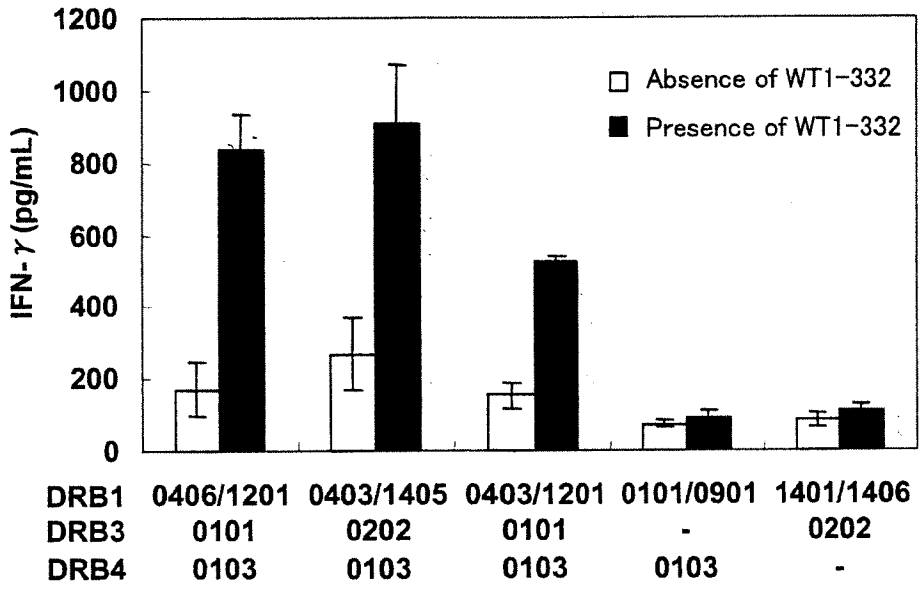
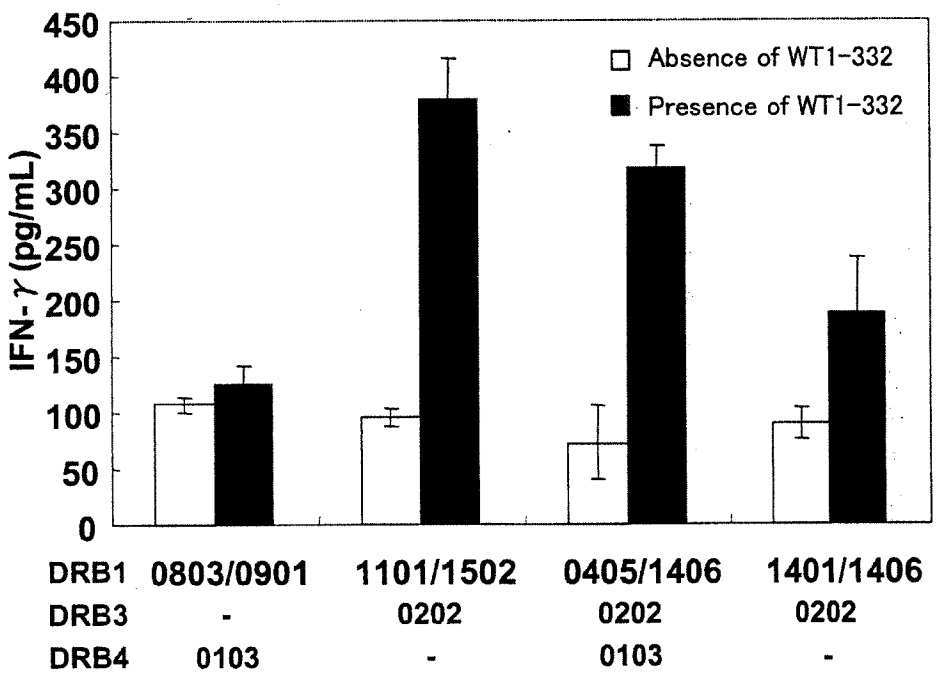
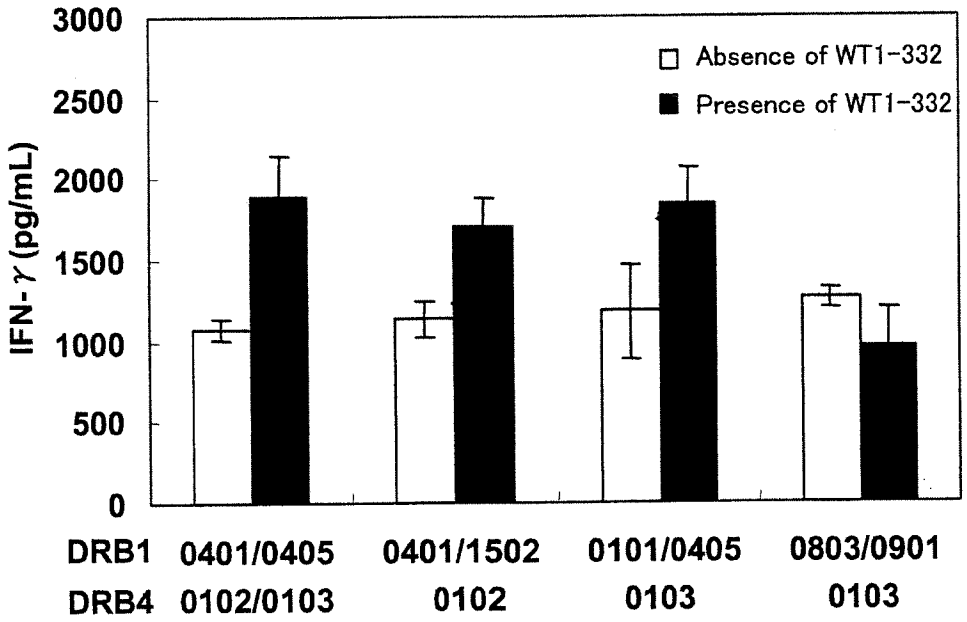
[Fig. 1]


