Fig. 1

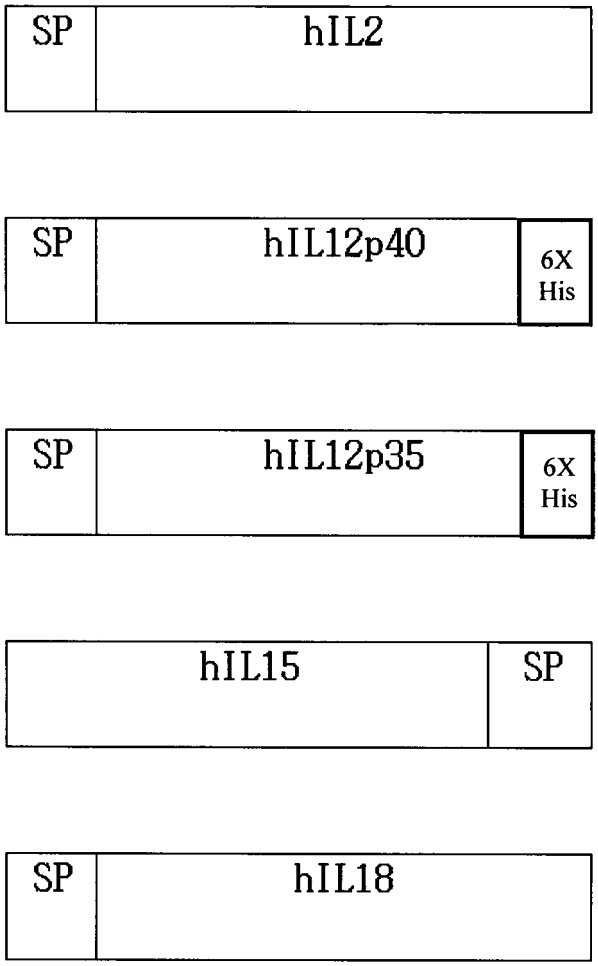

SP
hIL2
SP
hIL12p40
6X His
SP
hIL12p35
6X His
hIL15
SP
SP
hIL18

Fig. 2

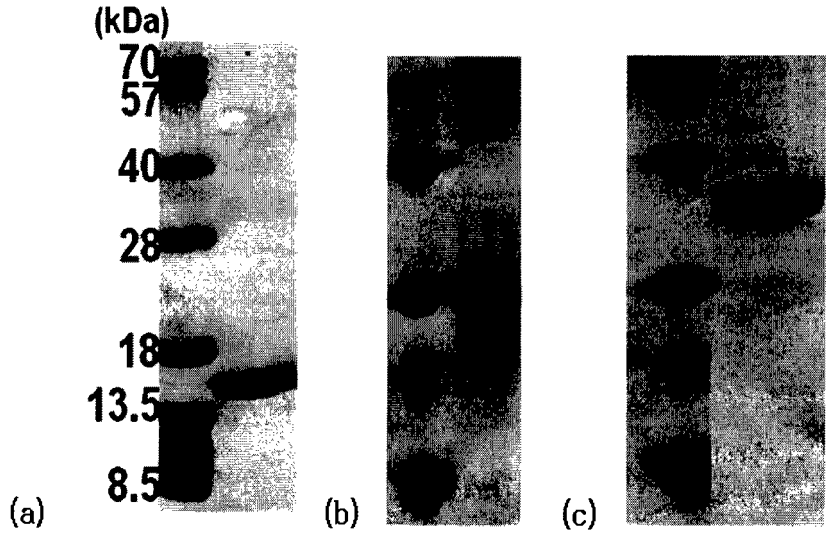
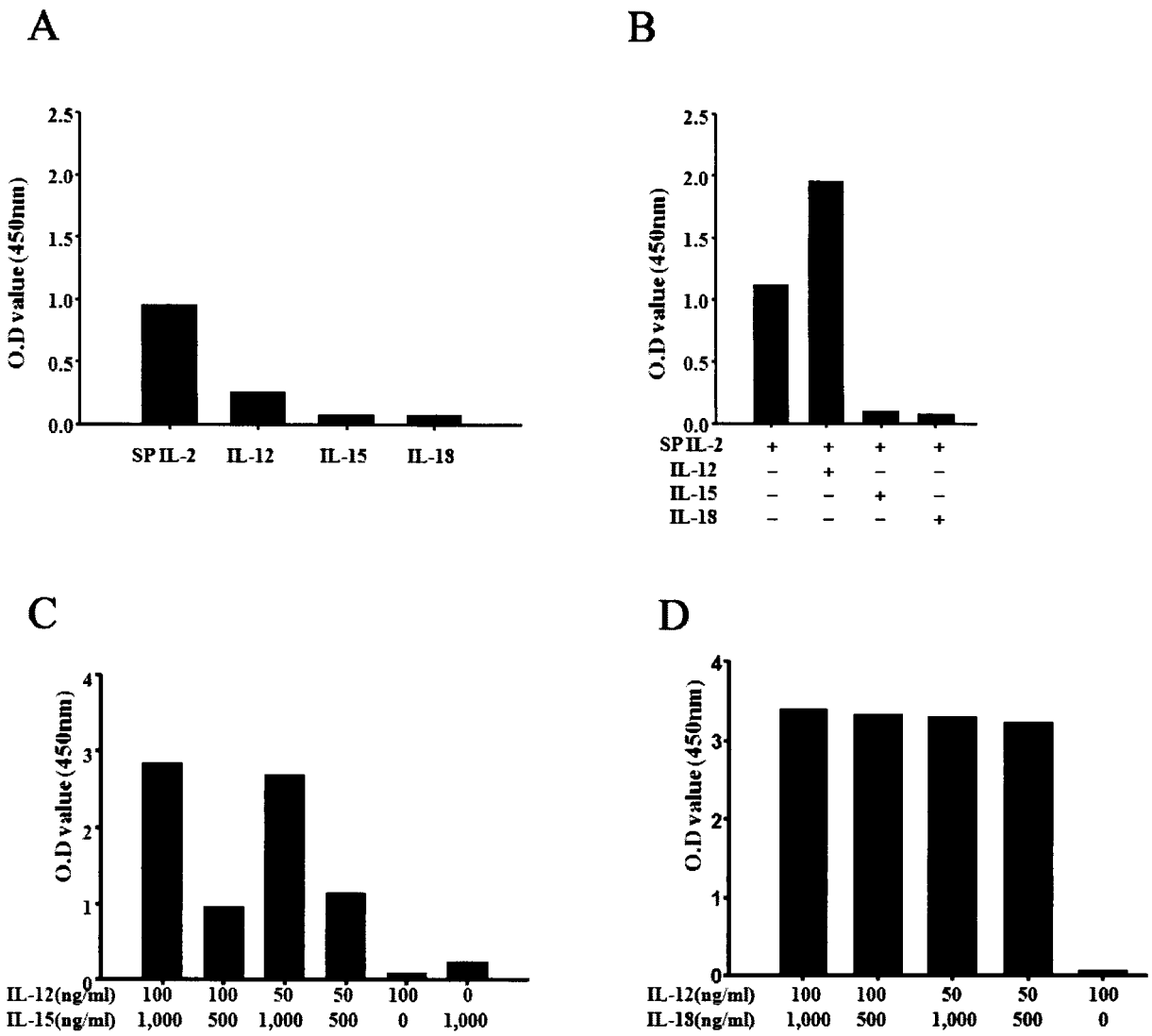

(kDa)
70
57
40
28
18
13.5
8.5
(a)
(b)
(c)

Fig. 3


A
O.D value (450nm)
2.5
2.0
1.5
1.0
0.5
0.0
SP
IL-2
IL-12
IL-15
IL-18
B
O.D value (450nm)
SP
IL-2 + + + +
IL-12 – + – –
IL-15 – – + –
IL-18 – – – +
C
O.D value (450nm)
4
3
2
1
0
IL-12(ng/ml) 100 100 50 50 100 0
IL-15(ng/ml) 1,000 500 1,000 500 0 1,000
D
O.D value (450nm)
4
3
2
1
0
IL-12(ng/ml) 100 100 50 50 100
IL-18(ng/ml) 1,000 500 1,000 500 0

