
Poly I:C
HKLM
Macrophage
Dendritic Cell
A
B
C
D
E
F
G
H
I
J
Anti-B7-H7
0
20
40
60
80
100
10^0 10^1 10^2 10^3 10^4

FIG. 2

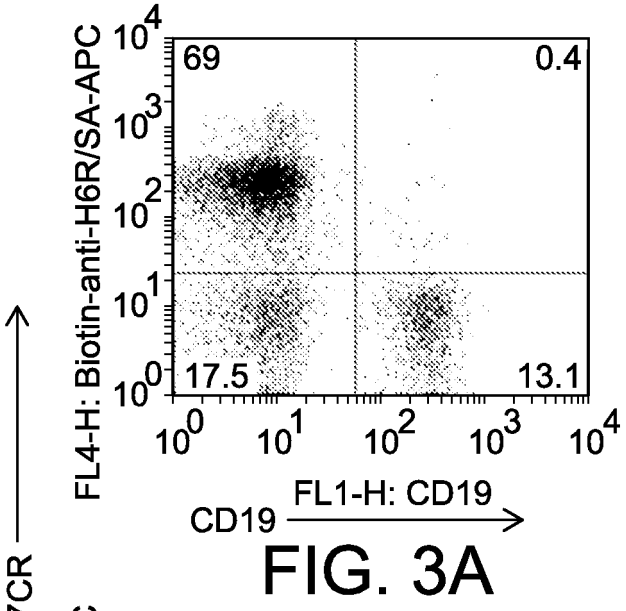


FIG. 3A

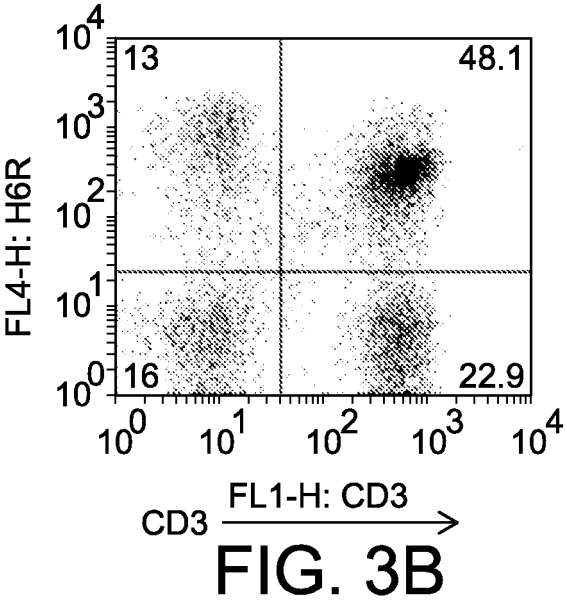


FIG. 3B

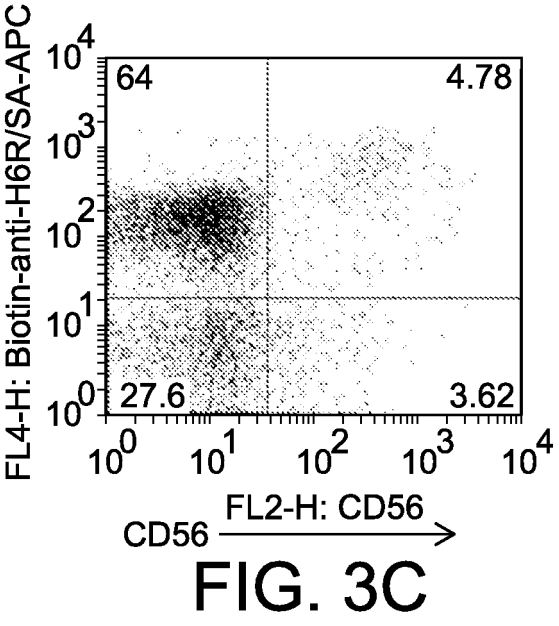


FIG. 3C

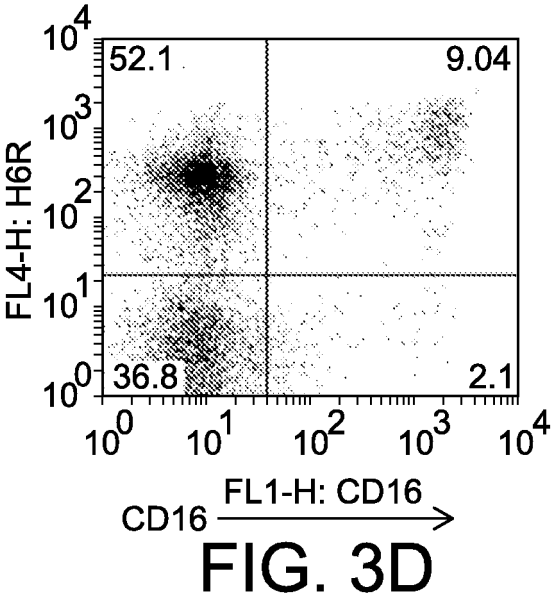


FIG. 3D

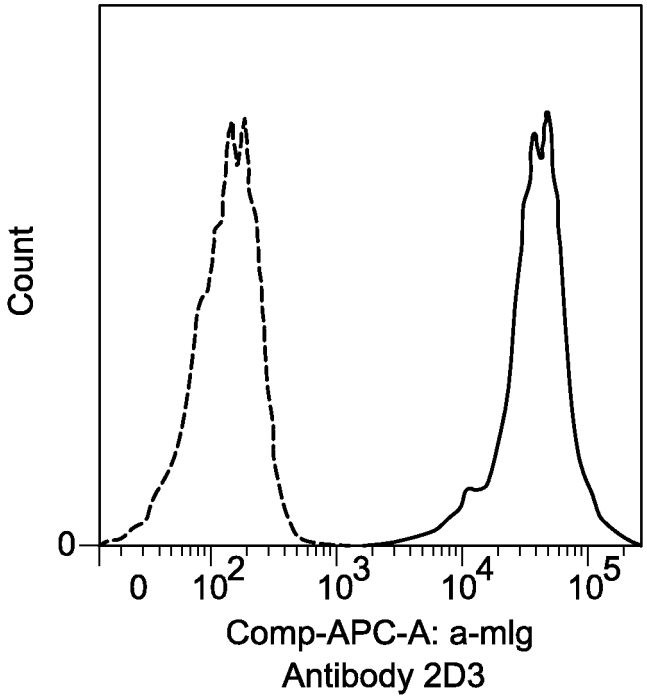

Count
0
0
10^2
10^3
10^4
10^5
Comp-APC-A: a-mlg
Antibody 2D3

FIG. 4A

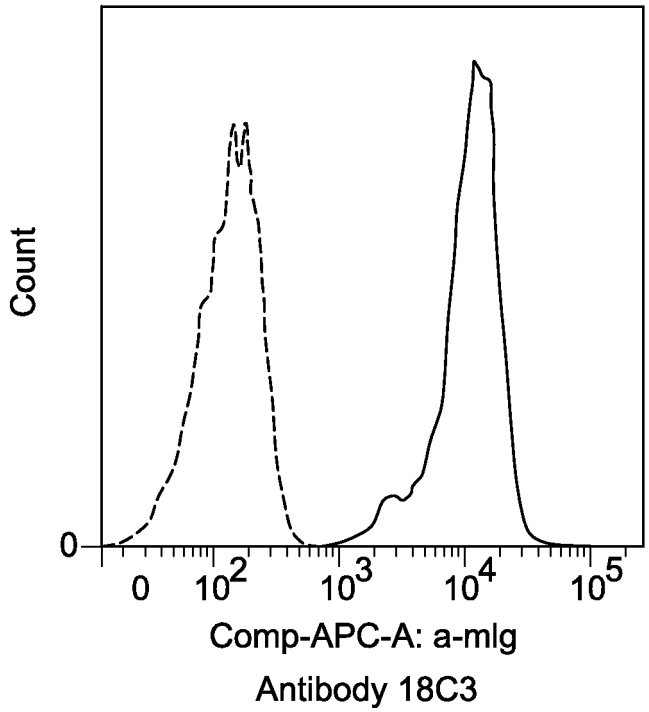

Count
0
0
10^2
