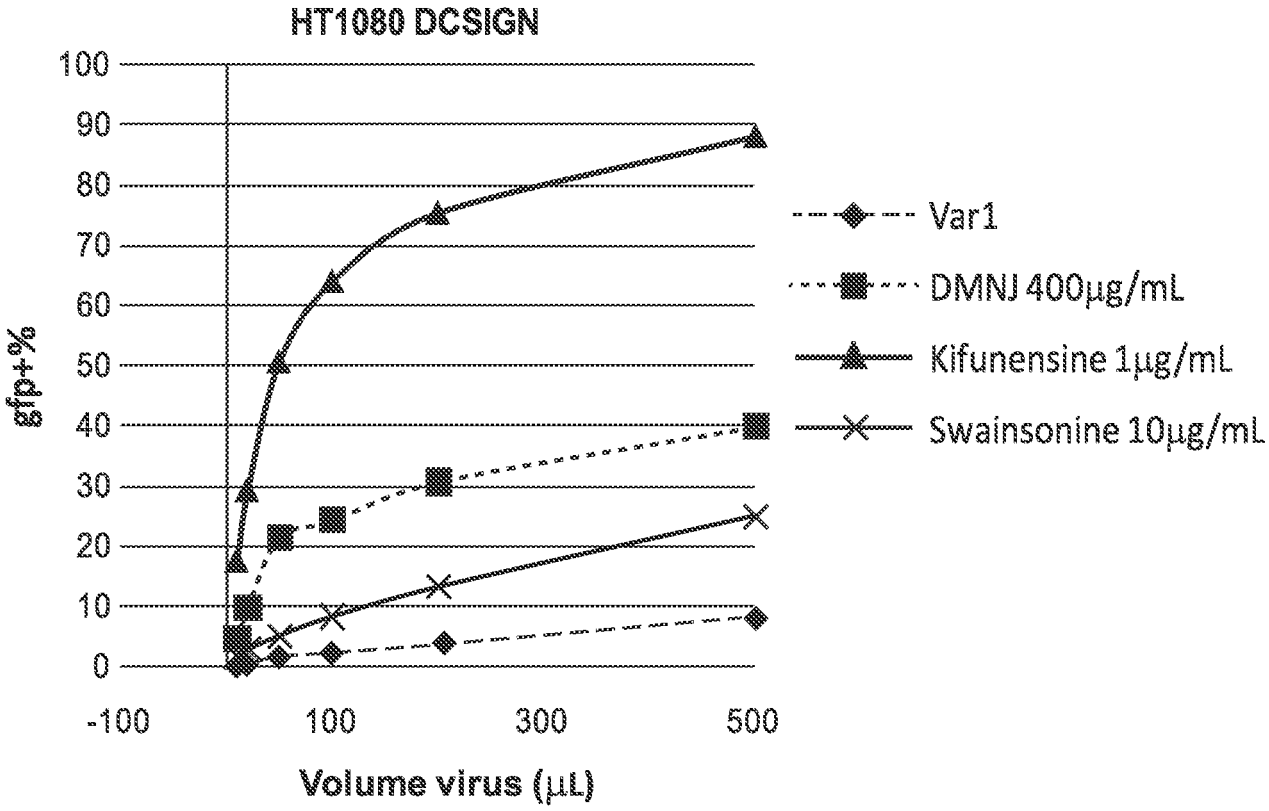

HT1080 DCSIGN
gfp+%
100
90
80
70
60
50
40
30
20
10
0
-100
100
300
500
Volume virus (µL)
Var1
DMNJ 400µg/mL
Kifunensine 1µg/mL
Swainsonine 10µg/mL

FIG. 1A

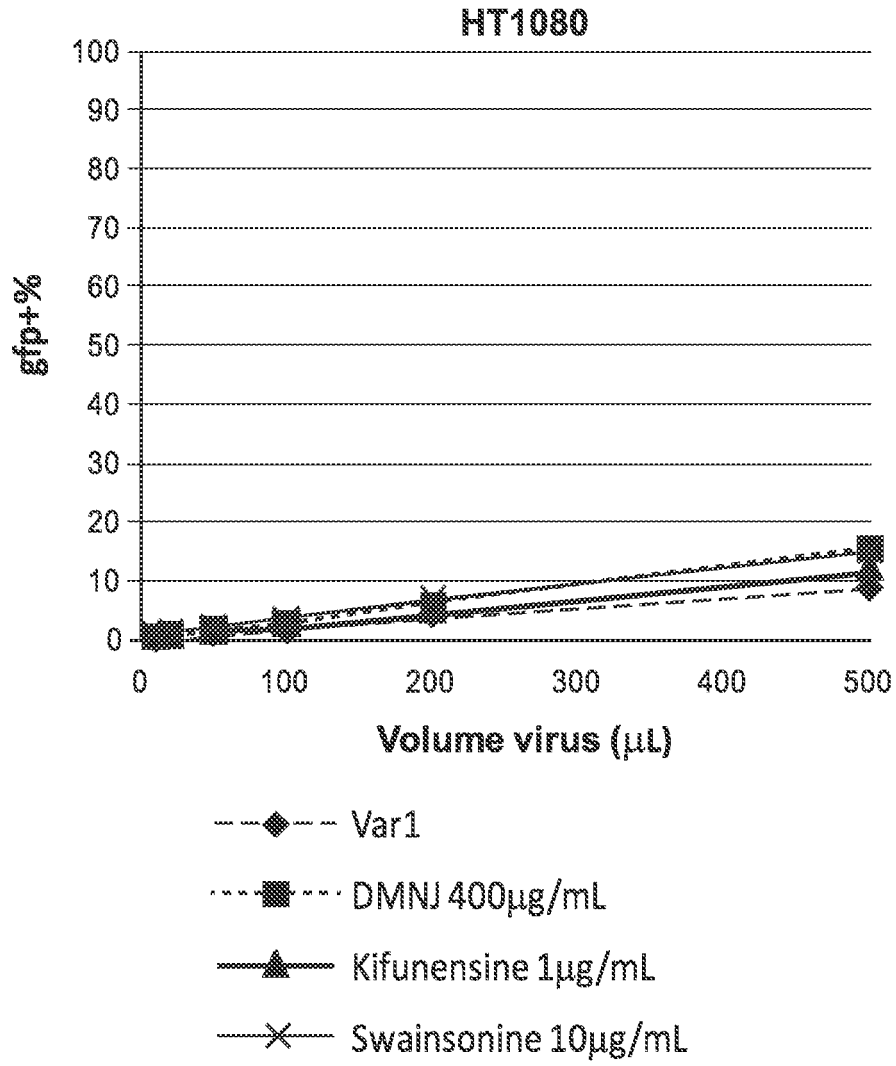

HT1080
gfp+%
100
90
80
70
60
50
40
30
20
10
0
0
100
200
300
400
500
Volume virus (µL)
Var1
DMNJ 400µg/mL
Kifunensine 1µg/mL
Swainsonine 10µg/mL

FIG. 1B

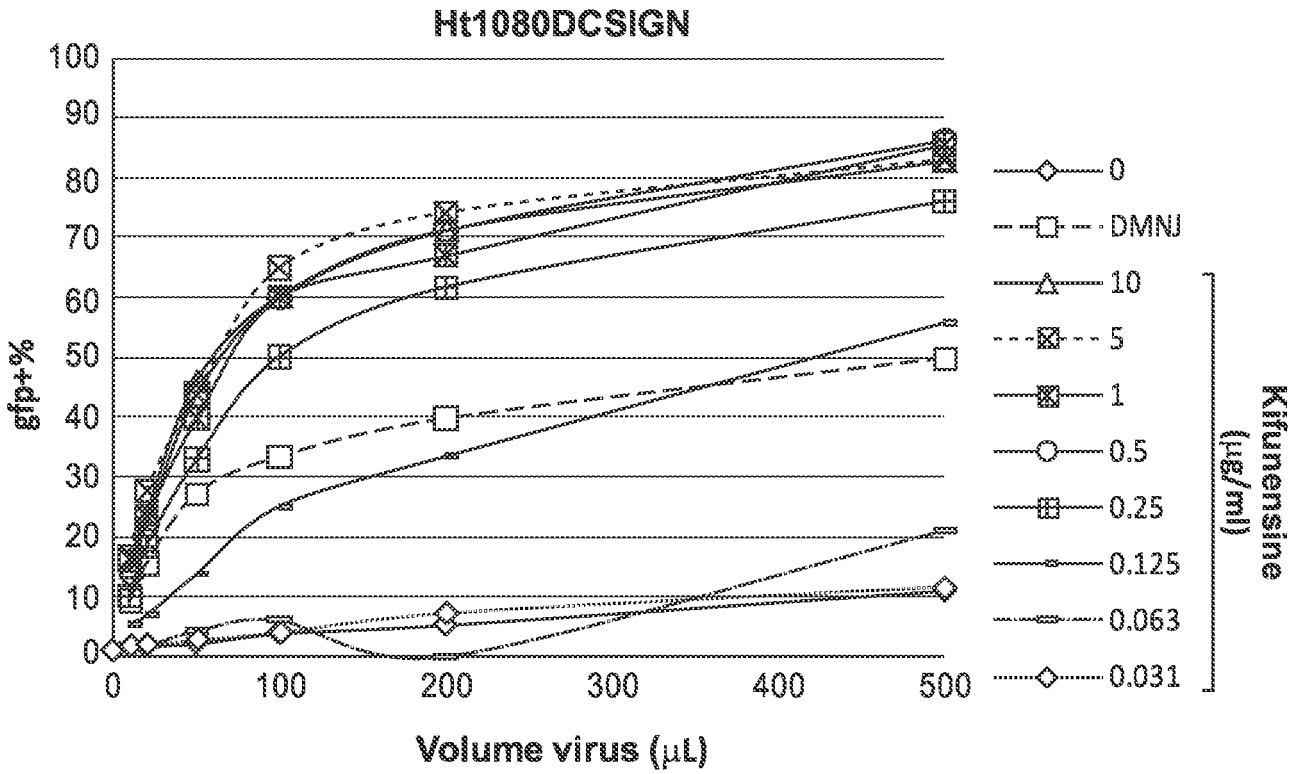

Ht1080DCSIGN
gfp+%
100
90
80
70
60
50
40
30
20
10
0
0
100
200
300
400
500
Volume virus (µL)
0
DMNJ
10
5
1
0.5
0.25
0.125
0.063
0.031
Kifunensine (µg/ml)