1200
1000
800
600
400
200
0
IFN-γ (pg/mL)
Absence of WT1-332
Presence of WT1-332
DRB1 0406/1201 0403/1405 0403/1201 0101/0901 1401/1406
DRB3 0101 0202 0101 - 0202
DRB4 0103 0103 0103 0103 -

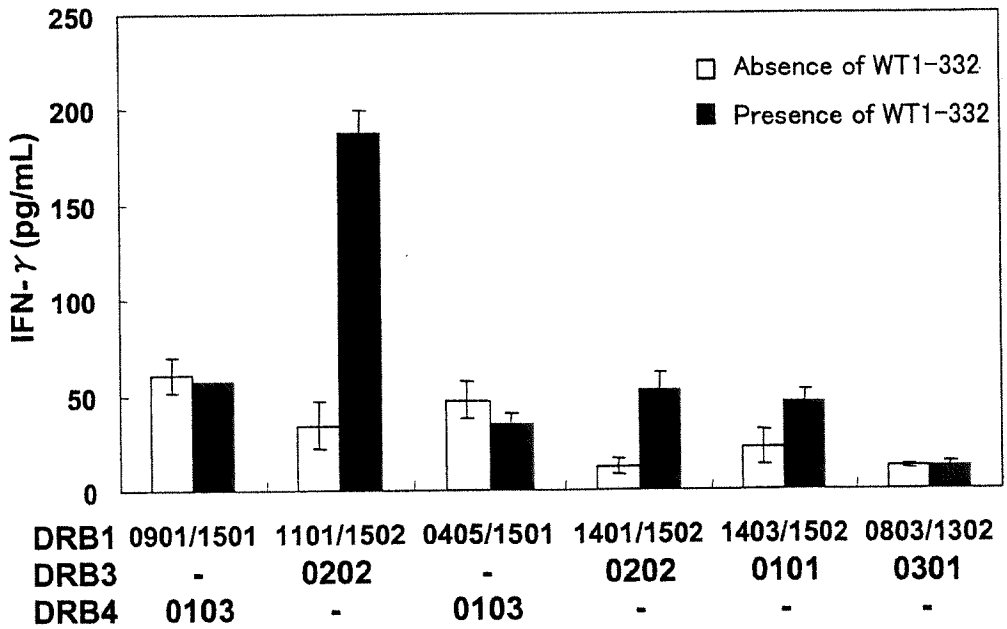
[Fig. 2]


450
400
350
300
250
200
150
100
50
0
IFN-γ (pg/mL)
Absence of WT1-332
Presence of WT1-332
DRB1 0803/0901 1101/1502 0405/1406 1401/1406
DRB3 - 0202 0202 0202
DRB4 0103 - 0103 -

[Fig. 3]