10^3
10^4
10^5
Comp-APC-A: a-mlg
Antibody 18C3

FIG. 4B

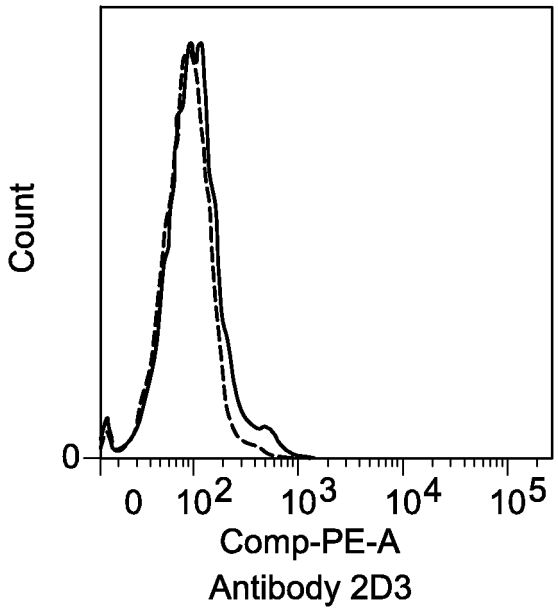


FIG. 5A

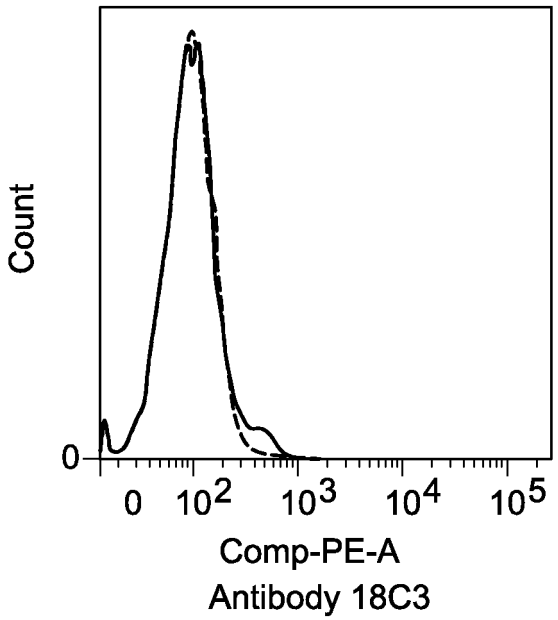


FIG. 5B

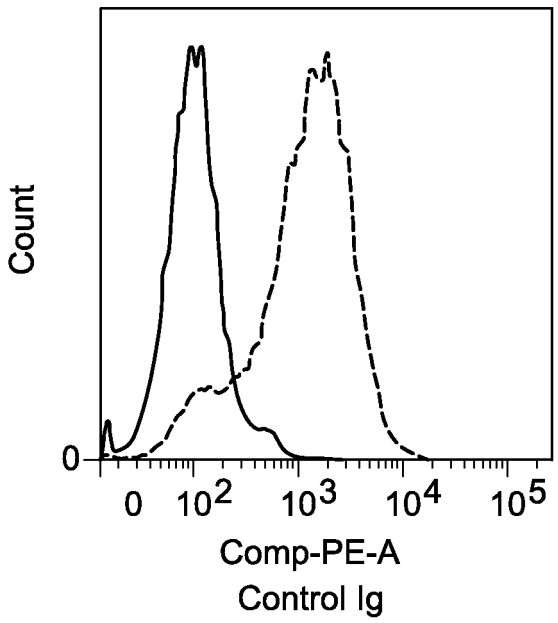


FIG. 5C

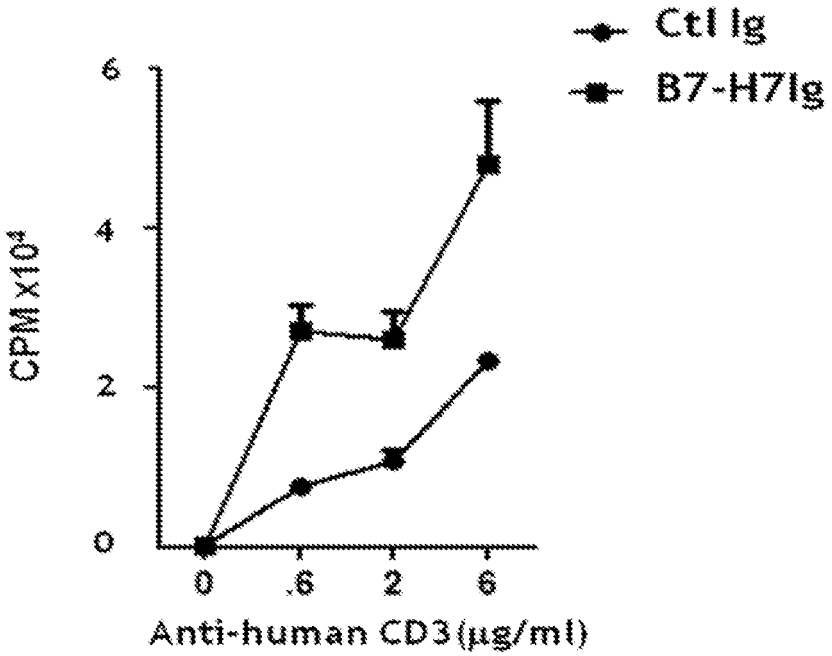

Ctl Ig
B7-H7Ig
CPM x10⁴
6
4
2
0
0
.6
2
6
Anti-human CD3 (µg/ml)

FIG. 6

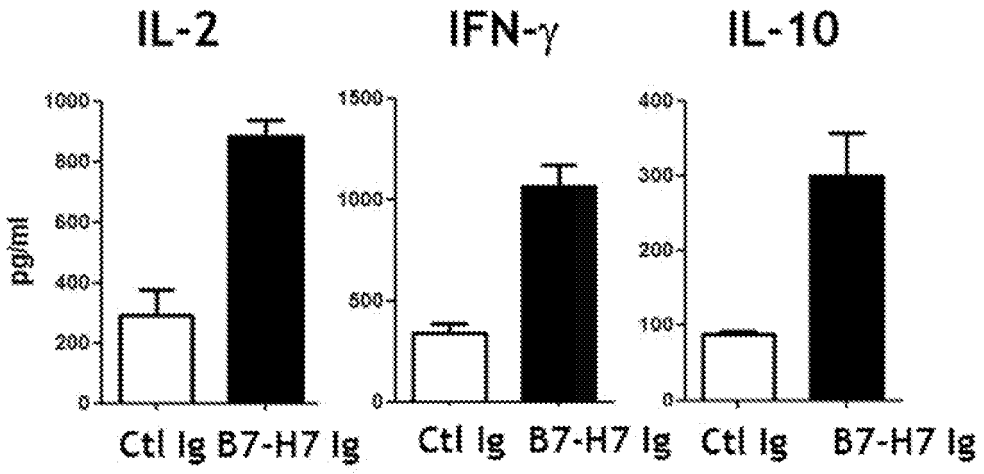

IL-2
IFN-γ
IL-10
pg/ml
1000
800
600
400
200
0
1500
1000
500
0
400
300
200
100
0
Ctl Ig
B7-H7 Ig
Ctl Ig
B7-H7 Ig
Ctl Ig
B7-H7 Ig