FIG. 2A

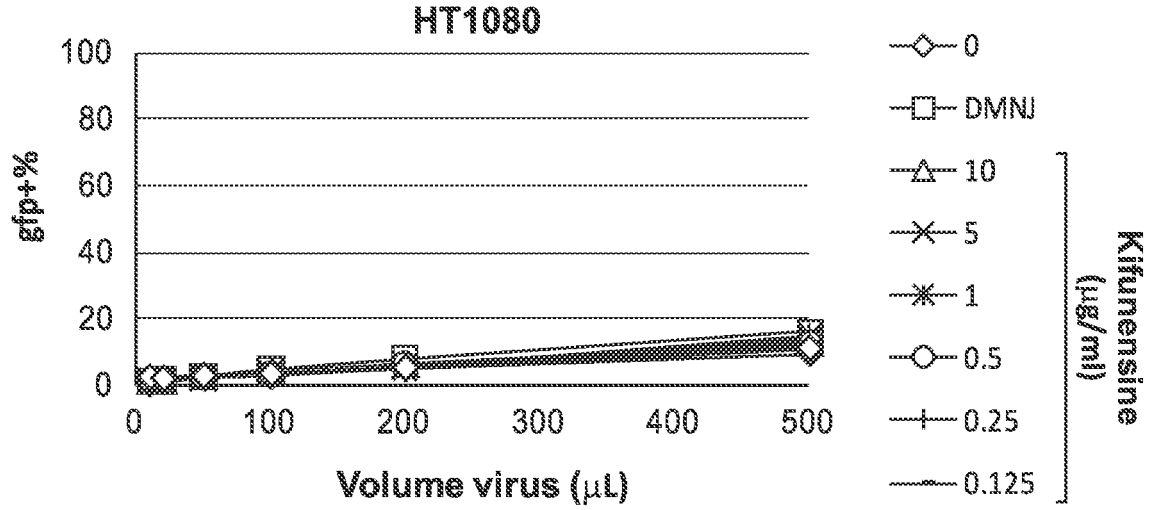

HT1080
gfp+%
100
80
60
40
20
0
0
100
200
300
400
500
Volume virus (µL)
0
DMNJ
10
5
1
0.5
0.25
0.125
Kifunensine (µg/ml)

FIG. 2B

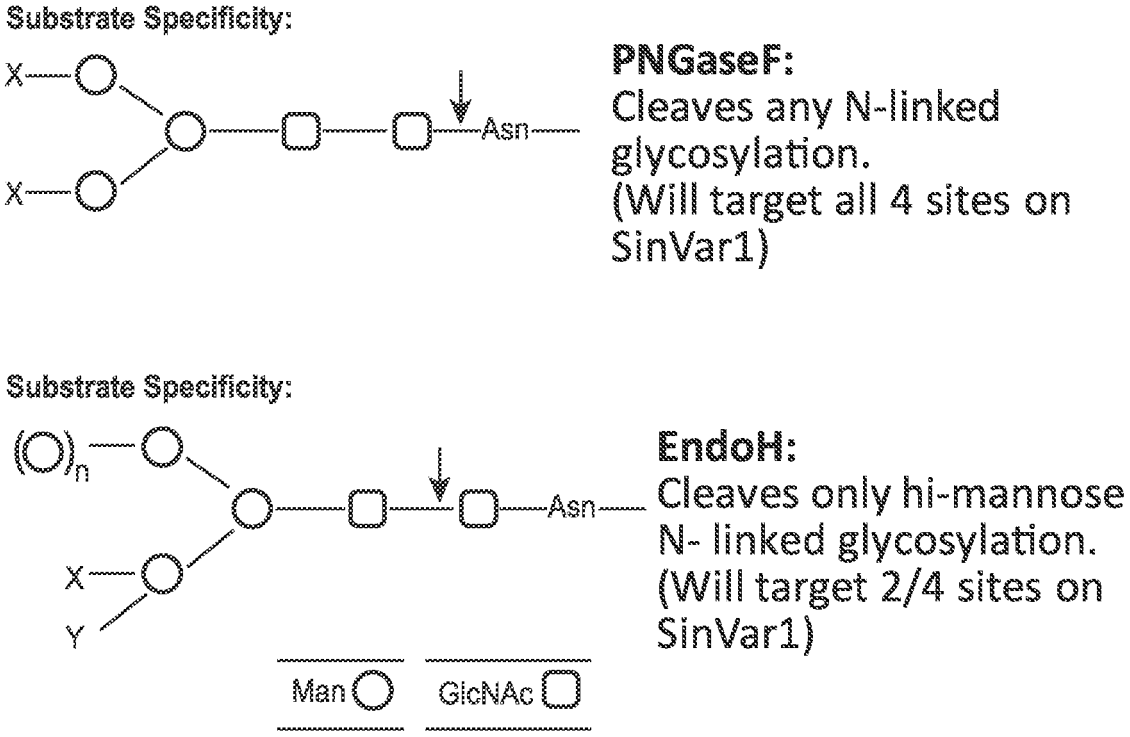

Substrate Specificity:
X
X
Asn
PNGaseF:
Cleaves any N-linked glycosylation.
(Will target all 4 sites on SinVar1)
Substrate Specificity:
(O)n
X
Y
Asn
EndoH:
Cleaves only hi-mannose N- linked glycosylation.
(Will target 2/4 sites on SinVar1)
Man
GlcNAc

FIG. 3A

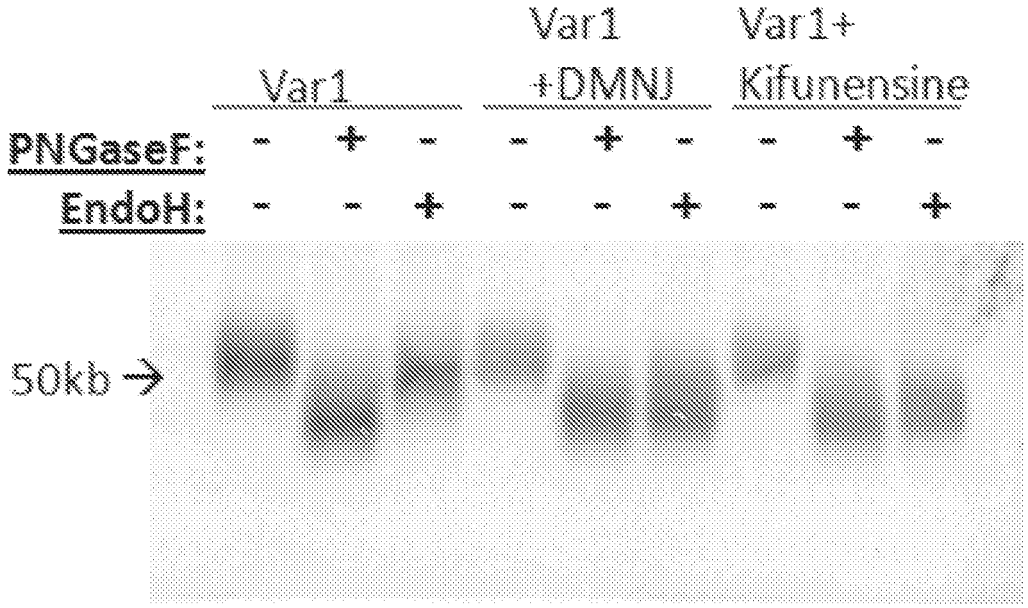

Var1
Var1 +DMNJ
Var1+ Kifunensine
PNGaseF: - + - - + - - + -
EndoH: - - + - - + - - +
50kb

FIG. 3B

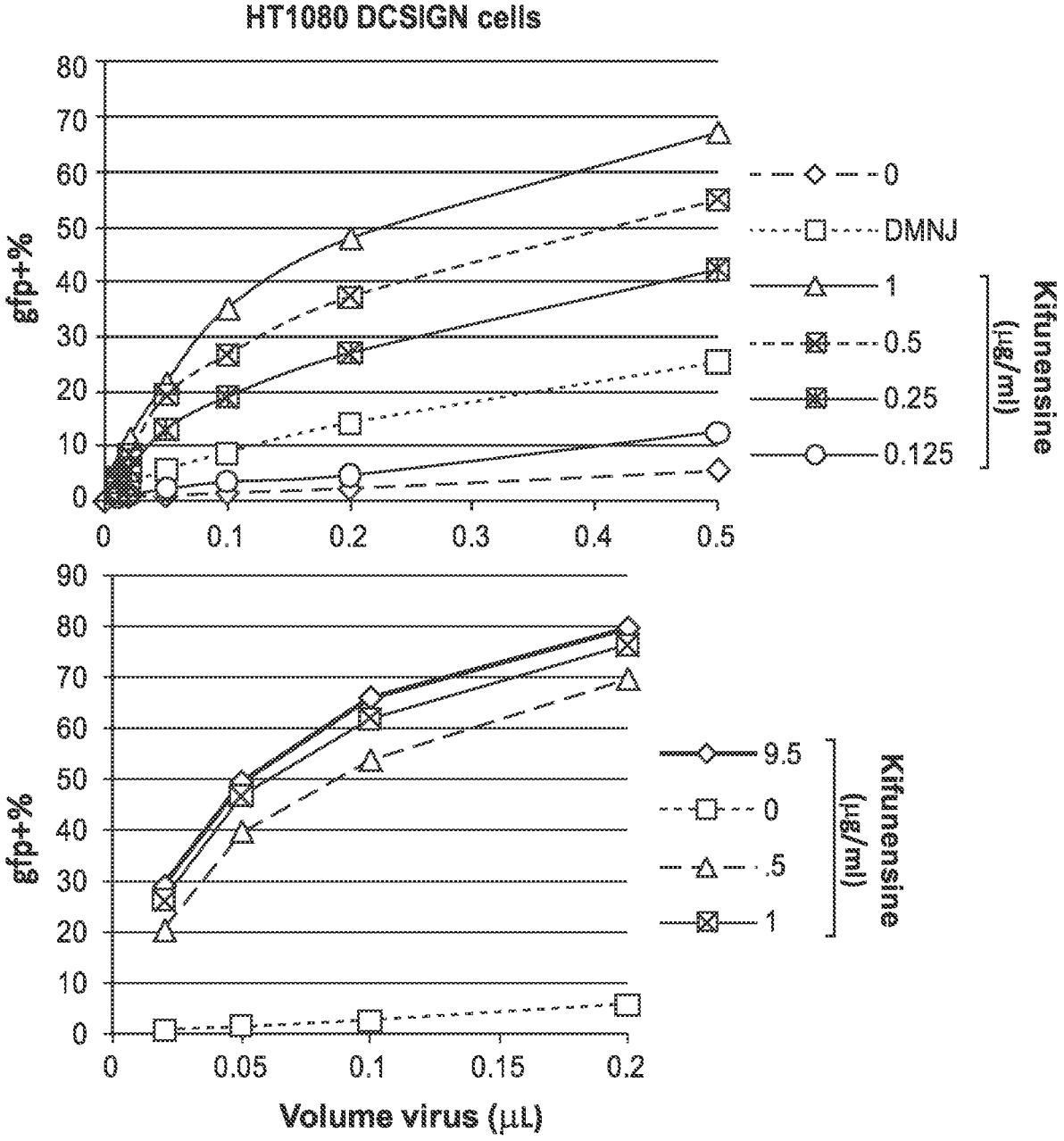

HT1080 DCSIGN cells
gfp+%
80
70
60
50
40
30
20
10
0
0
0.1
0.2
0.3
0.4
0.5
0
DMNJ
1
0.5
0.25
0.125
Kifunensine (µg/ml)
90
80
70
60
50
40
30
20
10
0
0
0.05
0.1
0.15
0.2
9.5
0
.5
1
Kifunensine (µg/ml)
Volume virus (µL)