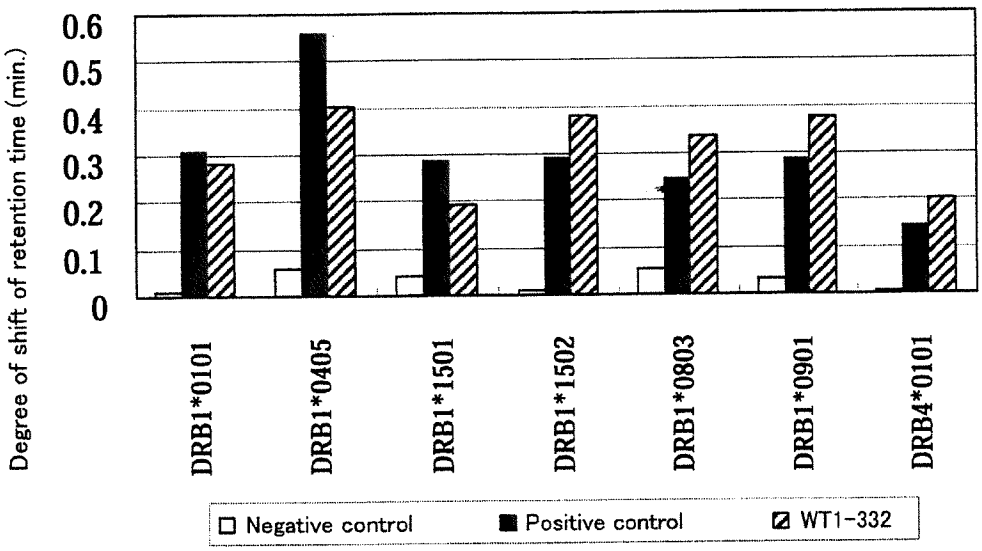

3000
2500
2000
1500
1000
500
0
IFN-γ (pg/mL)
Absence of WT1-332
Presence of WT1-332
DRB1 0401/0405 0401/1502 0101/0405 0803/0901
DRB4 0102/0103 0102 0103 0103

[Fig. 4]

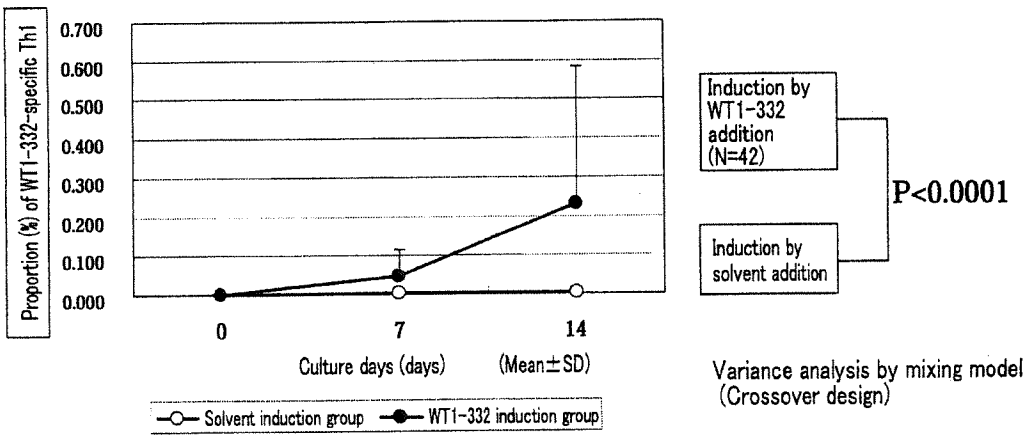

250
200
150
100
50
0
IFN-γ (pg/mL)
Absence of WT1-332
Presence of WT1-332
DRB1 0901/1501 1101/1502 0405/1501 1401/1502 1403/1502 0803/1302
DRB3 - 0202 - 0202 0101 0301
DRB4 0103 - 0103 - - -

5

[Fig. 5]

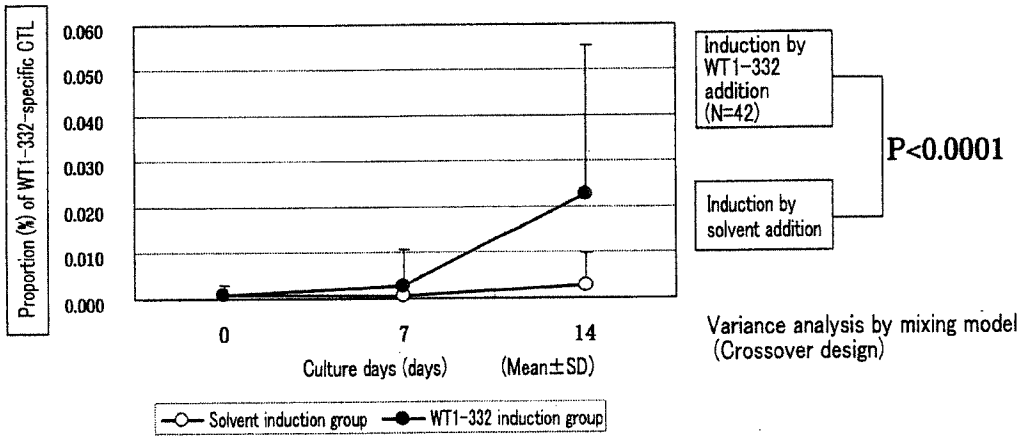

Degree of shift of retention time (min.)
0.6
0.5
0.4
0.3
0.2
0.1
0
DRB1*0101
DRB1*0405
DRB1*1501
DRB1*1502
DRB1*0803
DRB1*0901
DRB4*0101
Negative control
Positive control
WT1-332