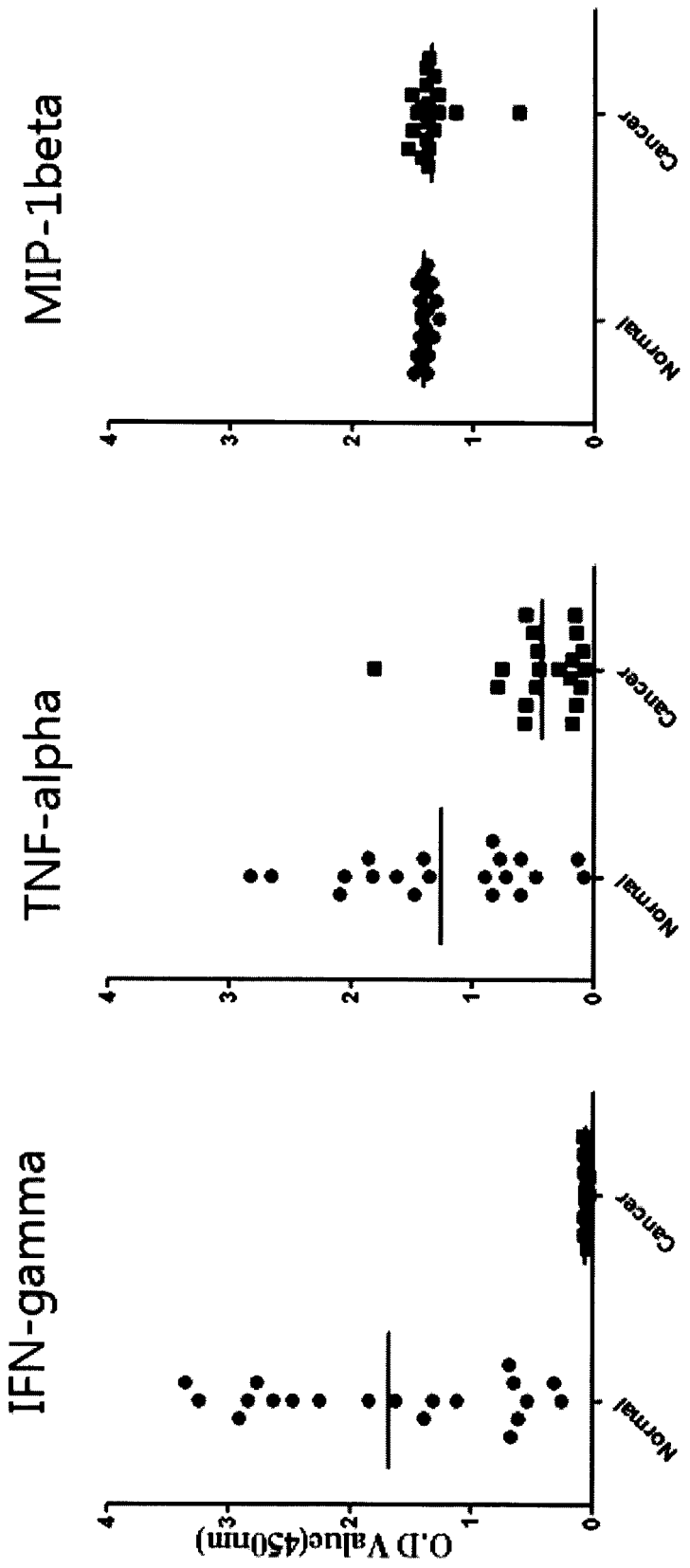

IFN-gamma
TNF-alpha
MIP-1beta
O.D Value(450nm)
0
1
2
3
4
Normal
Cancer

Fig. 4

Fig. 5

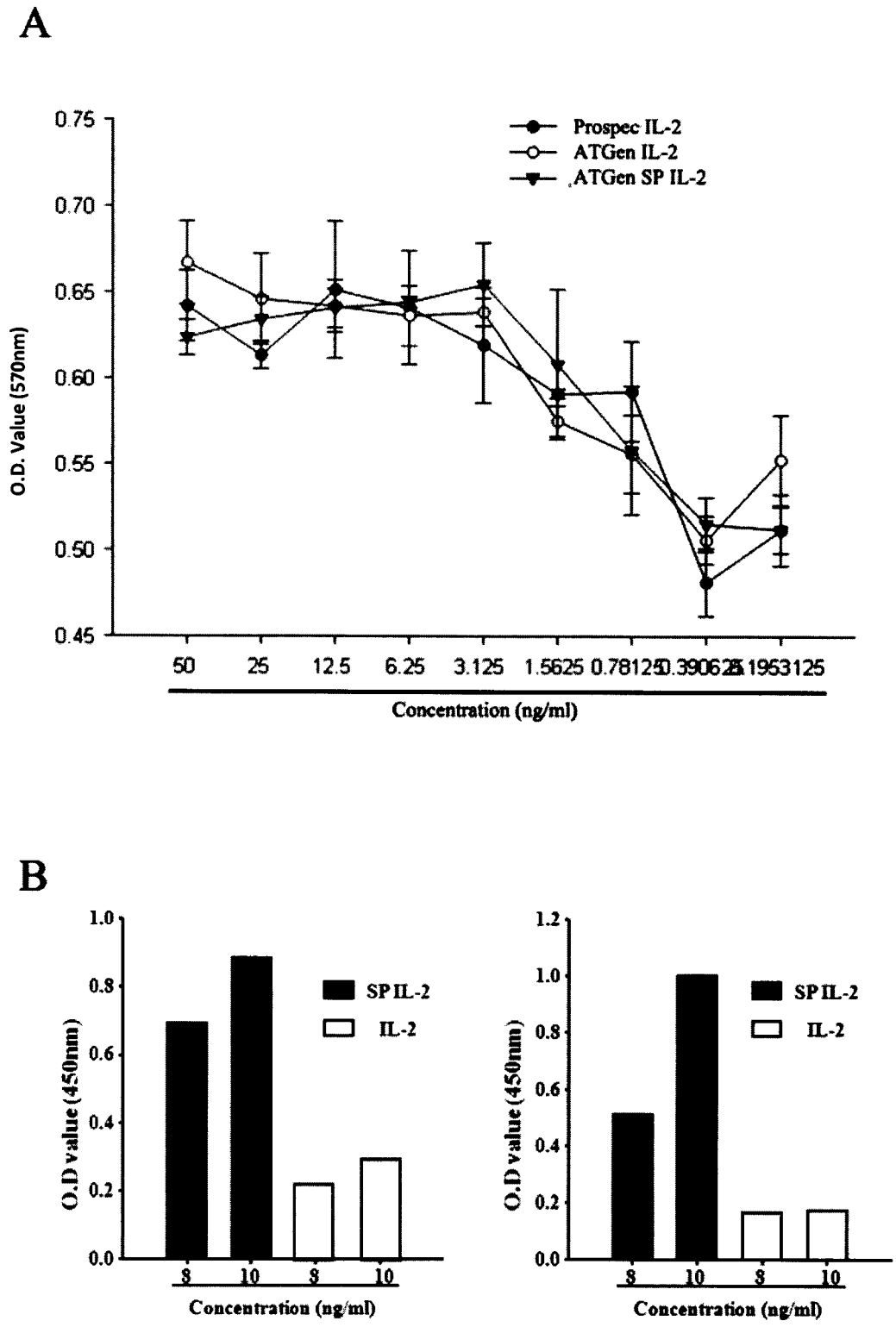

A
Prospec IL-2
ATGen IL-2
ATGen SP IL-2
O.D. Value (570nm)
0.75
0.70
0.65
0.60
0.55
0.50
0.45
50
25
12.5
6.25
3.125
1.5625
0.78125
0.390625
0.1953125
Concentration (ng/ml)
B
O.D value (450nm)
1.0
0.8
0.6
0.4
0.2
0.0
SP IL-2
IL-2
8
10
8
10
Concentration (ng/ml)
O.D value (450nm)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
SP IL-2
IL-2
8
10
8
10
Concentration (ng/ml)