FIG. 4A

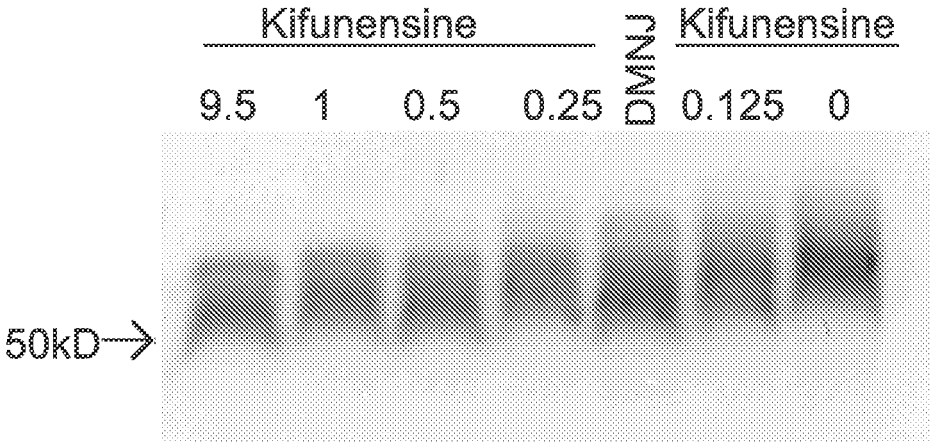


FIG. 4B

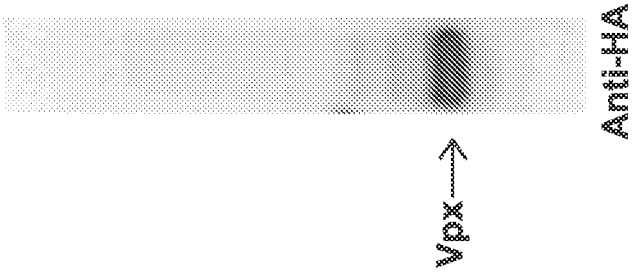

Vpx
Anti-HA

FIG. 5A

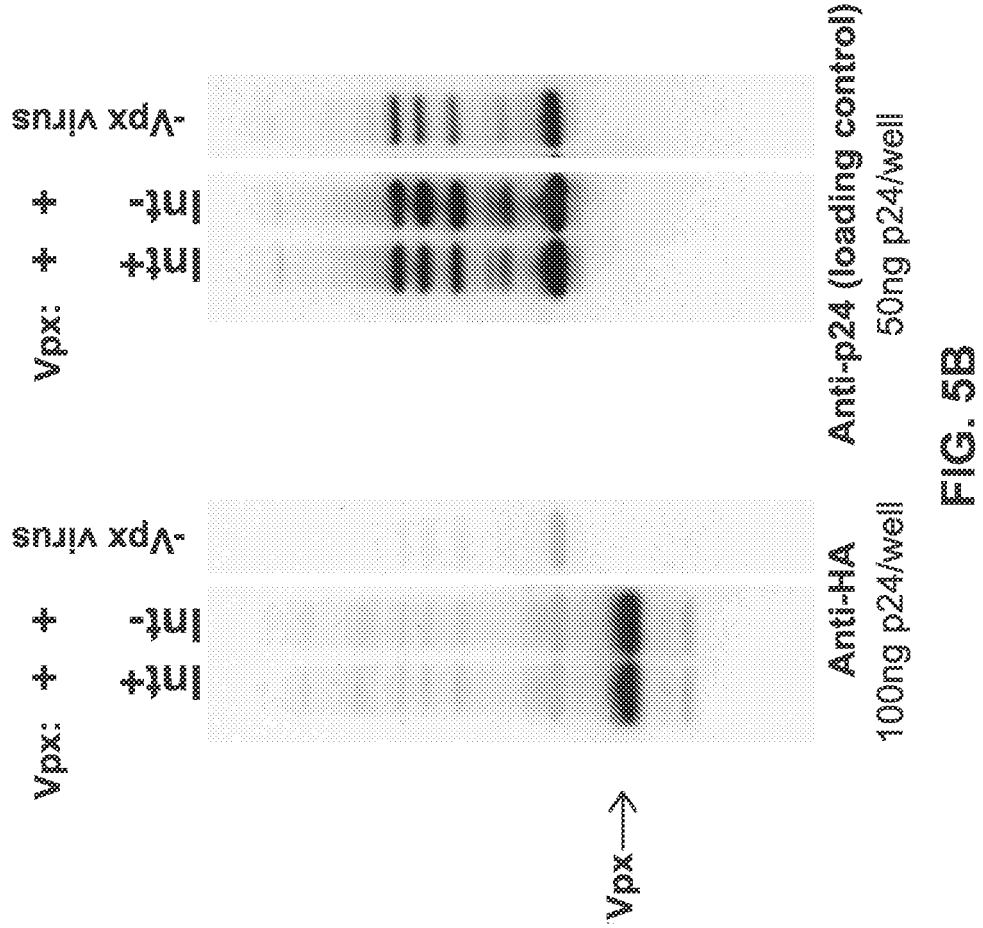

Vpx:
Int+
Int-
-Vpx virus
Anti-HA
100ng p24/well
Vpx
Vpx:
Int+
Int-
-Vpx virus
Anti-p24 (loading control)
50ng p24/well

FIG. 5B

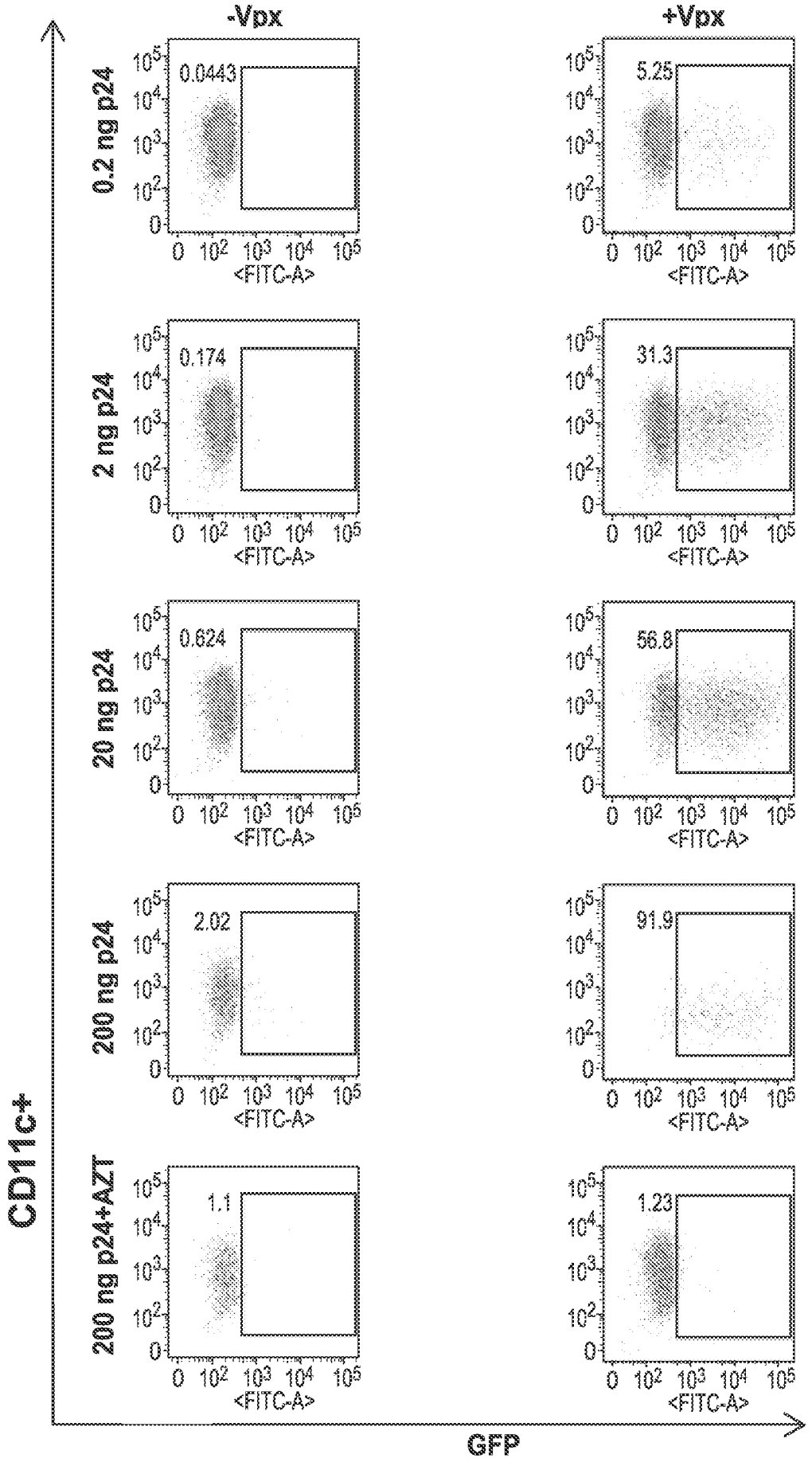

-Vpx
+Vpx
0.2 ng p24
2 ng p24
20 ng p24
200 ng p24
200 ng p24+AZT
0.0443
5.25
0.174
31.3
0.624
56.8
2.02
91.9
1.1
1.23
<FITC-A>
CD11c+
GFP