FIG. 7

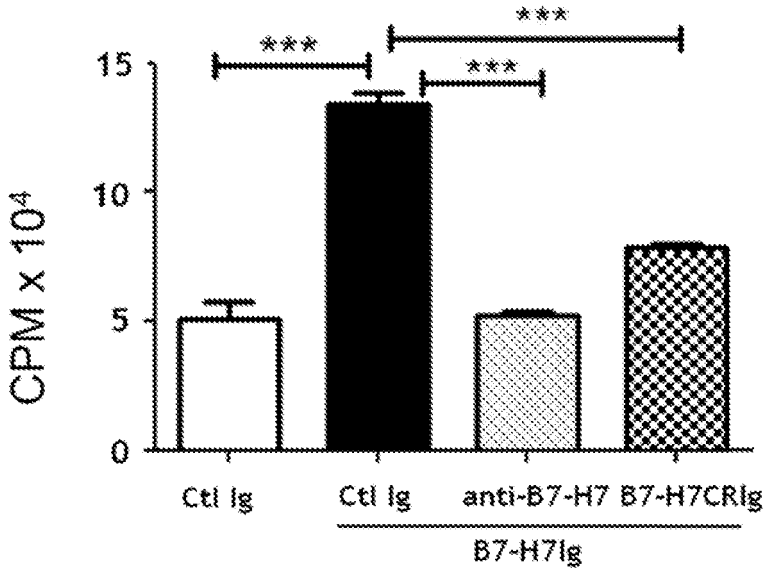

***
***
***
15
10
5
0
CPM x 10⁴
Ctl Ig
Ctl Ig
anti-B7-H7
B7-H7CRIg
B7-H7Ig

FIG. 8

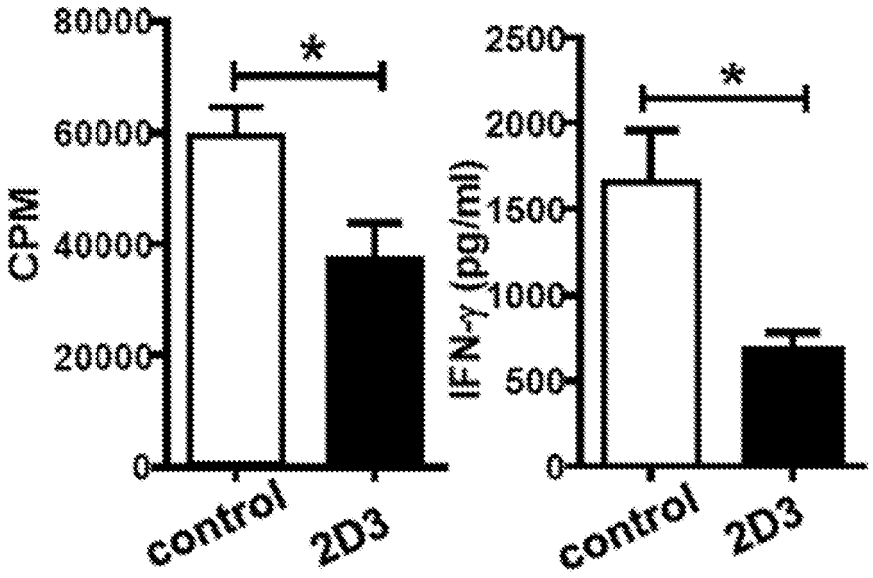

80000
60000
40000
20000
0
CPM
*
control
2D3
2500
2000
1500
1000
500
0
IFN-γ (pg/ml)
*
control
2D3