Fig. 6

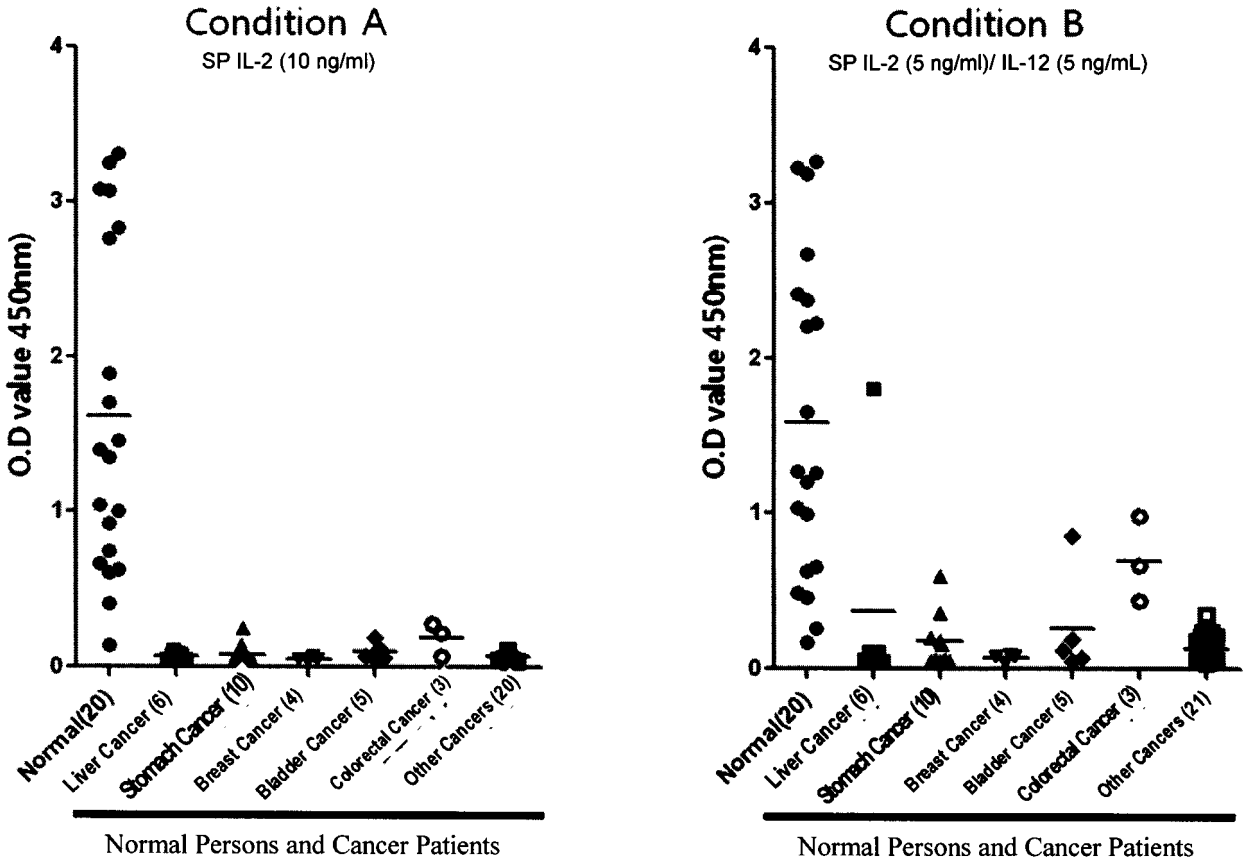

Condition A
SP IL-2 (10 ng/ml)
O.D value 450nm)
0
1
2
3
4
Normal(20)
Liver Cancer (6)
Stomach Cancer (10)
Breast Cancer (4)
Bladder Cancer (5)
Colorectal Cancer (3)
Other Cancers (20)
Normal Persons and Cancer Patients
Condition B
SP IL-2 (5 ng/ml)/ IL-12 (5 ng/mL)
O.D value 450nm)
0
1
2
3
4
Normal(20)
Liver Cancer (6)
Stomach Cancer (10)
Breast Cancer (4)
Bladder Cancer (5)
Colorectal Cancer (3)
Other Cancers (21)
Normal Persons and Cancer Patients