FIG. 6

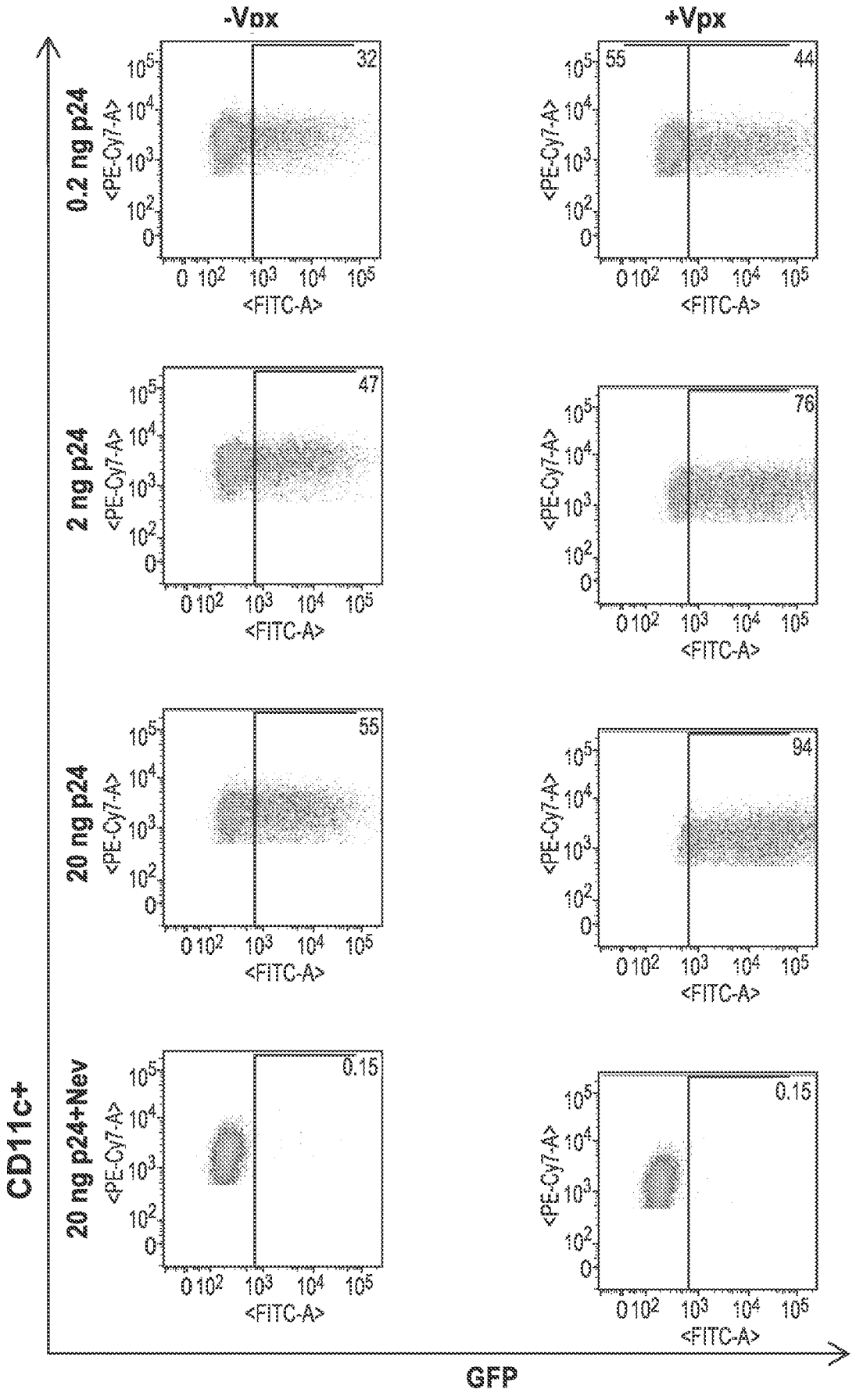

-Vpx
+Vpx
0.2 ng p24
2 ng p24
20 ng p24
20 ng p24+Nev
CD11c+
GFP
<PE-Cy7-A>
<FITC-A>
32
55
44
47
76
55
94
0.15
0.15

FIG. 7

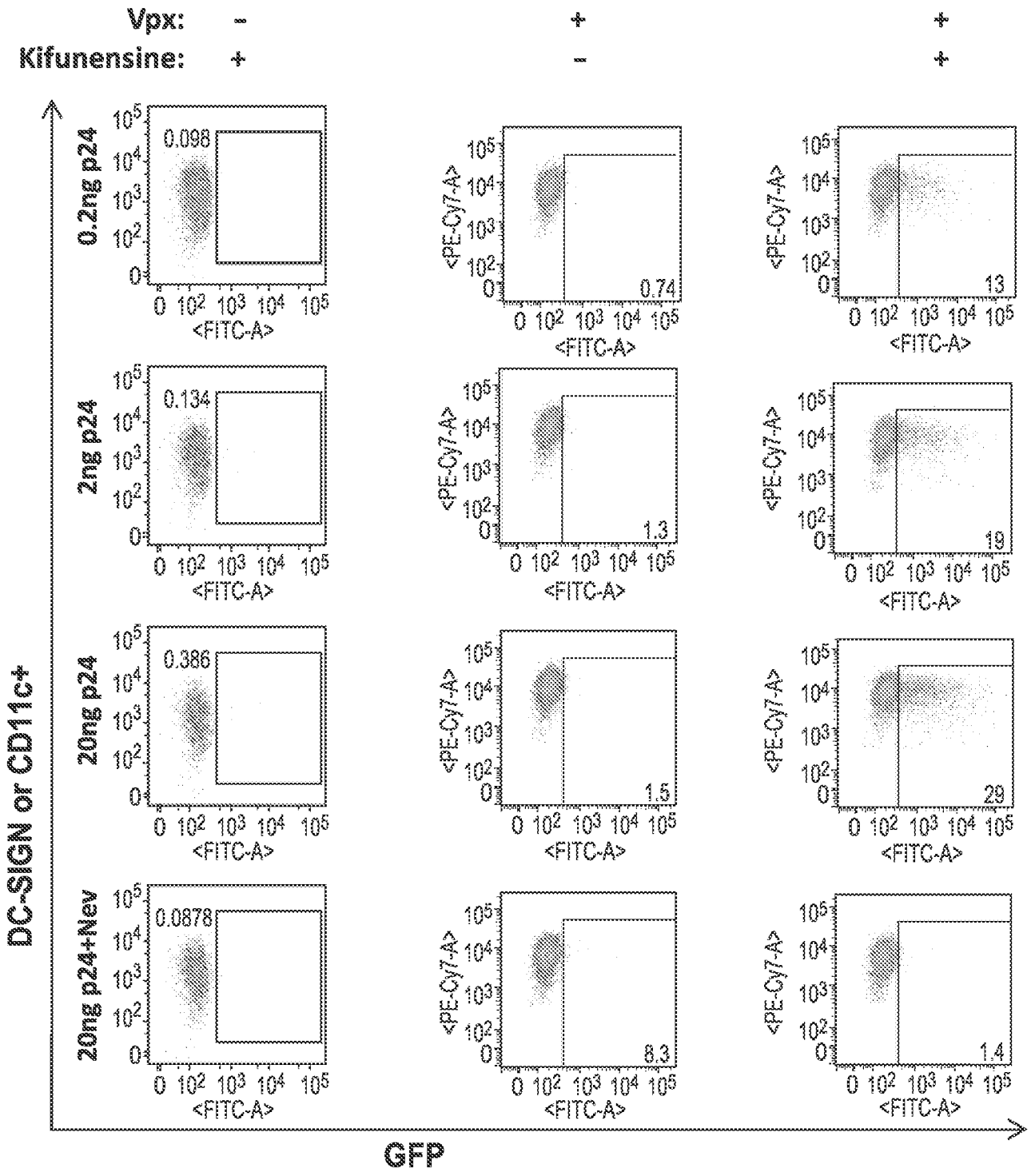

Vpx: - + +
Kifunensine: + - +
0.2ng p24
2ng p24
20ng p24
20ng p24+Nev
0.098
0.74
13
0.134
1.3
19
0.386
1.5
29
0.0878
8.3
1.4
<PE-Cy7-A>
<FITC-A>
DC-SIGN or CD11c+
GFP

FIG. 8

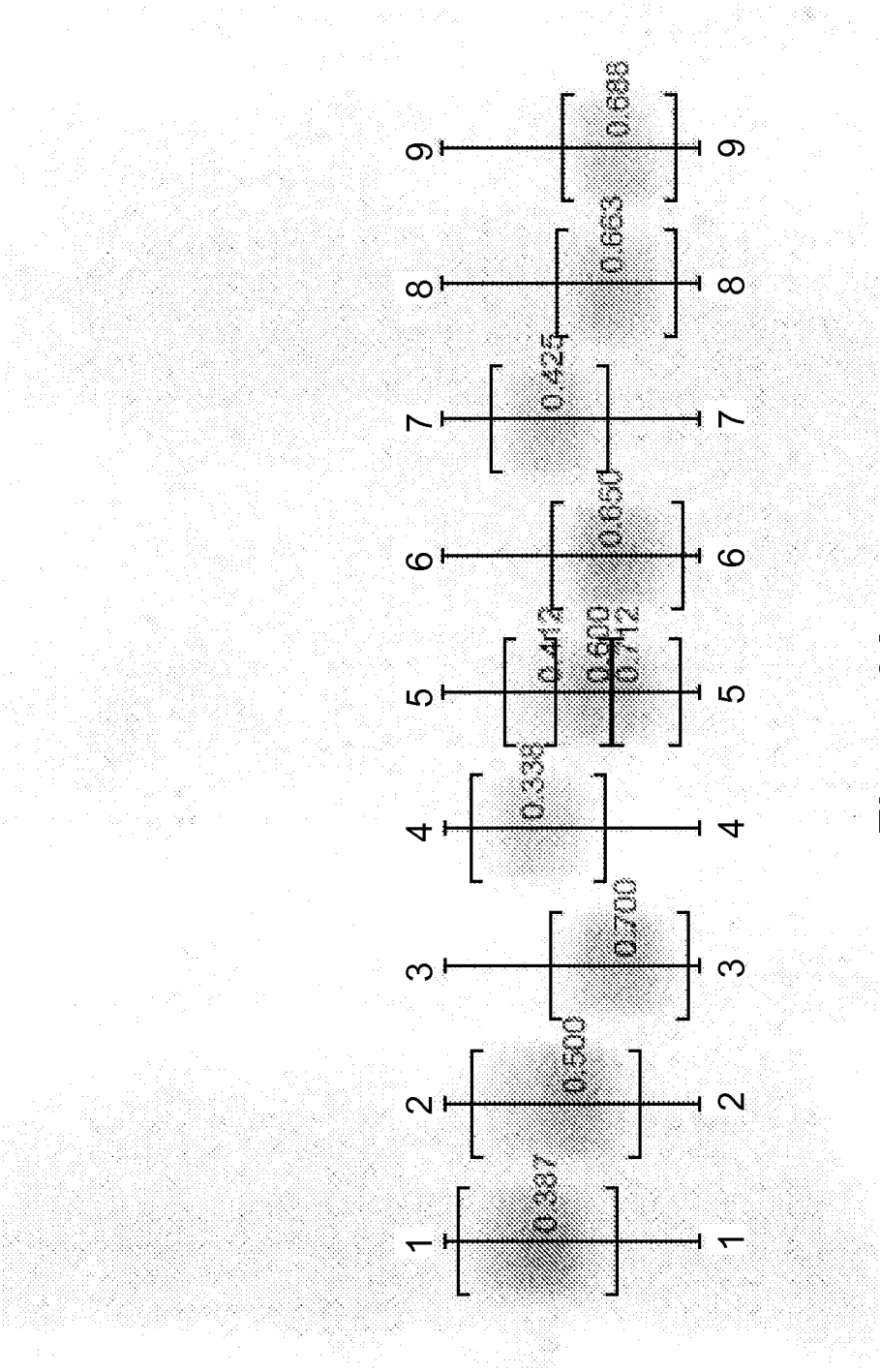

1
2
3
4
5
6
7
8
9
0.337
0.500
0.700
0.338
0.413
0.600
0.712
0.650
0.425
0.663
0.688