FIG. 9

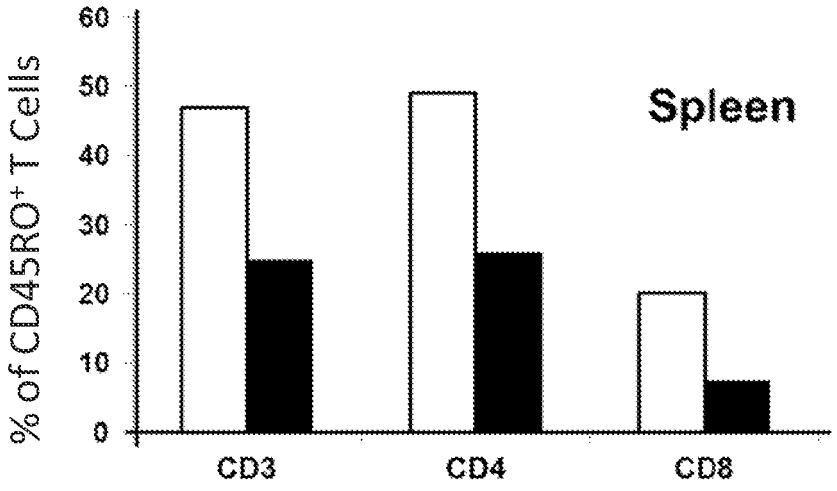


Figure 10A

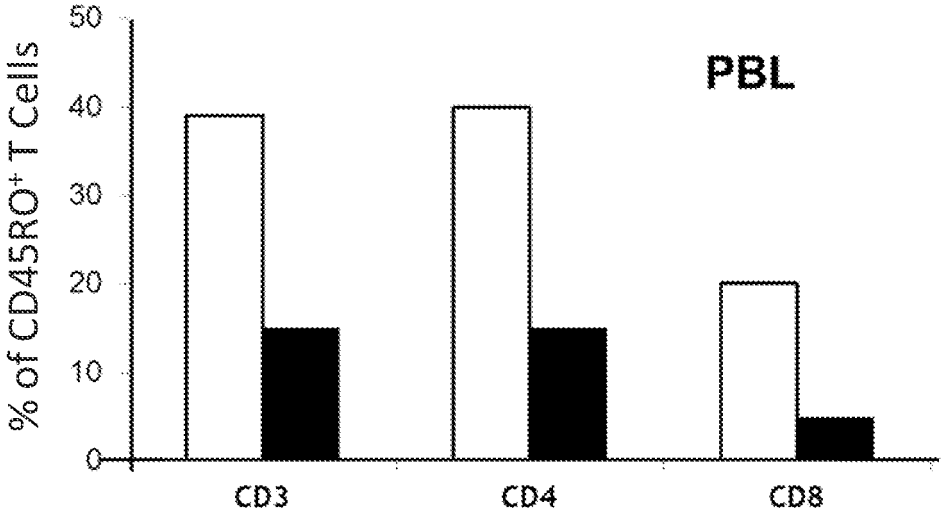


Figure 10B

PBS
Anti-B7-H7 Antibody

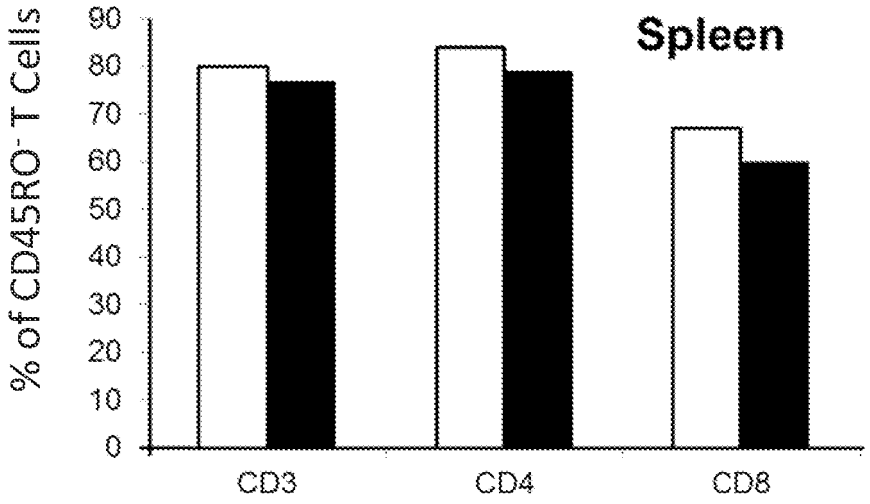


Figure 11A

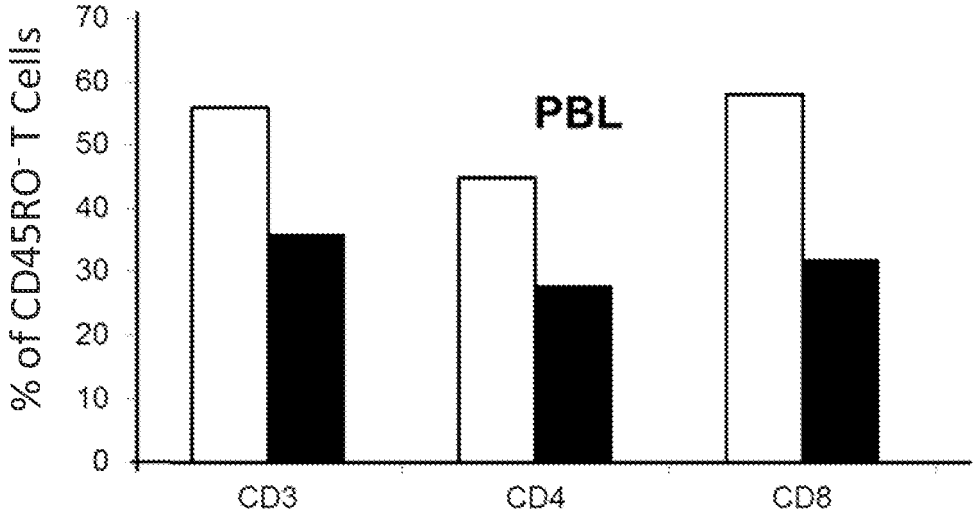
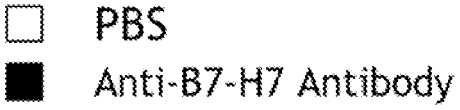
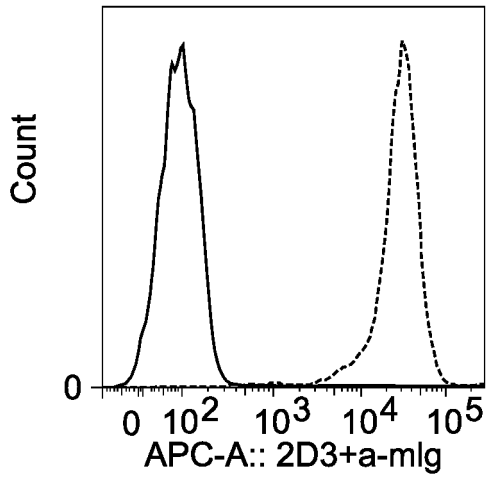


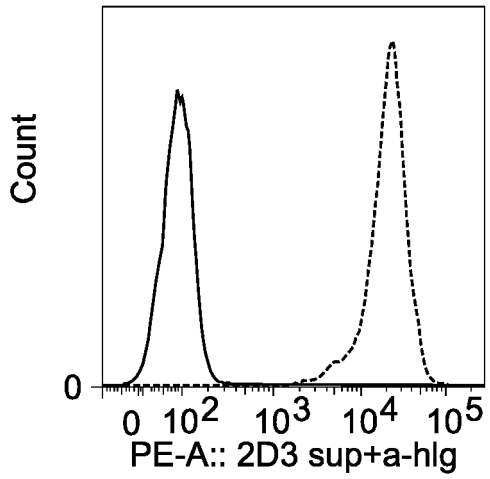
Figure 11B





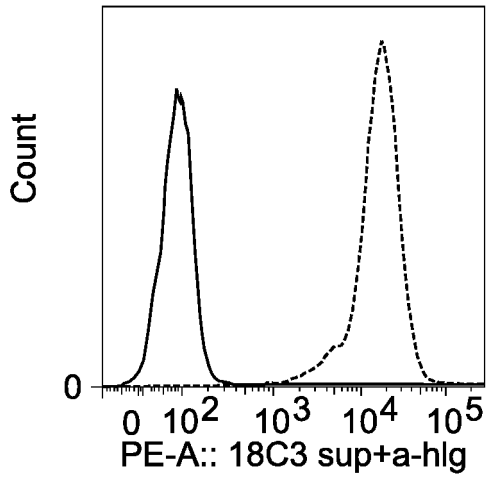
Purified Anti-Human B7-H7 Antibody 2D3

FIG. 12A



Recombinant Anti-Human B7-H7 Chimeric Antibody 2D3 (hIgG4)

FIG. 12B



Recombinant Anti-Human B7-H7 Chimeric Antibody 18C3 (hIgG4)