Fig. 7

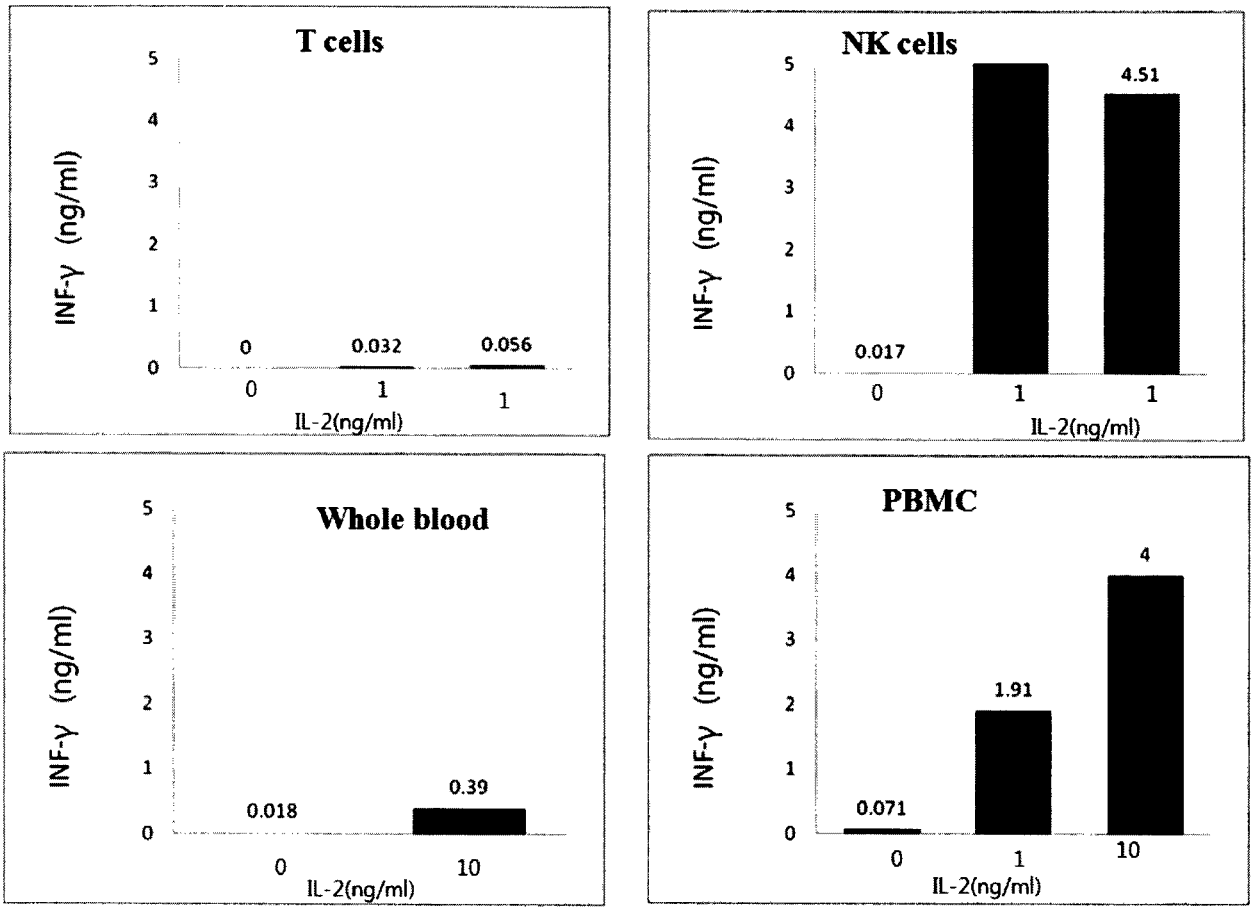

T cells
INF-γ (ng/ml)
0
0.032
0.056
0
1
1
IL-2(ng/ml)
NK cells
INF-γ (ng/ml)
0.017
4.51
0
1
1
IL-2(ng/ml)
Whole blood
INF-γ (ng/ml)
0.018
0.39
0
10
IL-2(ng/ml)
PBMC
INF-γ (ng/ml)
0.071
1.91
4
0
1
10
IL-2(ng/ml)

Fig. 8

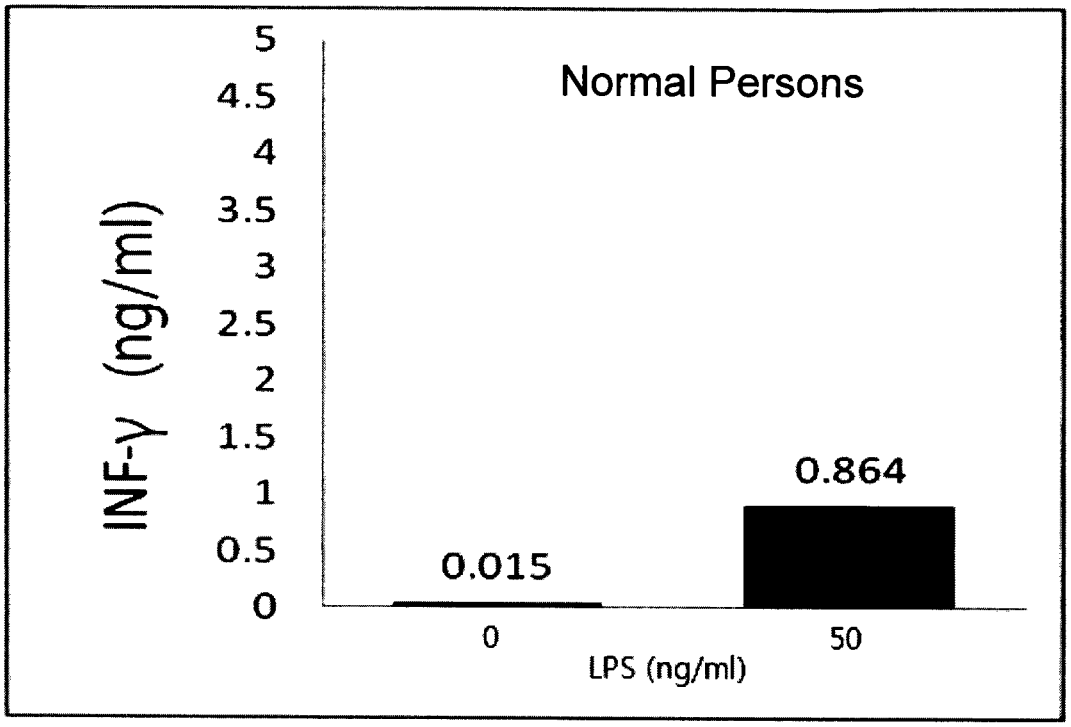

Normal Persons
INF-γ (ng/ml)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0.015
0.864
0
50
LPS (ng/ml)