[Fig. 6]

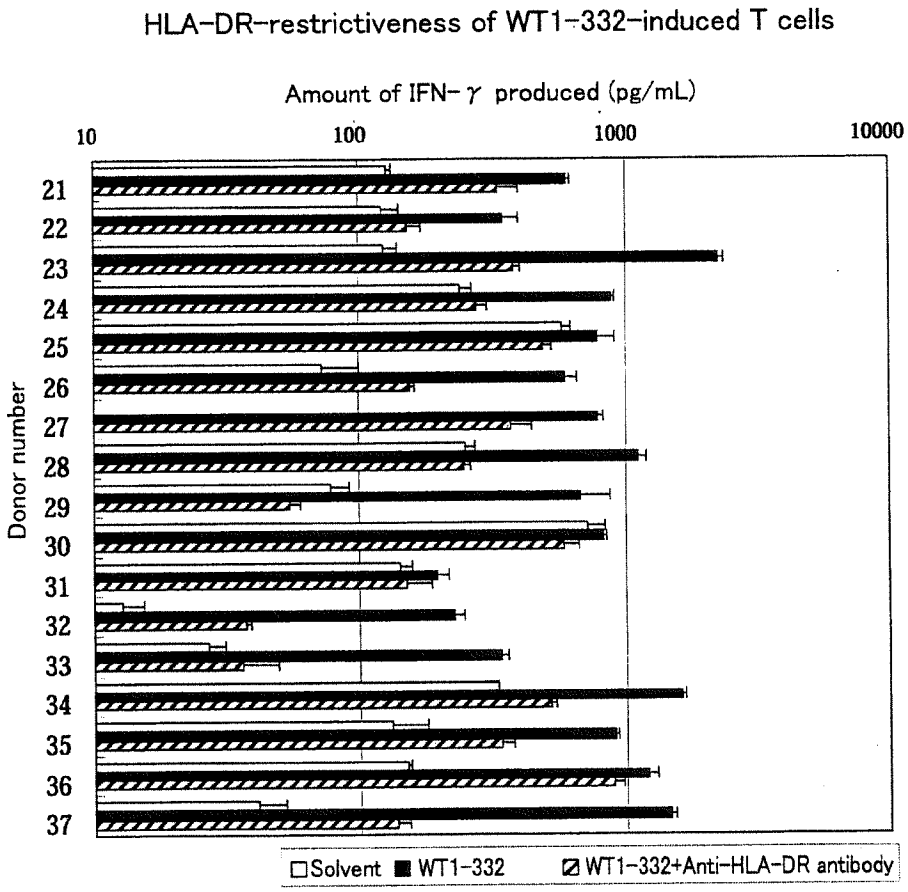

Proportion (%) of WT1-332-specific Th1
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0.000
0
7
14
Culture days (days)
(Mean±SD)
Solvent induction group
WT1-332 induction group
Induction by WT1-332 addition (N=42)
Induction by solvent addition
P<0.0001
Variance analysis by mixing model
(Crossover design)