FIG. 12C

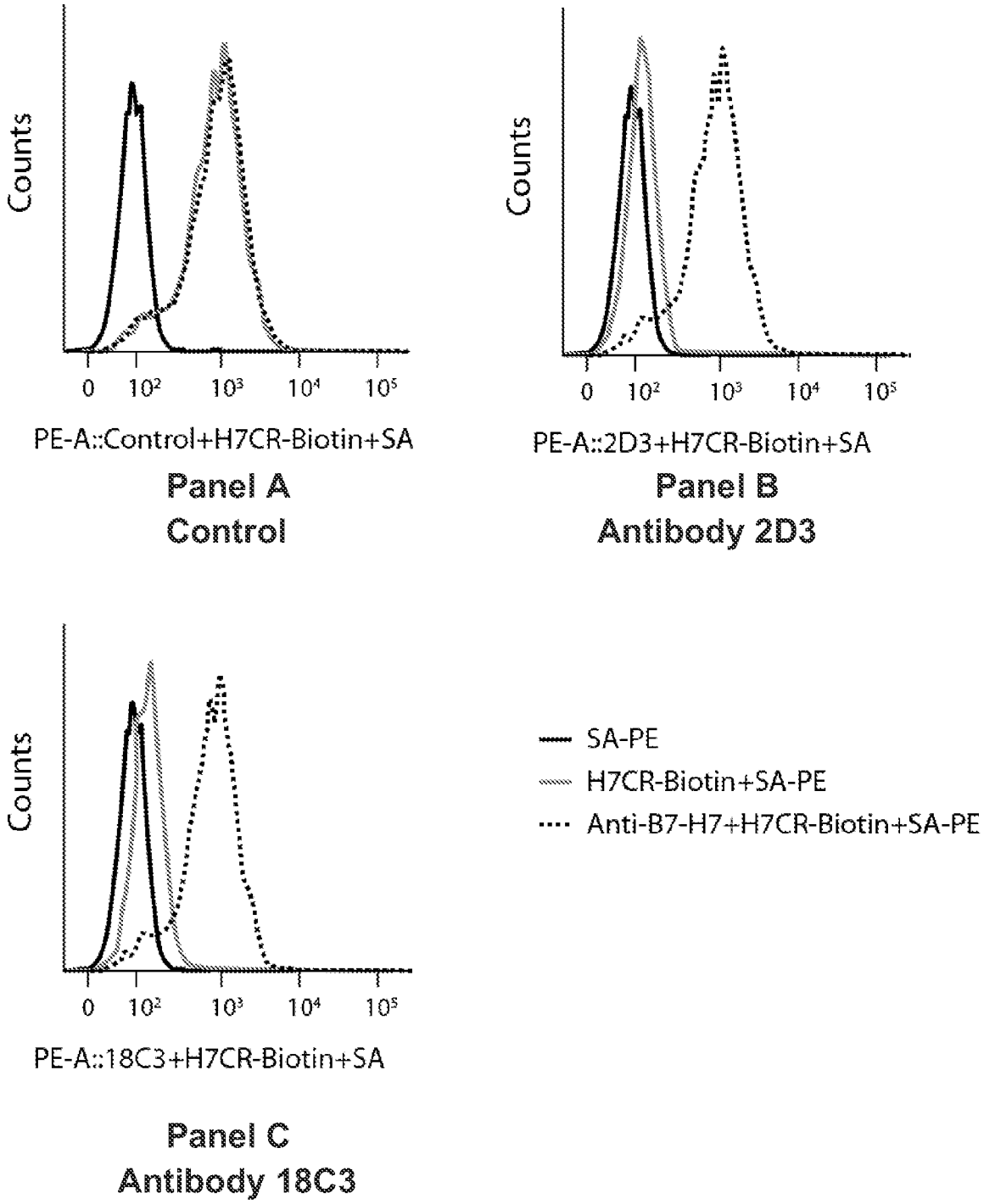

Counts
0
10²
10³
10⁴
10⁵
PE-A::Control+H7CR-Biotin+SA
Panel A
Control
PE-A::2D3+H7CR-Biotin+SA
Panel B
Antibody 2D3
PE-A::18C3+H7CR-Biotin+SA
Panel C
Antibody 18C3
SA-PE
H7CR-Biotin+SA-PE
Anti-B7-H7+H7CR-Biotin+SA-PE