Figure 9A

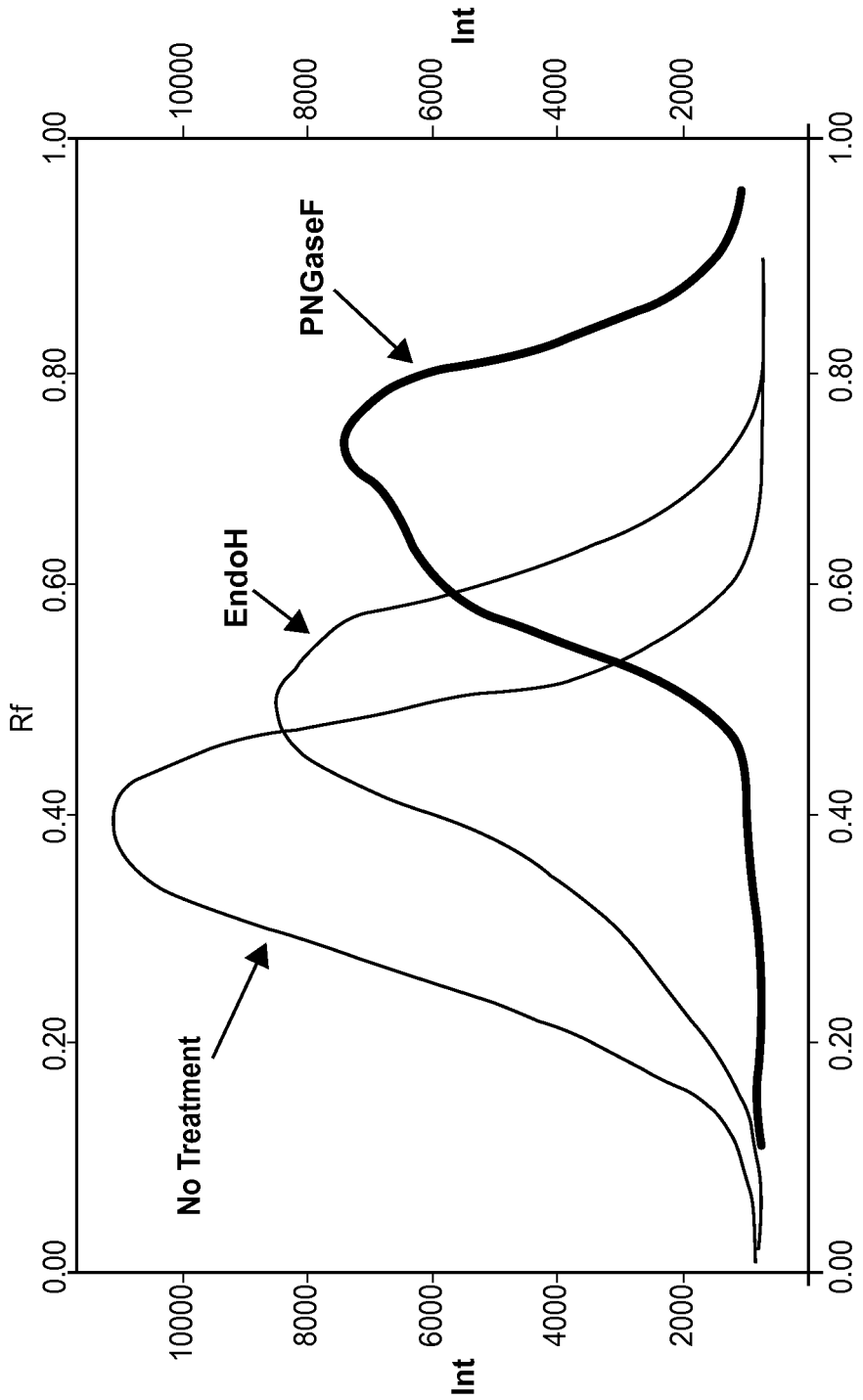

Int
10000
8000
6000
4000
2000
1.00
0.80
0.60
0.40
0.20
0.00
Rf
PNGaseF
EndoH
No Treatment

Figure 9B

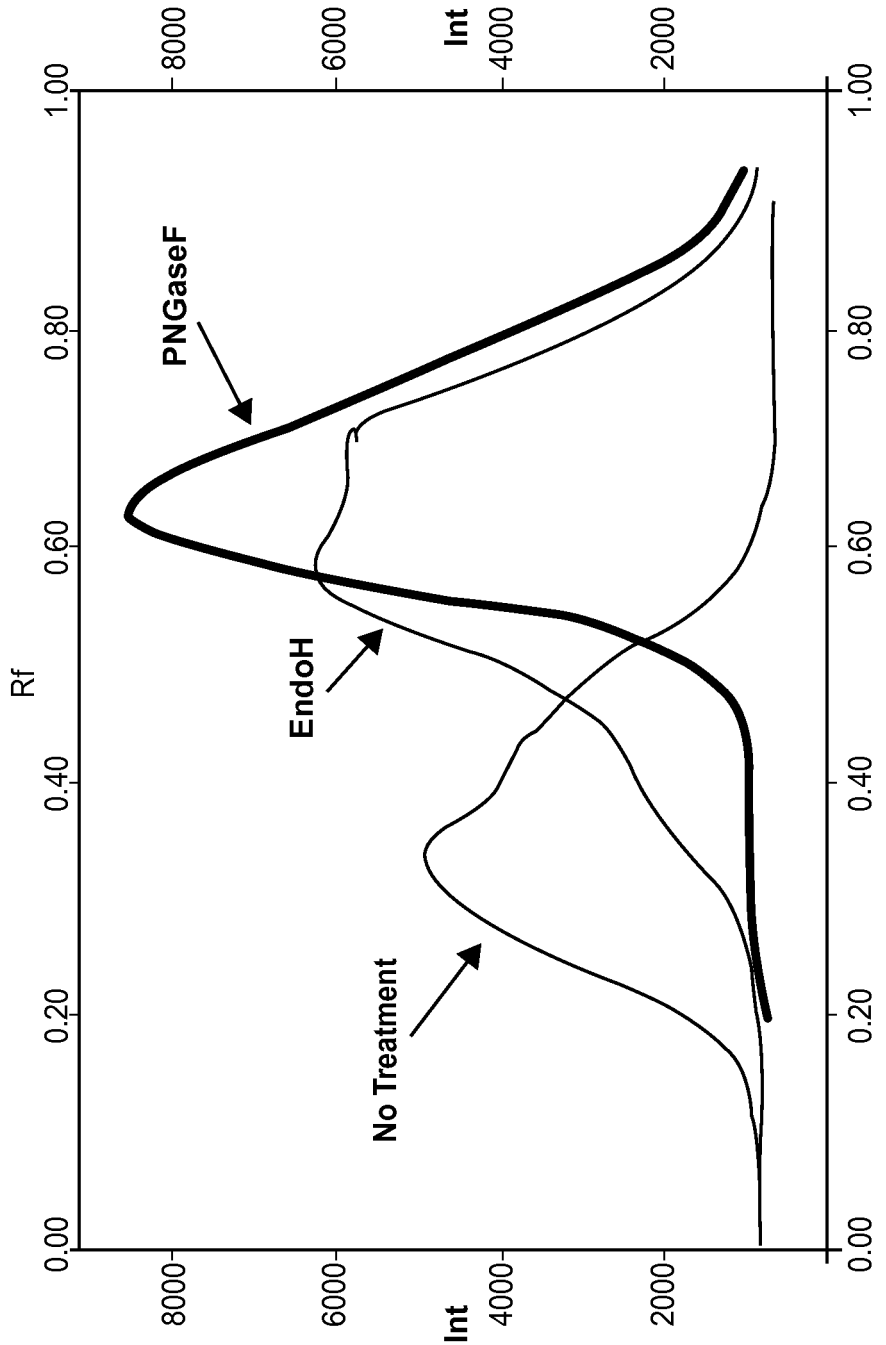

Rf
0.00
0.20
0.40
0.60
0.80
1.00
Int
2000
4000
6000
8000
PNGaseF
EndoH
No Treatment