5

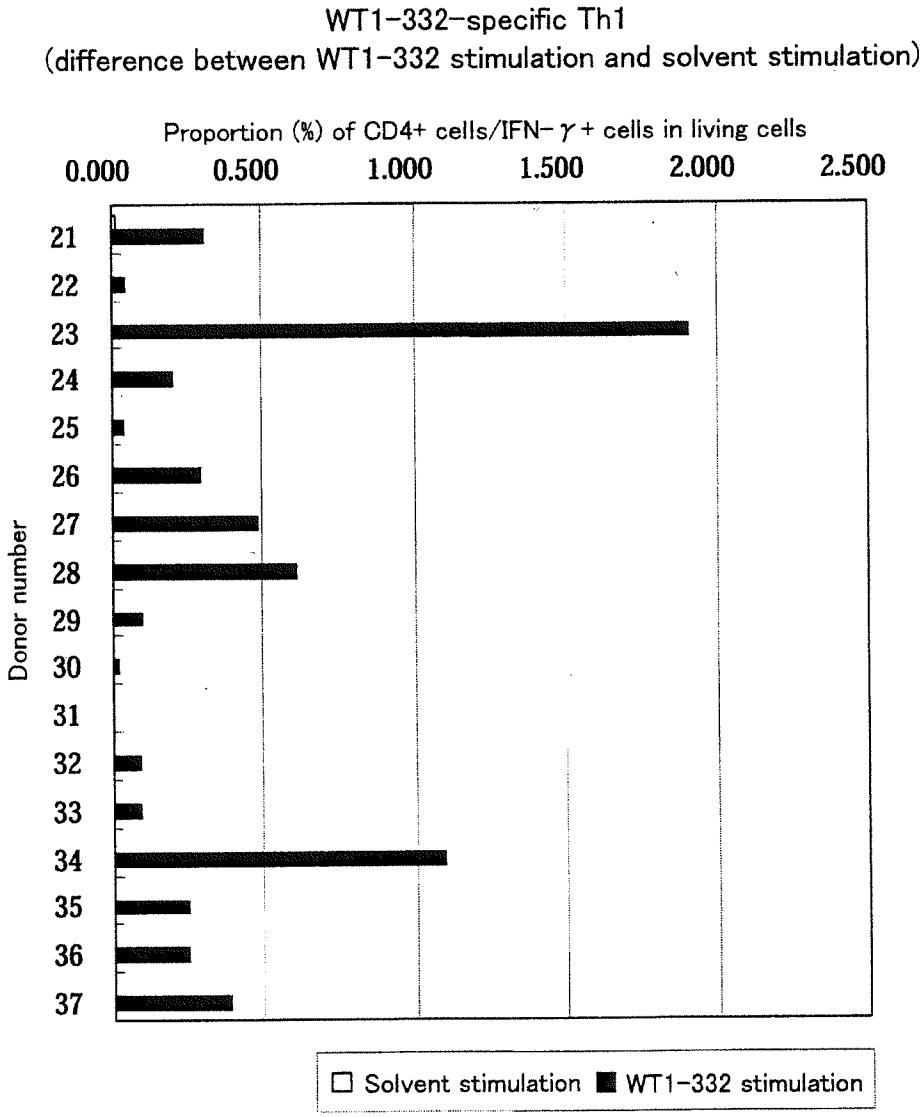
[Fig. 7]


Proportion (%) of WT1-332-specific CTL
0.060
0.050
0.040
0.030
0.020
0.010
0.000
0
7
14
Culture days (days)
(Mean±SD)
Induction by WT1-332 addition (N=42)
Induction by solvent addition
P<0.0001
Variance analysis by mixing model (Crossover design)
Solvent induction group
WT1-332 induction group

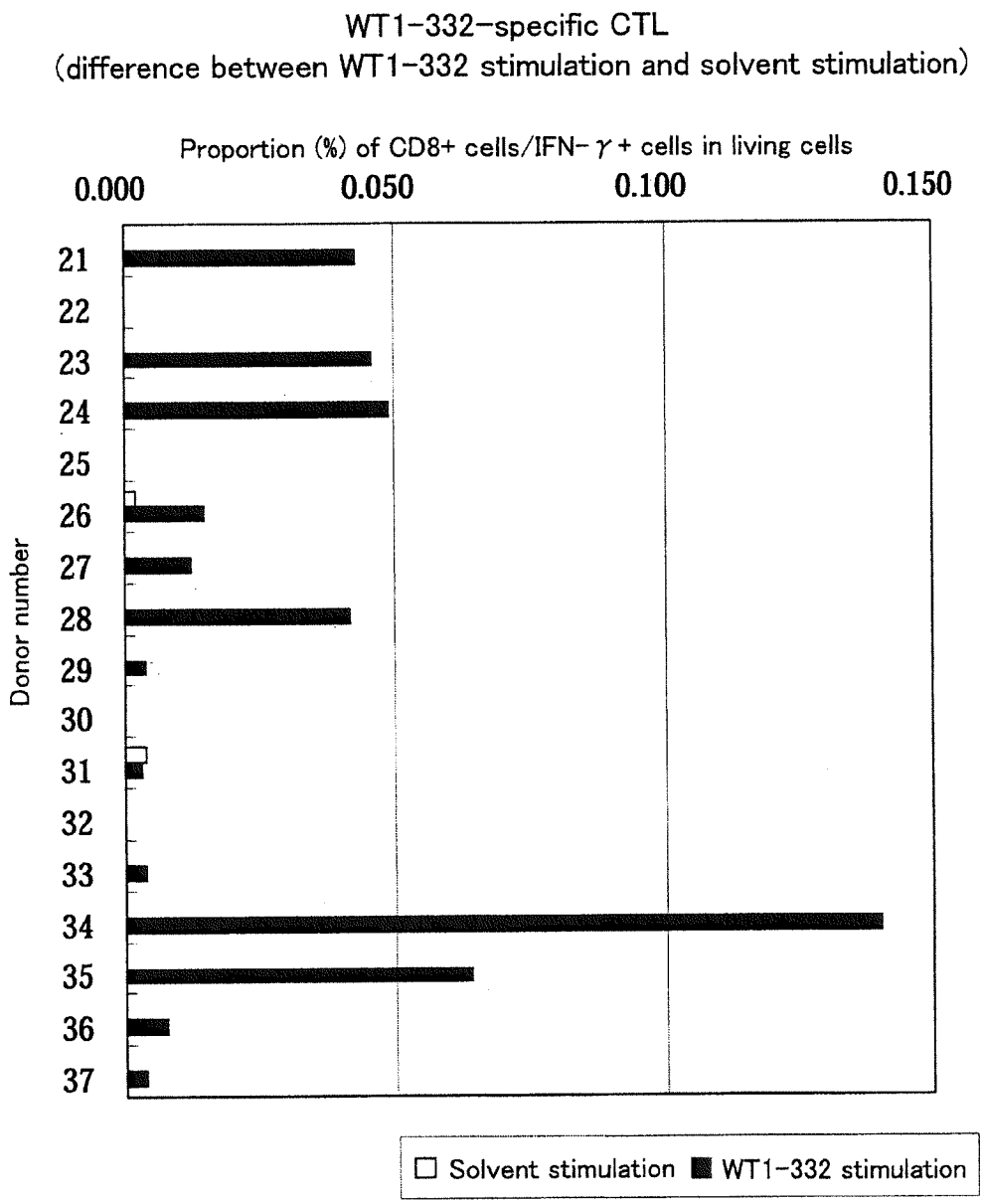
[Fig. 8]