FIG. 13

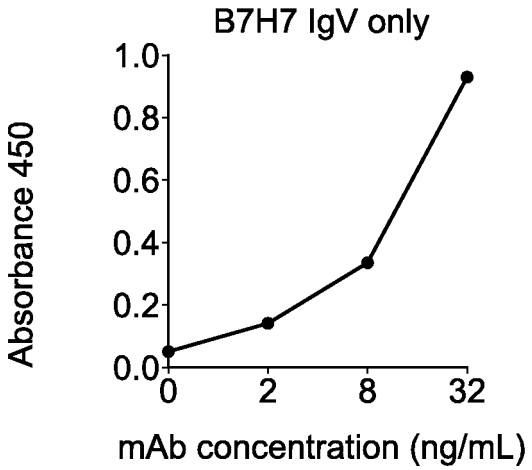


FIG. 14A

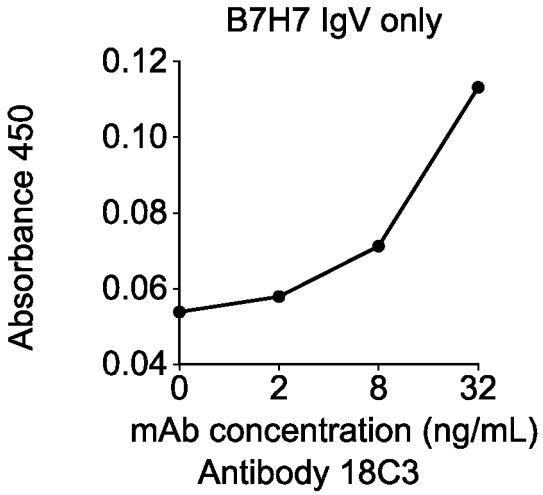


FIG. 14B

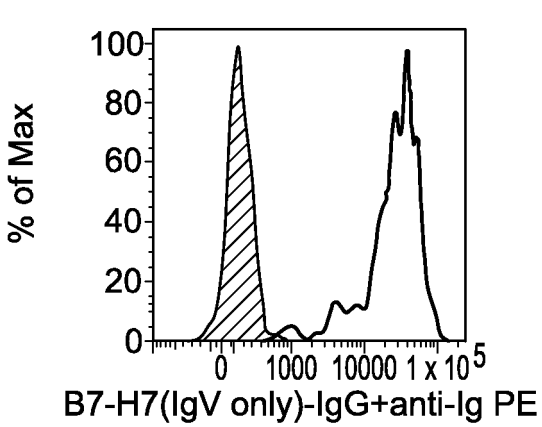


FIG. 14C

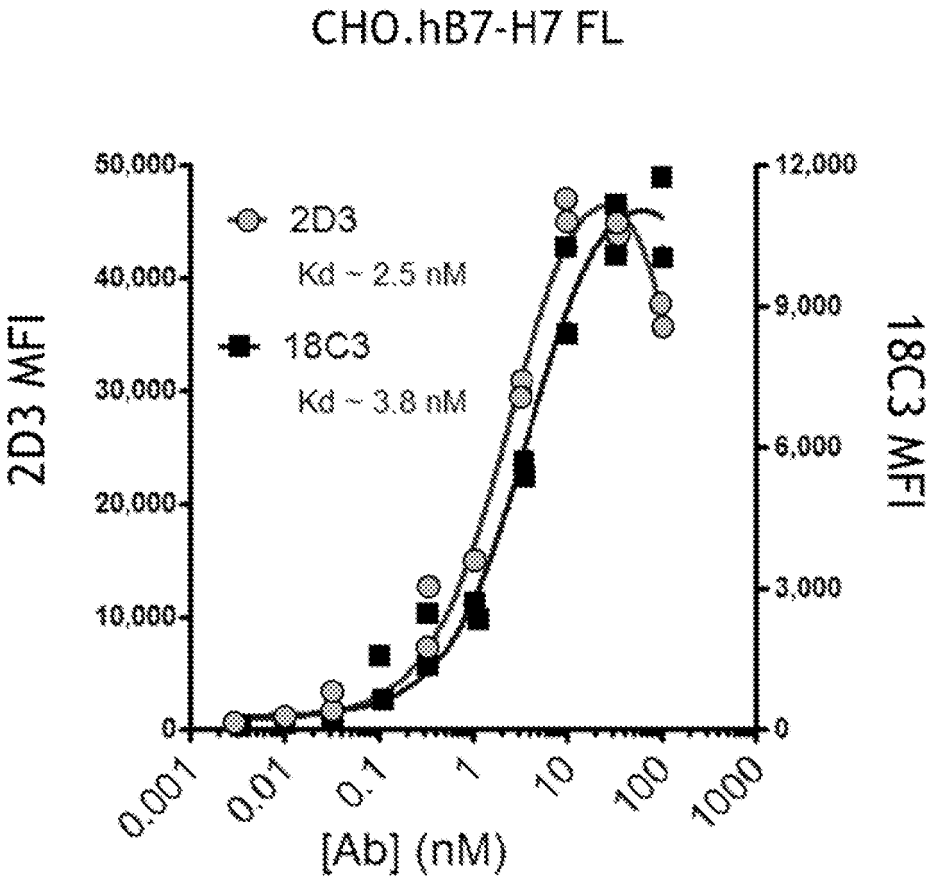
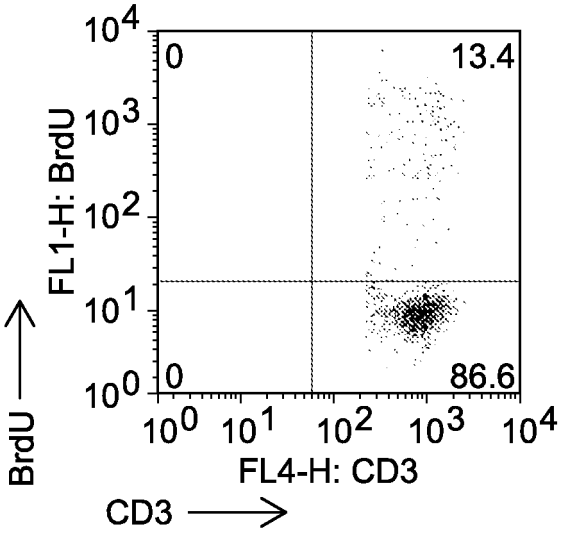
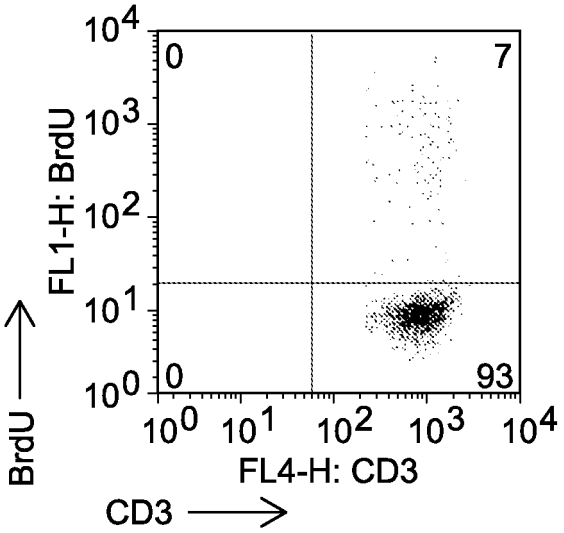

CHO.hB7-H7 FL
2D3 MFI
18C3 MFI
2D3
Kd ~ 2.5 nM
18C3
Kd ~ 3.8 nM
50,000
40,000
30,000
20,000
10,000
0
12,000
9,000
6,000
3,000
0
0.001
0.01
0.1
1
10
100
1000
[Ab] (nM)