Figure 9C

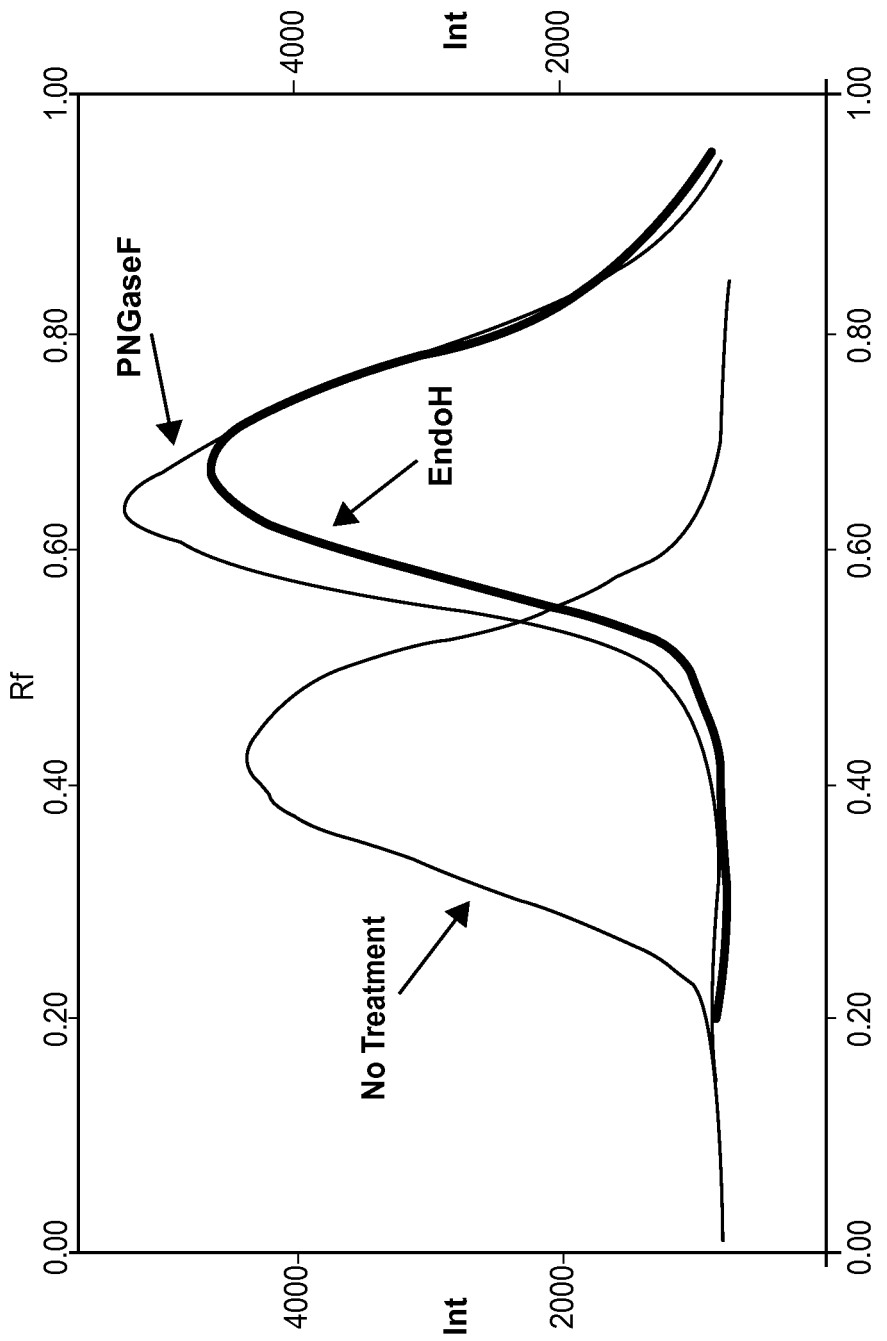
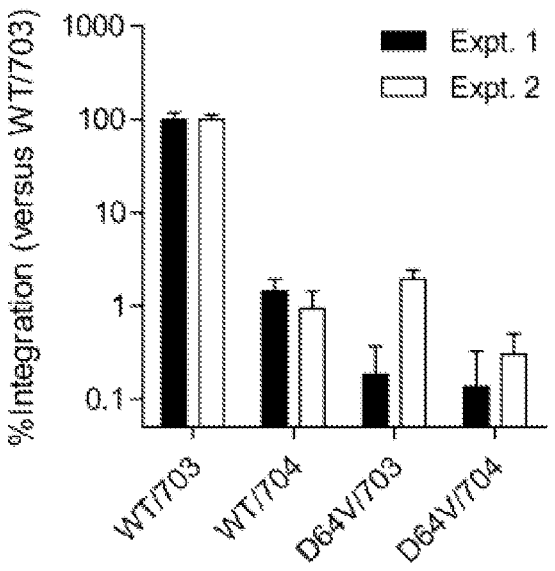
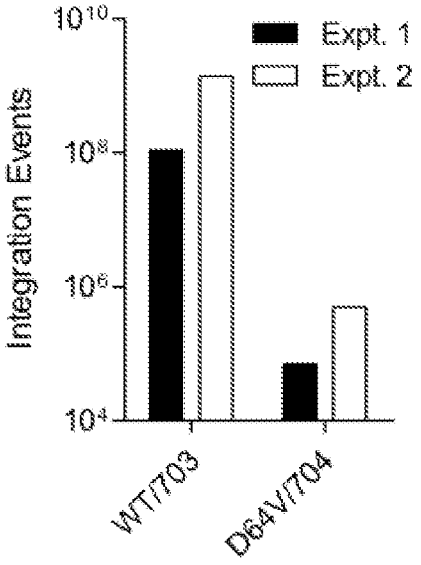

Int
4000
2000
1.00
0.80
0.60
0.40
0.20
0.00
Rf
PNGaseF
EndoH
No Treatment

Figure 9D



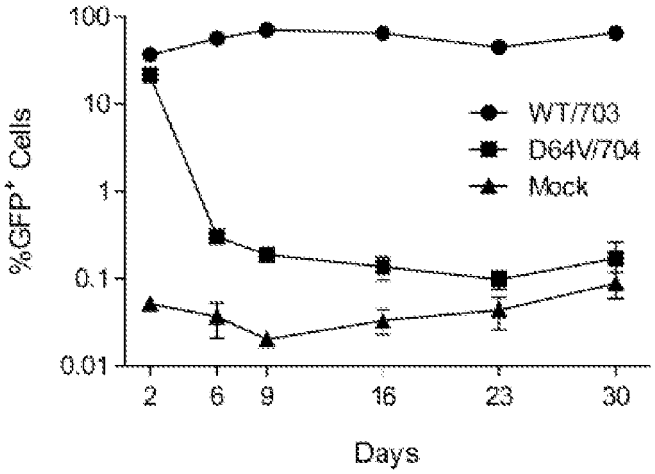
	Fold Reduction (versus WT/703)	
	Expt. 1	Expt. 2
WT/704	69.1	110.9
D64V/703	544.7	51.4
D64V/704	731.1	323.8

Figure 10A



	Fold Reduction (versus WT/703)	
	Expt. 1	Expt. 2
D64V/704	1,571	2,800

Figure 10B



	Fold Reduction (versus WT/703)					
	Day 2	Day 6	Day 9	Day 16	Day 23	Day 30
D64V/704	1.71	187.63	439.38	462.64	448.10	385.65

FIGURE 10C

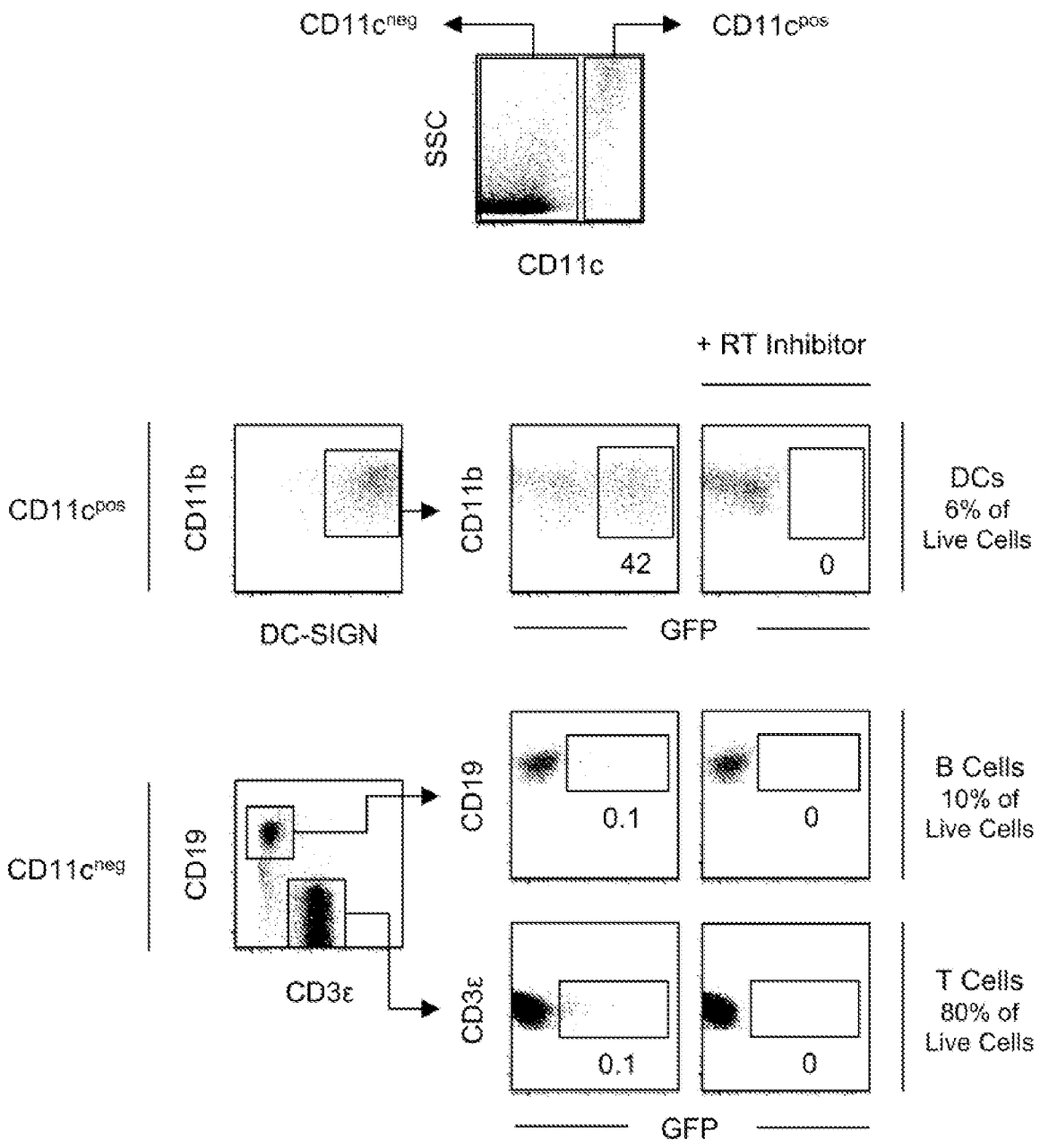

CD11c^neg
CD11c^pos
SSC
CD11c
+ RT Inhibitor
CD11c^pos
CD11b
DC-SIGN
CD11b
42
0
GFP
DCs
6% of
Live Cells
CD11c^neg
CD19
CD3ε
CD19
0.1
0
B Cells
10% of
Live Cells
CD3ε
0.1
0
GFP
T Cells
80% of
Live Cells