HLA-DR-restrictiveness of WT1-332-induced T cells
Amount of IFN-γ produced (pg/mL)
10
100
1000
10000
Donor number
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
Solvent
WT1-332
WT1-332+Anti-HLA-DR antibody

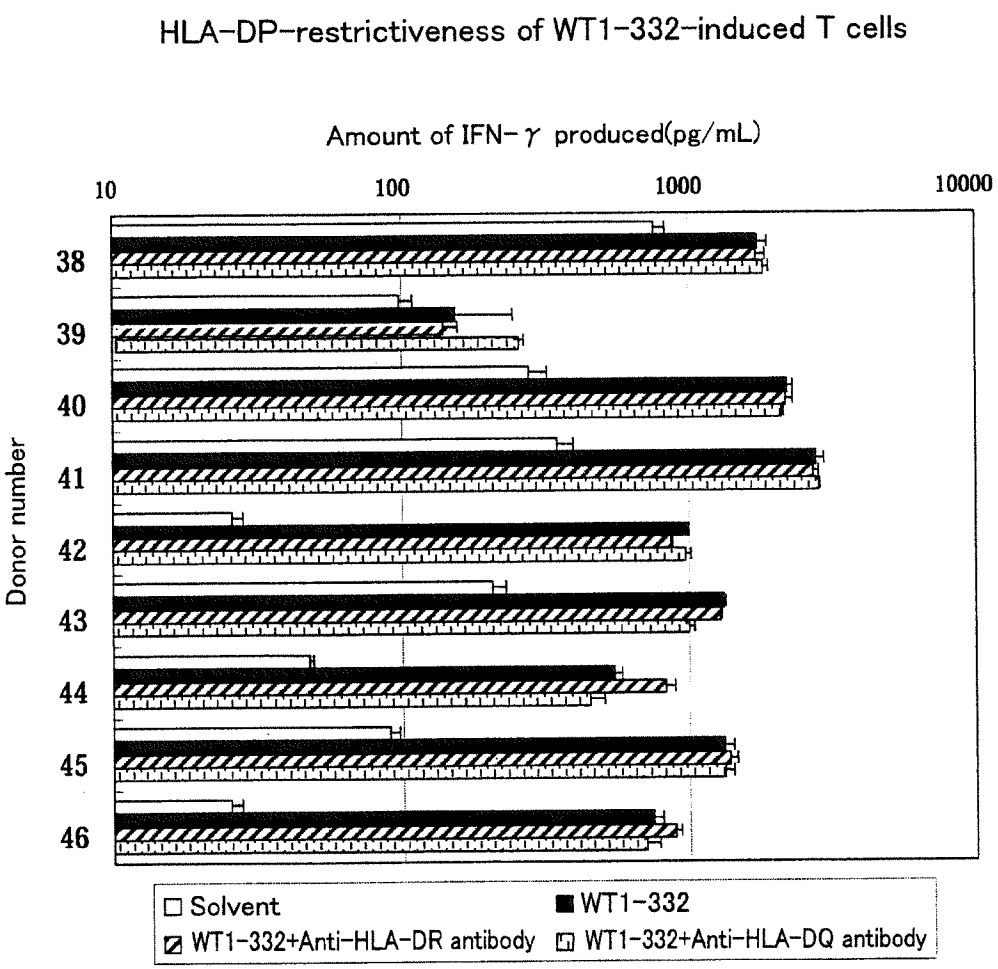
[Fig. 9]