FIG. 15

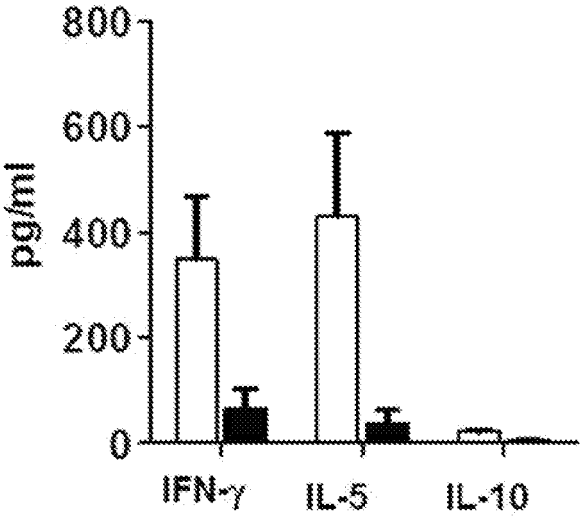


Panel A: Control

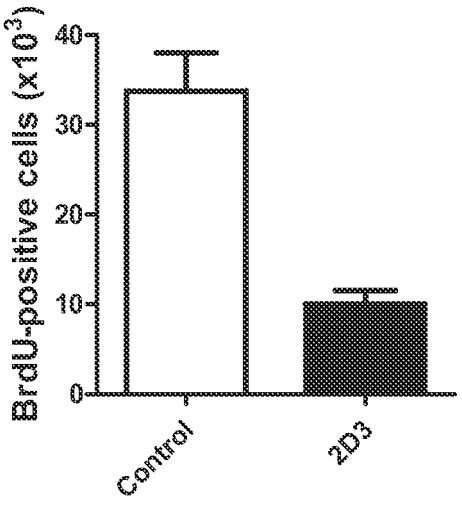


Panel B: Antibody 2D3

FIG. 16A



Panel A: Cytokine Levels



Panel B: BrdU-Positive Cells

FIG. 16B

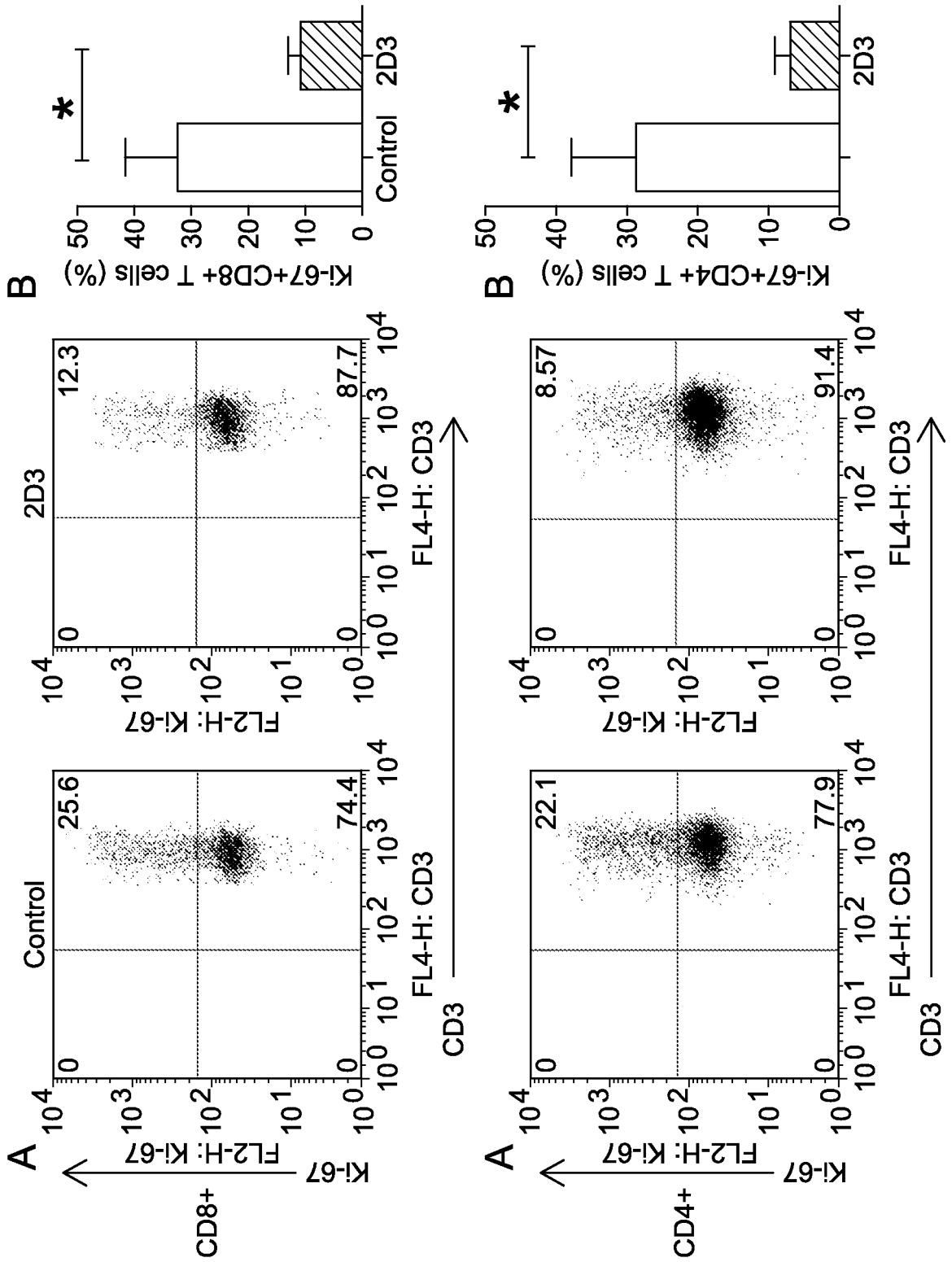

A
B
CD8+
CD4+
Ki-67
FL2-H: Ki-67
FL4-H: CD3
CD3
Control
2D3
25.6
74.4
12.3
87.7
22.1
77.9
8.57
91.4
Ki-67+CD8+ T cells (%)
Ki-67+CD4+ T cells (%)
*

FIG. 17A-B

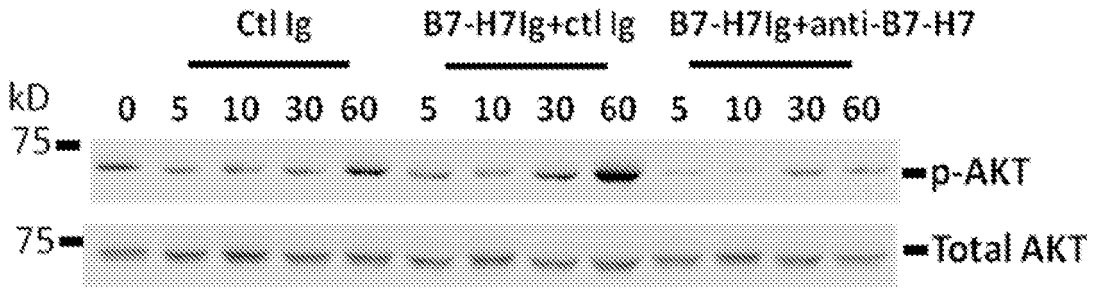

Ctl Ig
B7-H7Ig+ctl Ig
B7-H7Ig+anti-B7-H7
kD
0 5 10 30 60 5 10 30 60 5 10 30 60
75
p-AKT
75
Total AKT

FIG. 18

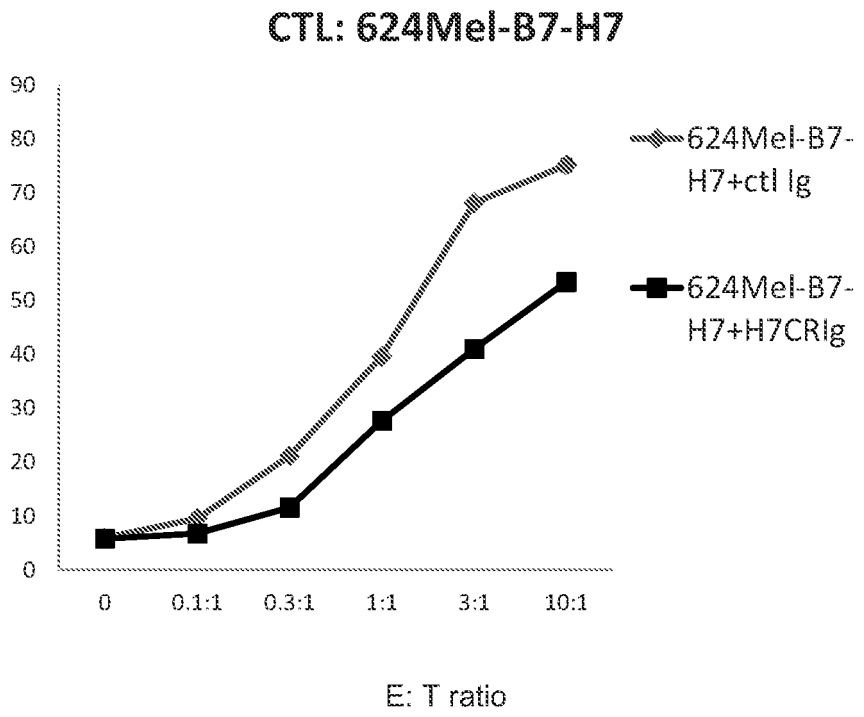

CTL: 624Mel-B7-H7
90
80
70
60
50
40
30
20
10
0
0
0.1:1
0.3:1
1:1
3:1
10:1
624Mel-B7-H7+ctl Ig
624Mel-B7-H7+H7CRIg
E: T ratio