Figure 11

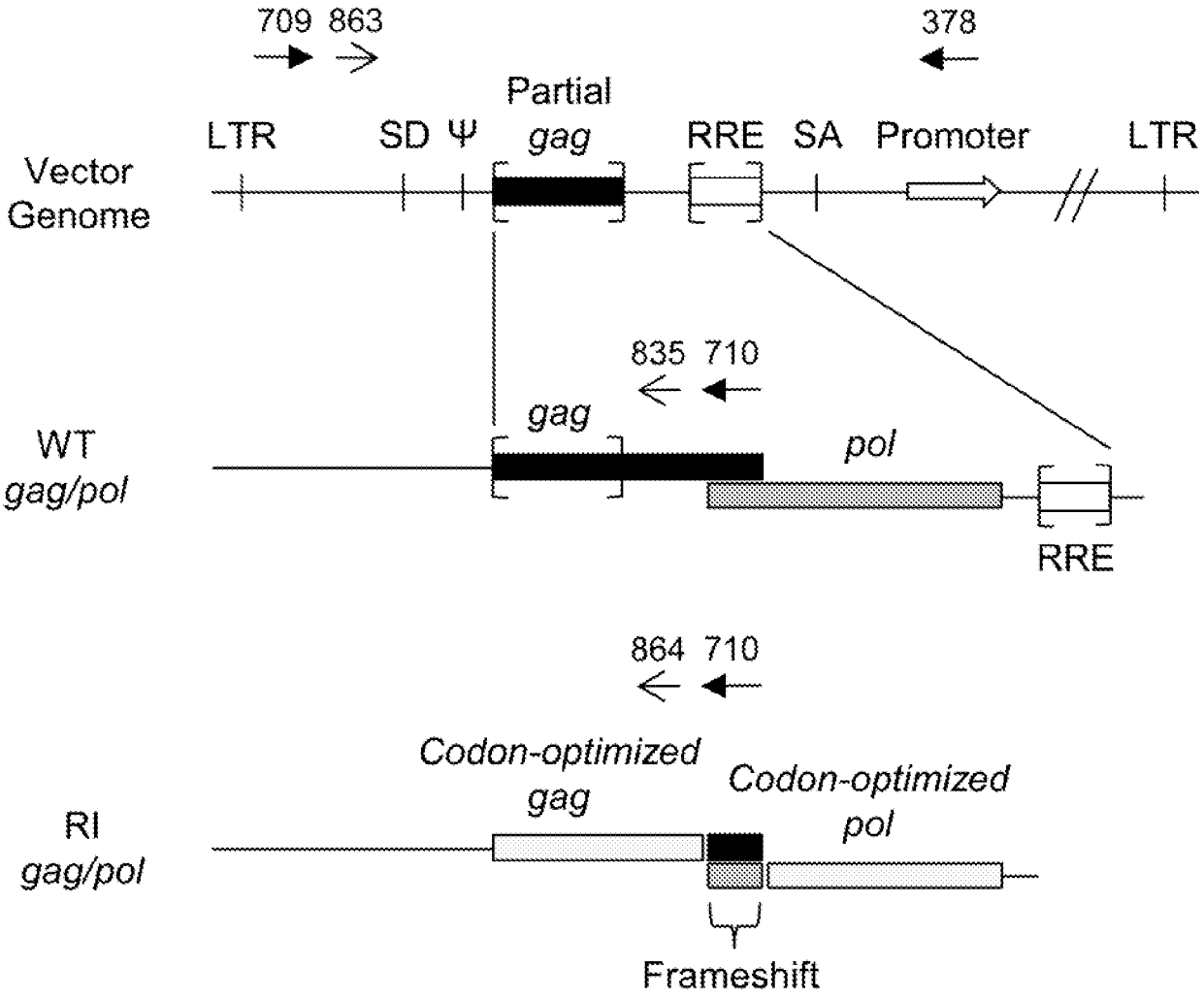

709 863
378
Partial
LTR
SD Ψ
gag
RRE
SA
Promoter
LTR
Vector
Genome
835 710
gag
WT
gag/pol
pol
RRE
864 710
Codon-optimized
gag
Codon-optimized
pol
RI
gag/pol
Frameshift

Figure 12

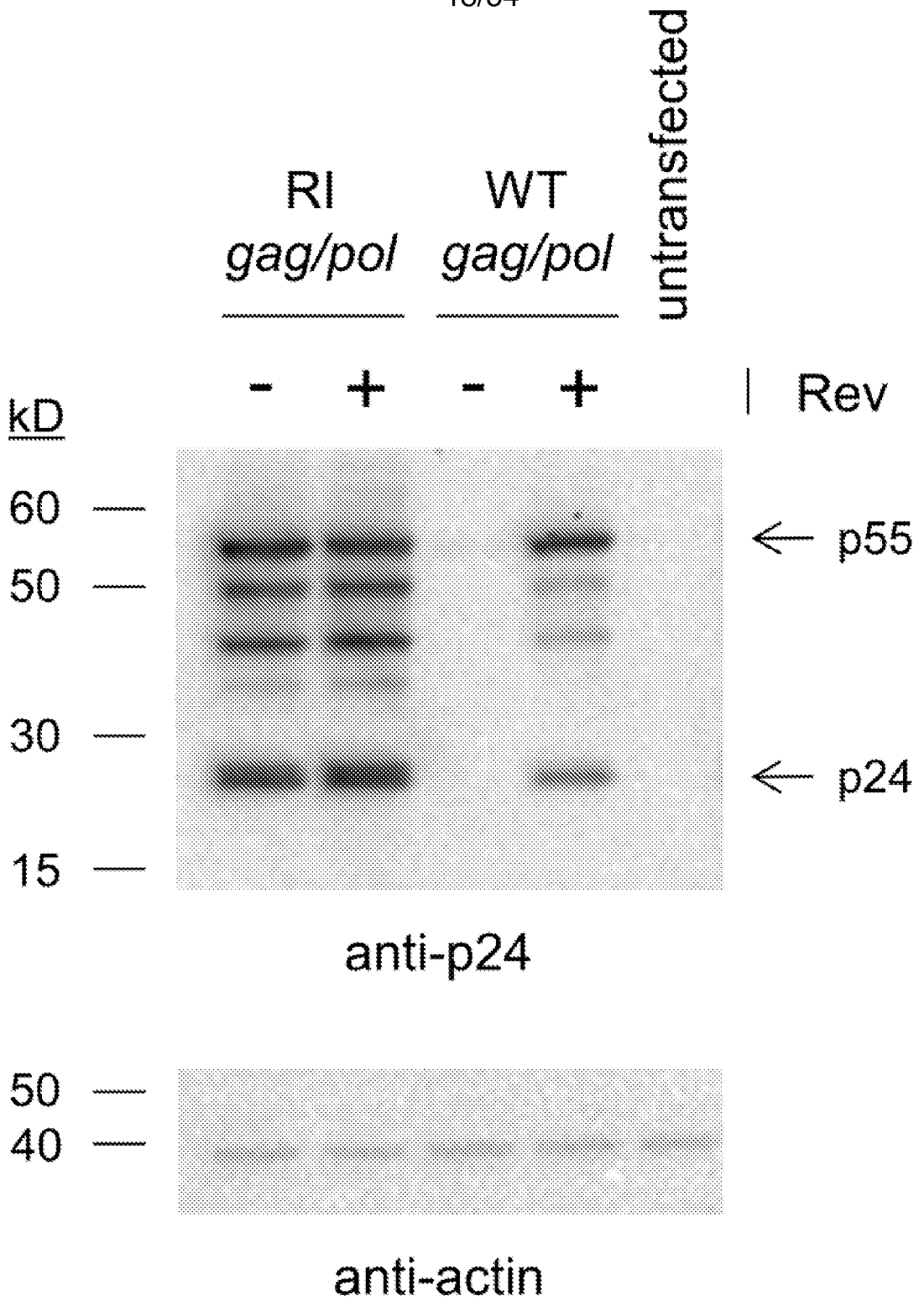

RI
gag/pol
WT
gag/pol
untransfected
- + - +
Rev
kD
60
50
30
15
p55
p24
anti-p24
50
40
anti-actin

Figure 13

	6 µg *gag/pol* DNA		3 µg gag/pol DNA	
	WT *gag/pol*	RI *gag/pol*	WT *gag/pol*	RI *gag/pol*
p24 (ng/mL)	206+/- 21	235 +/- 6	84 +/- 3	100 +/- 6