WT1-332-specific Th1
(difference between WT1-332 stimulation and solvent stimulation)
Proportion (%) of CD4+ cells/IFN-γ+ cells in living cells
0.000
0.500
1.000
1.500
2.000
2.500
Donor number
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
Solvent stimulation
WT1-332 stimulation

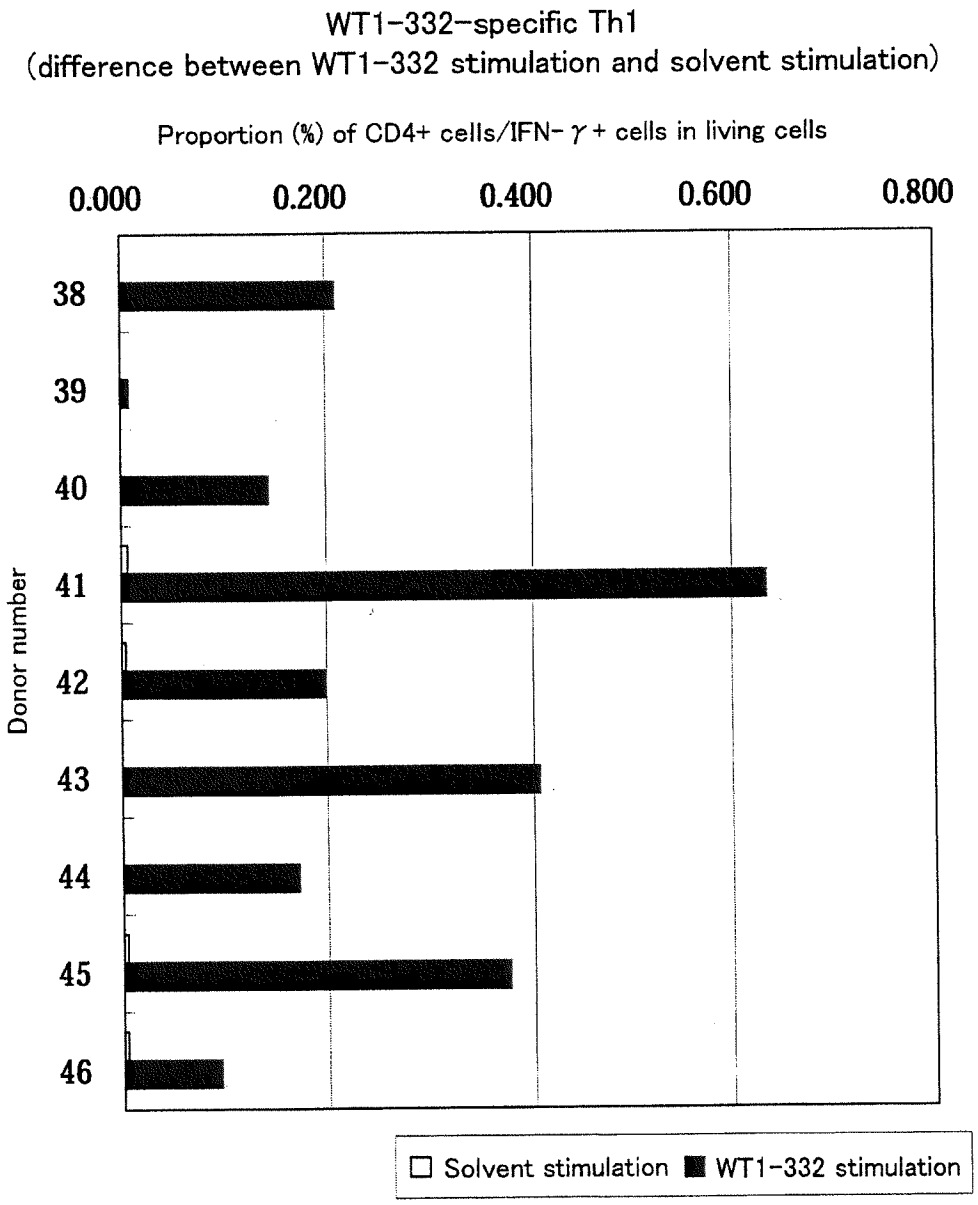
[Fig. 10]


WT1-332-specific CTL
(difference between WT1-332 stimulation and solvent stimulation)
Proportion (%) of CD8+ cells/IFN-γ+ cells in living cells
0.000
0.050
0.100
0.150
Donor number
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
Solvent stimulation
WT1-332 stimulation