Fig. 9

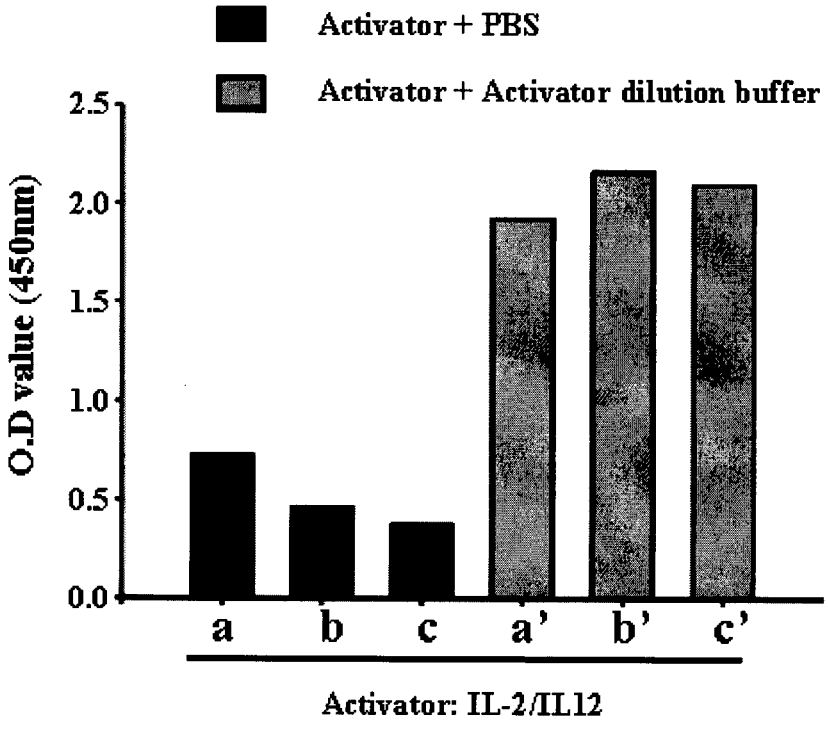

Activator + PBS
Activator + Activator dilution buffer
O.D value (450nm)
2.5
2.0
1.5
1.0
0.5
0.0
a
b
c
a'
b'
c'
Activator: IL-2/IL12

Fig. 10

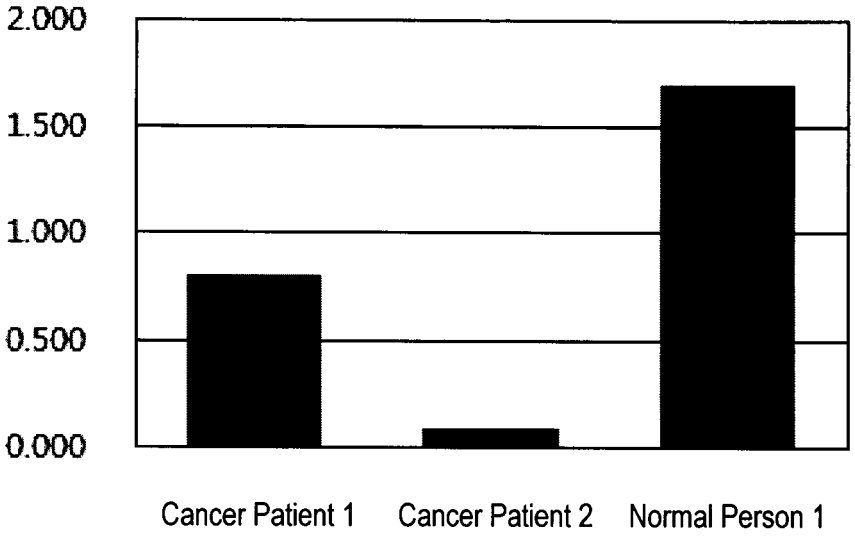
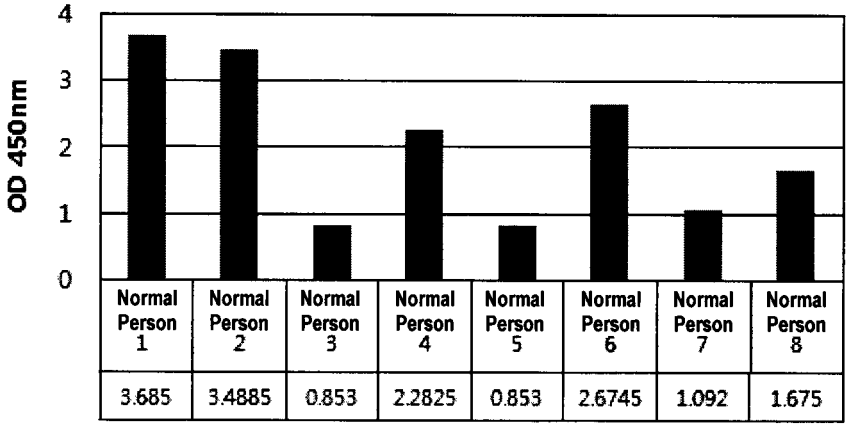