FIG. 19

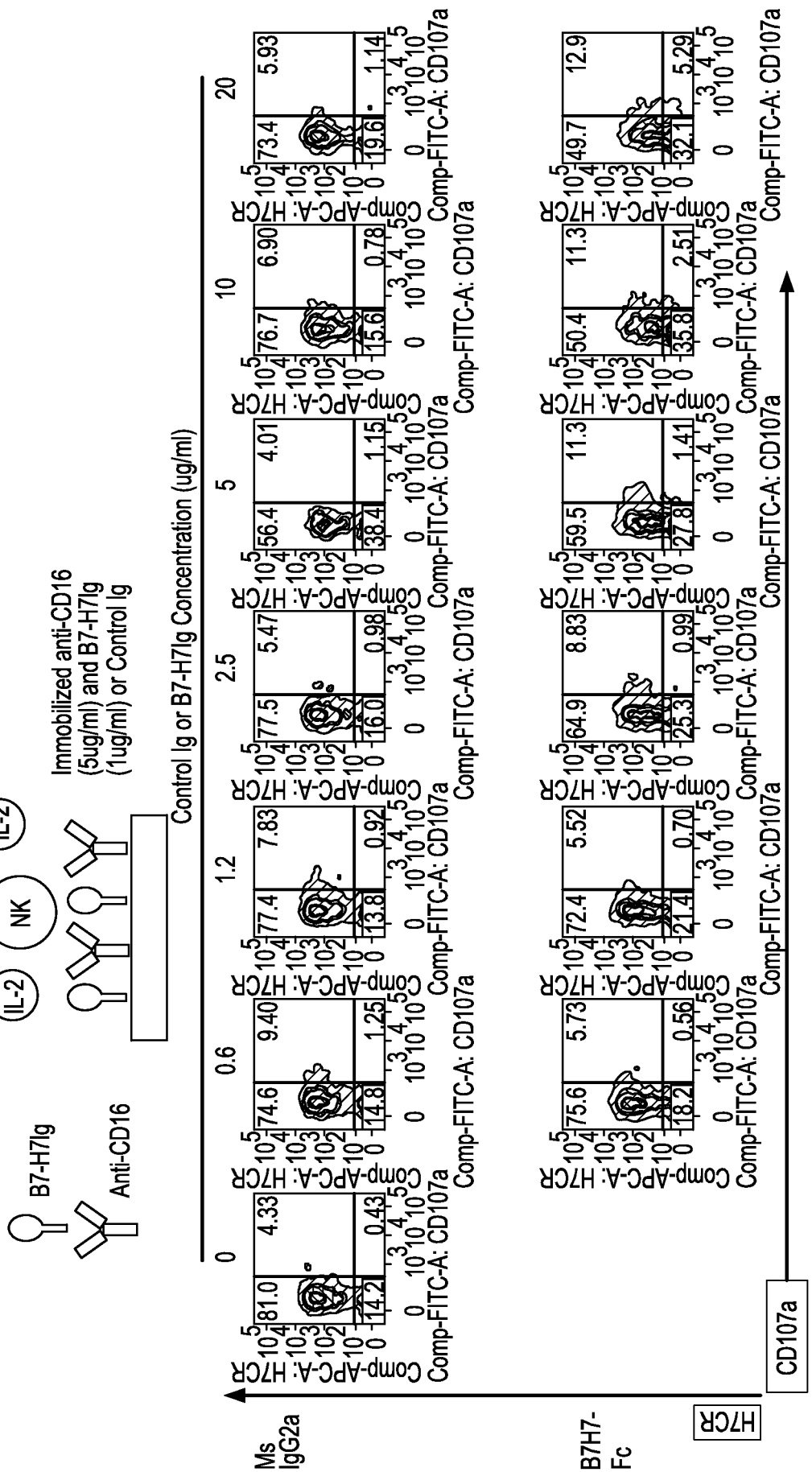

B7-H7Ig
Anti-CD16
IL-2
NK
IL-2
Immobilized anti-CD16
(5ug/ml) and B7-H7Ig
(1ug/ml) or Control Ig
Control Ig or B7-H7Ig Concentration (ug/ml)
0
0.6
1.2
2.5
5
10
20
Ms IgG2a
B7H7-Fc
H7CR
CD107a
Comp-APC-A: H7CR
Comp-FITC-A: CD107a
81.0
4.33
14.2
0.43
74.6
9.40
14.8
1.25
77.4
7.83
13.8
0.92
77.5
5.47
16.0
0.98
56.4
4.01
38.4
1.15
76.7
6.90
15.6
0.78
73.4
5.93
19.6
1.14
75.6
5.73
18.2
0.56
72.4
5.52
21.4
0.70
64.9
8.83
25.3
0.99
59.5
11.3
27.8
1.41
50.4
11.3
35.8
2.51
49.7
12.9
32.1
5.29

FIG. 20A

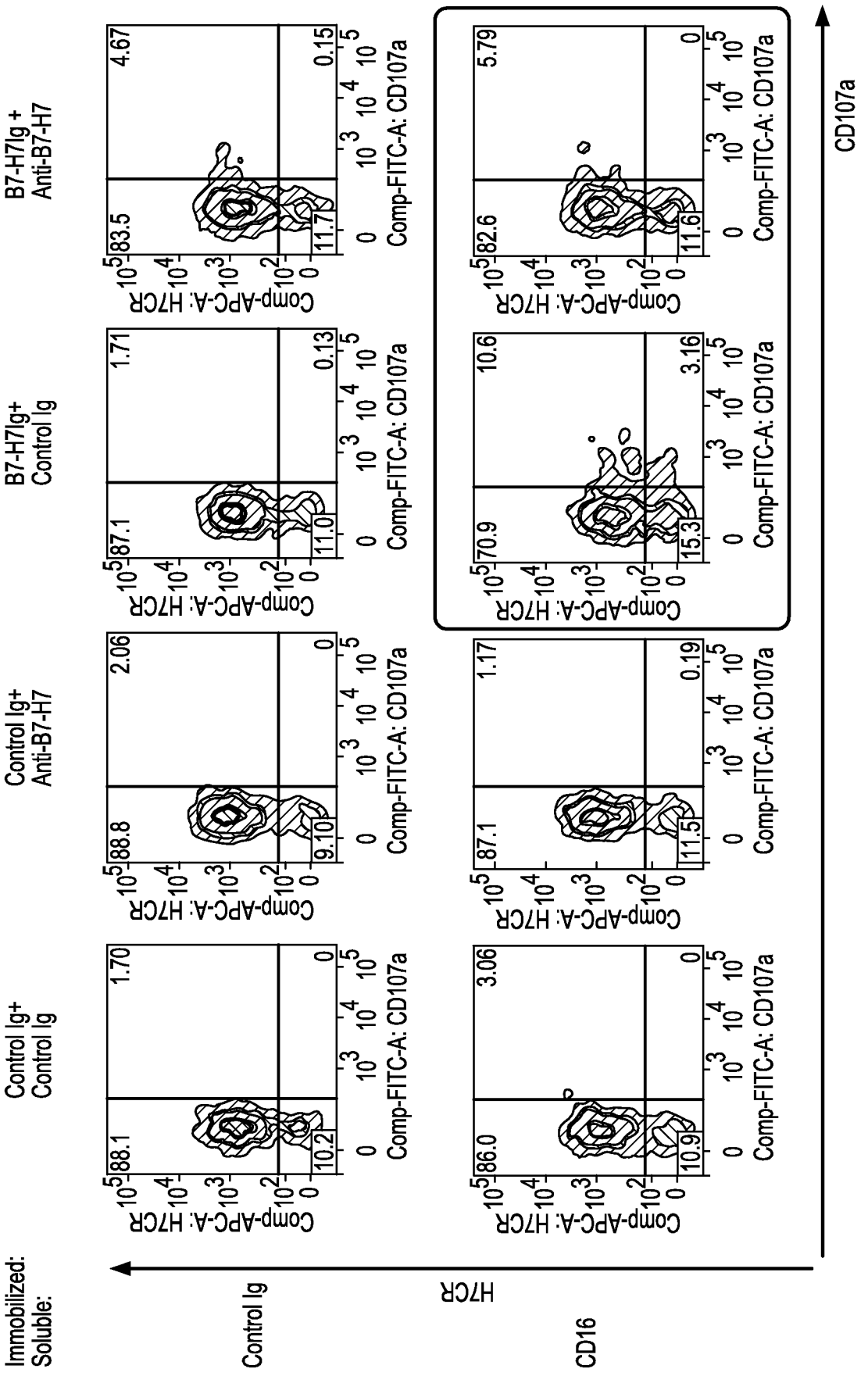

Immobilized:
Soluble:
Control Ig
CD16
H7CR
CD107a
Control Ig+
Control Ig
Control Ig+
Anti-B7-H7
B7-H7Ig+
Control Ig
B7-H7Ig +
Anti-B7-H7
Comp-APC-A: H7CR
Comp-FITC-A: CD107a
88.1
10.2
1.70
0
88.8
9.10
2.06
0
87.1
11.0
1.71
0.13
83.5
11.7
4.67
0.15
86.0
10.9
3.06
0
87.1
11.5
1.17
0.19
70.9
15.3
10.6
3.16
82.6
11.6
5.79
0

FIG. 20B