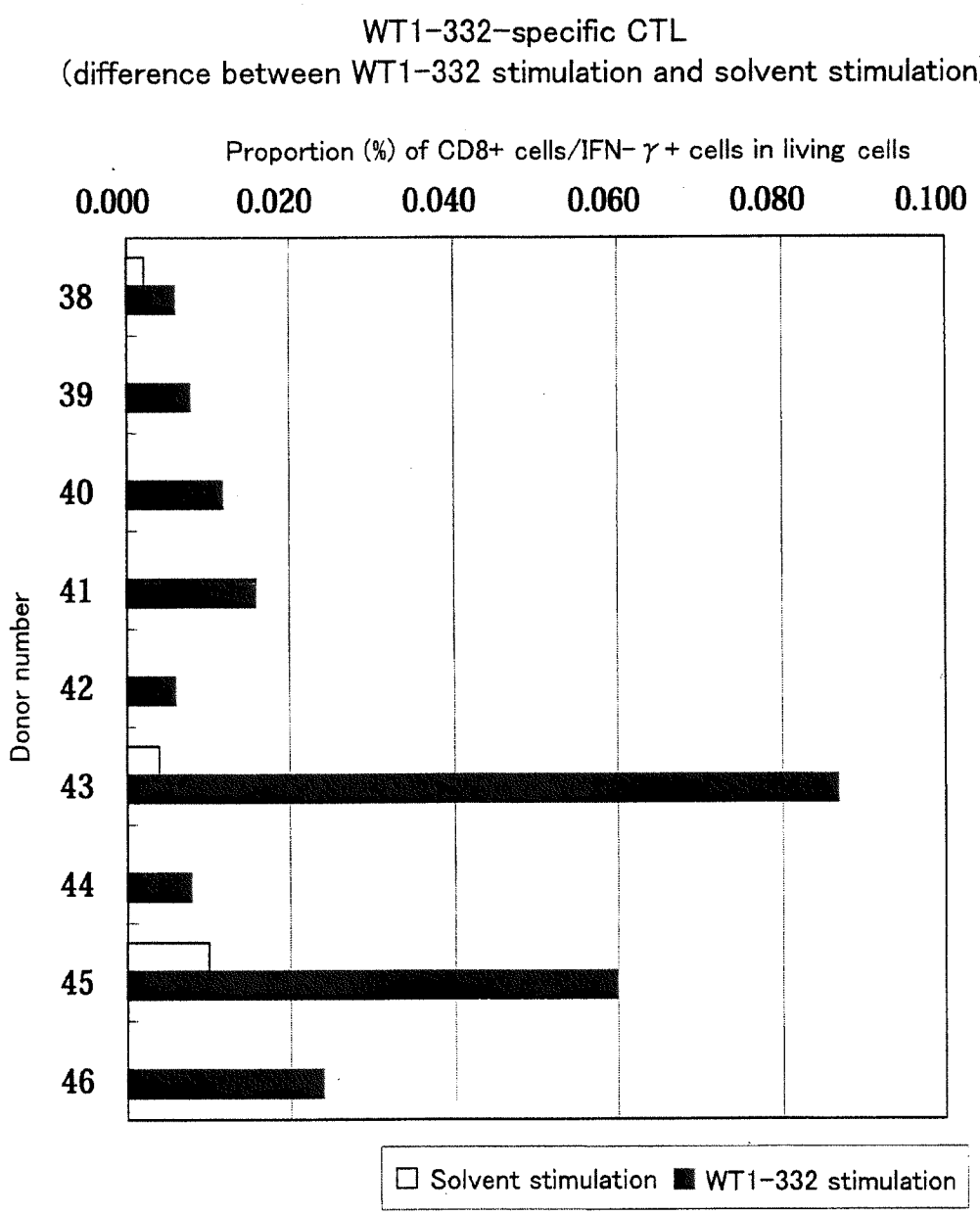
[Fig. 11]


HLA-DP-restrictiveness of WT1-332-induced T cells
Amount of IFN-γ produced(pg/mL)
10
100
1000
10000
Donor number
38
39
40
41
42
43
44
45
46
Solvent
WT1-332
WT1-332+Anti-HLA-DR antibody
WT1-332+Anti-HLA-DQ antibody

[Fig. 12]


WT1-332-specific Th1
(difference between WT1-332 stimulation and solvent stimulation)
Proportion (%) of CD4+ cells/IFN-γ+ cells in living cells
0.000
0.200
0.400
0.600
0.800
Donor number
38
39
40
41
42
43
44
45
46
Solvent stimulation
WT1-332 stimulation

[Fig. 13]


WT1-332-specific CTL
(difference between WT1-332 stimulation and solvent stimulation)
Proportion (%) of CD8+ cells/IFN-γ+ cells in living cells
0.000
0.020
0.040
0.060
0.080
0.100
Donor number
38
39
40
41
42
43
44
45
46
Solvent stimulation
WT1-332 stimulation