2.000
1.500
1.000
0.500
0.000
Cancer Patient 1
Cancer Patient 2
Normal Person 1

Fig. 11


OD 450nm
4
3
2
1
0
Normal Person 1
Normal Person 2
Normal Person 3
Normal Person 4
Normal Person 5
Normal Person 6
Normal Person 7
Normal Person 8
3.685
3.4885
0.853
2.2825
0.853
2.6745
1.092
1.675

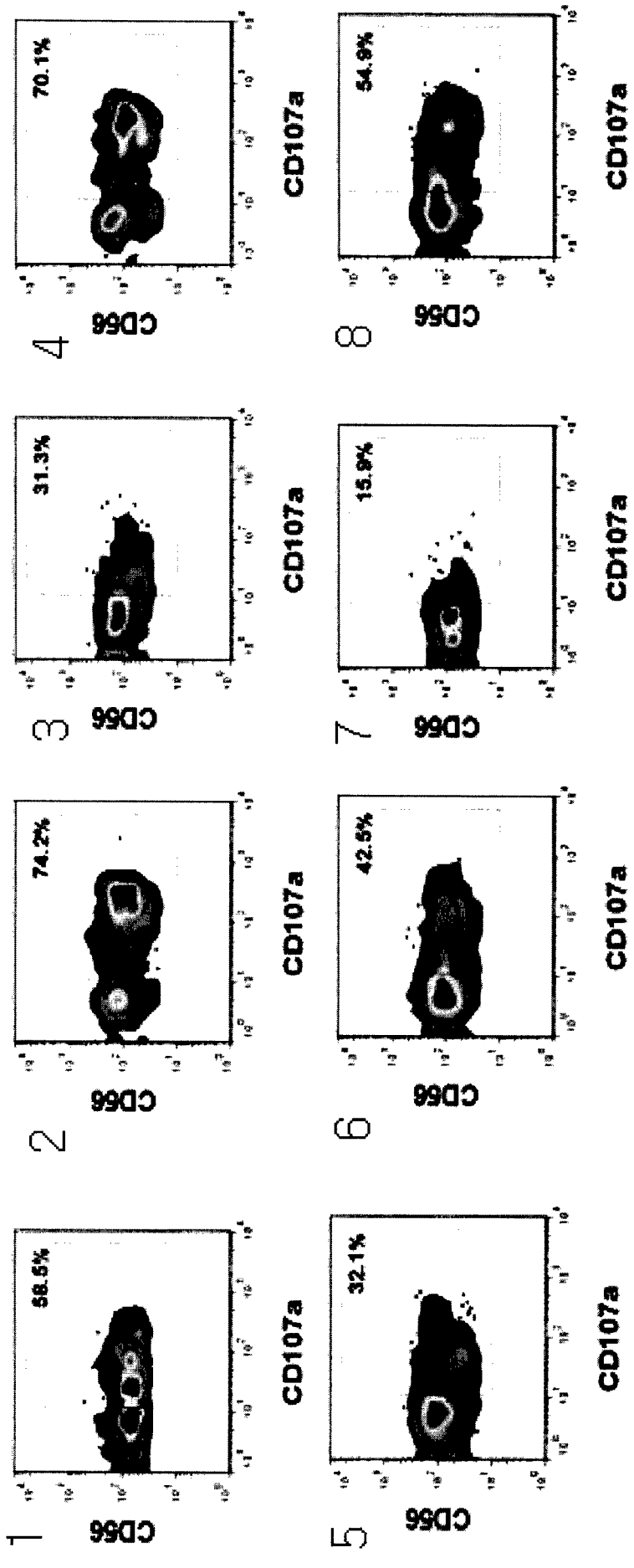

1
58.5%
CD56
CD107a
2
74.2%
CD56
CD107a
3
31.3%
CD56
CD107a
4
70.1%
CD56
CD107a
5
32.1%
CD56
CD107a
6
42.5%
CD56
CD107a
7
15.9%
CD56
CD107a
8
54.9%
CD56
CD107a

Fig. 12