Figure 14A

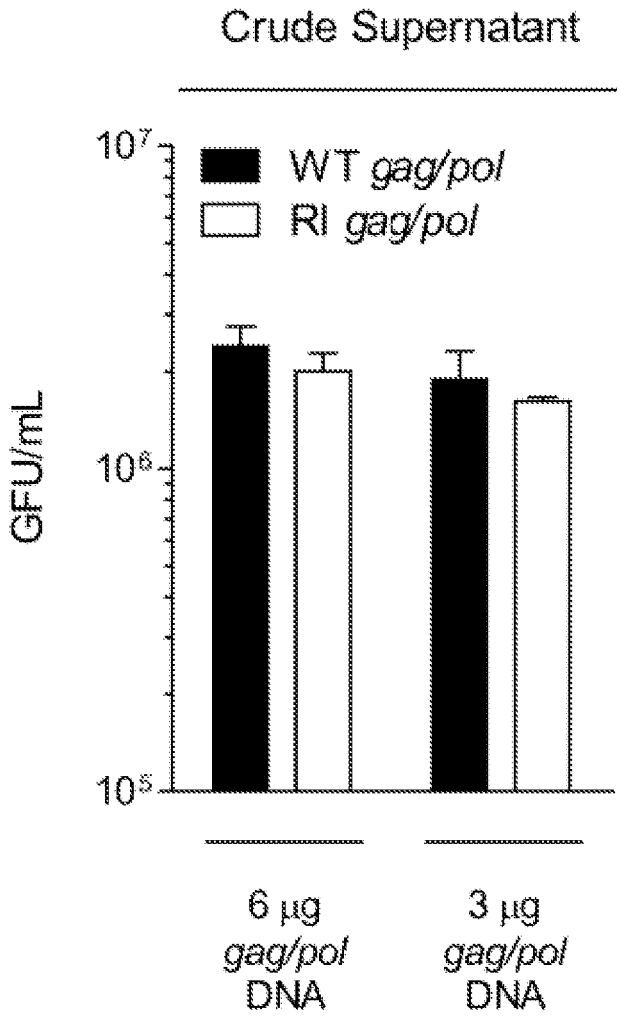


Figure 14B

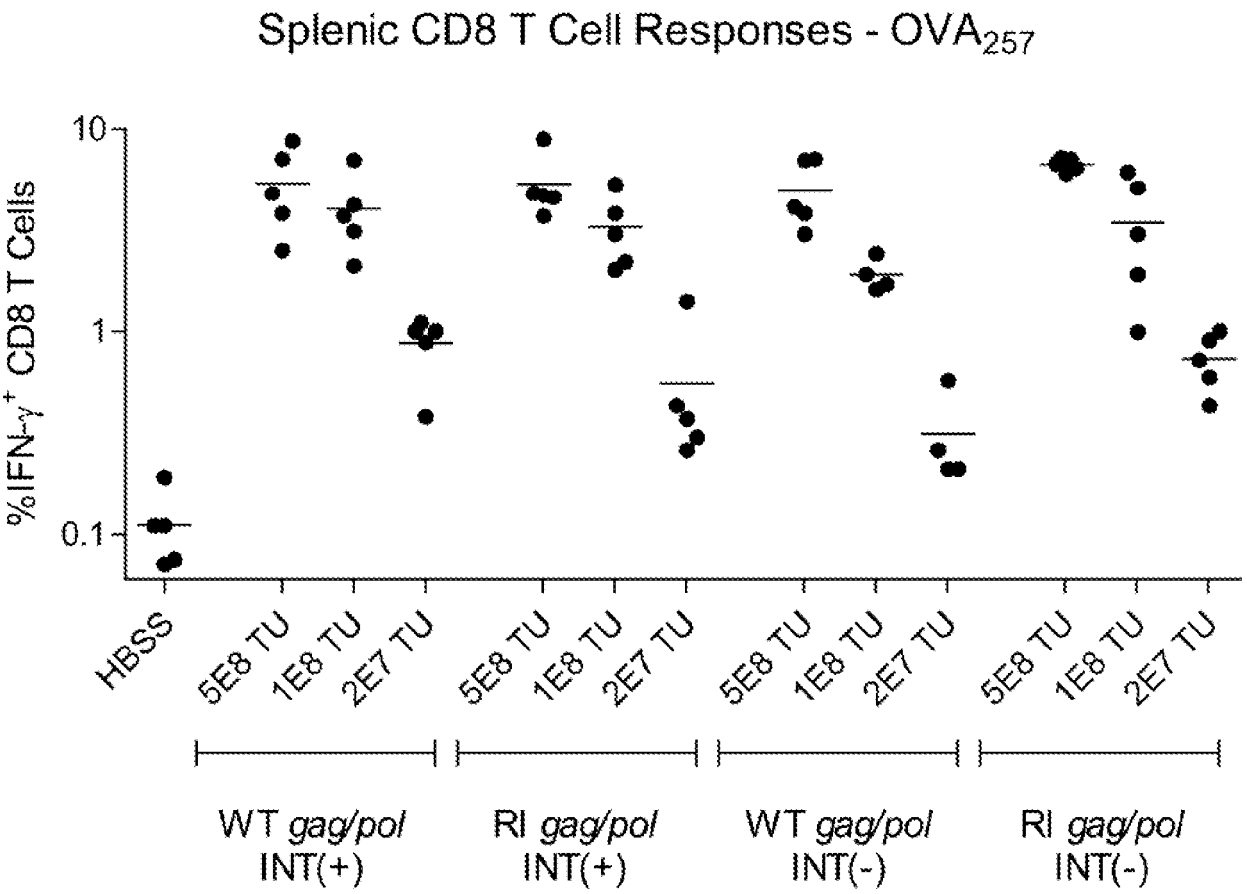

Splenic CD8 T Cell Responses - OVA257
%IFN-γ+ CD8 T Cells
10
1
0.1
HBSS
5E8 TU
1E8 TU
2E7 TU
5E8 TU
1E8 TU
2E7 TU
5E8 TU
1E8 TU
2E7 TU
5E8 TU
1E8 TU
2E7 TU
WT gag/pol INT(+)
RI gag/pol INT(+)
WT gag/pol INT(-)
RI gag/pol INT(-)

Figure 15

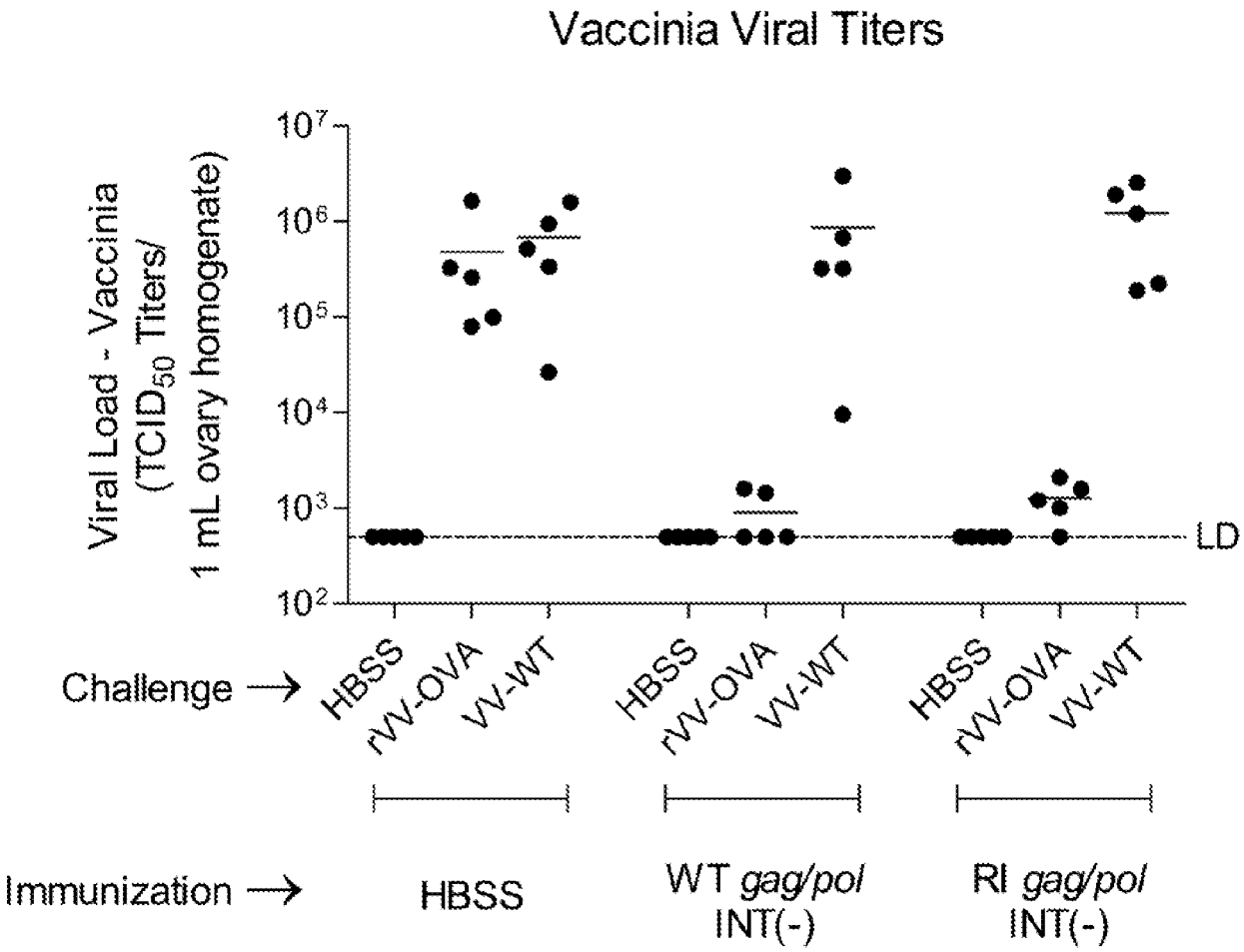

Vaccinia Viral Titers
Viral Load - Vaccinia (TCID50 Titers/ 1 mL ovary homogenate)
10^7
10^6
10^5
10^4
10^3
10^2
LD
Challenge →
HBSS
rVV-OVA
VV-WT
HBSS
rVV-OVA
VV-WT
HBSS
rVV-OVA
VV-WT
Immunization →
HBSS
WT gag/pol INT(-)
RI gag/pol INT(-)

Figure 16

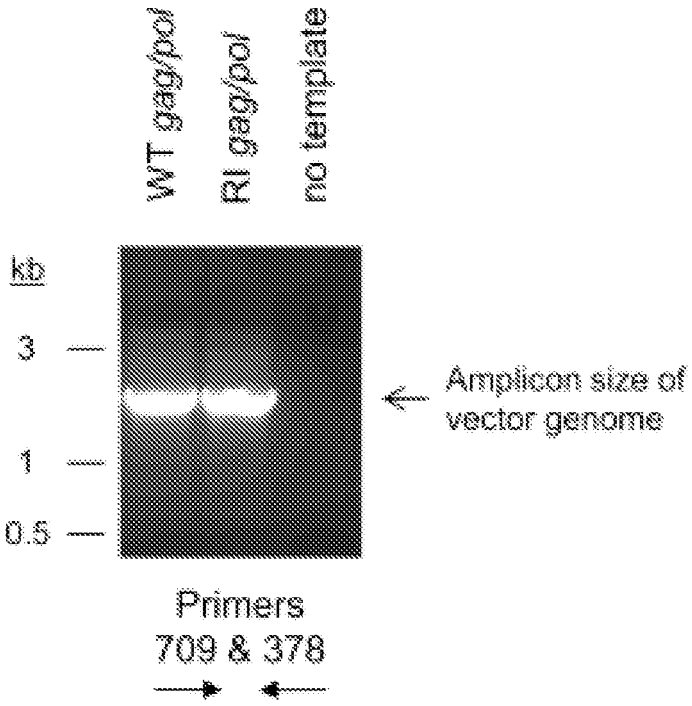


Figure 17A

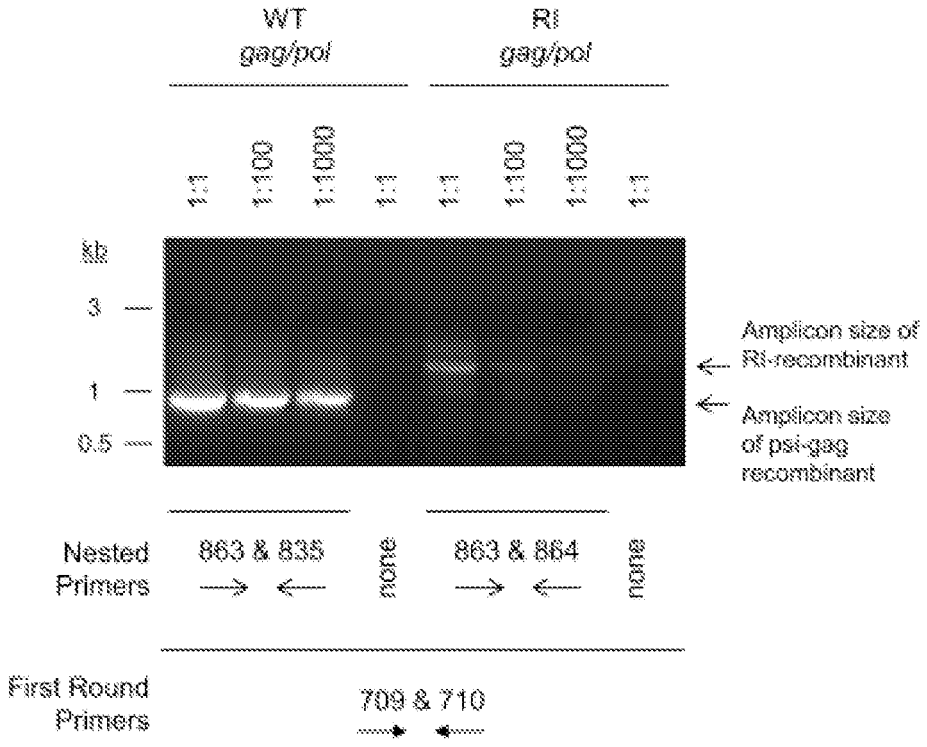


Figure 17B

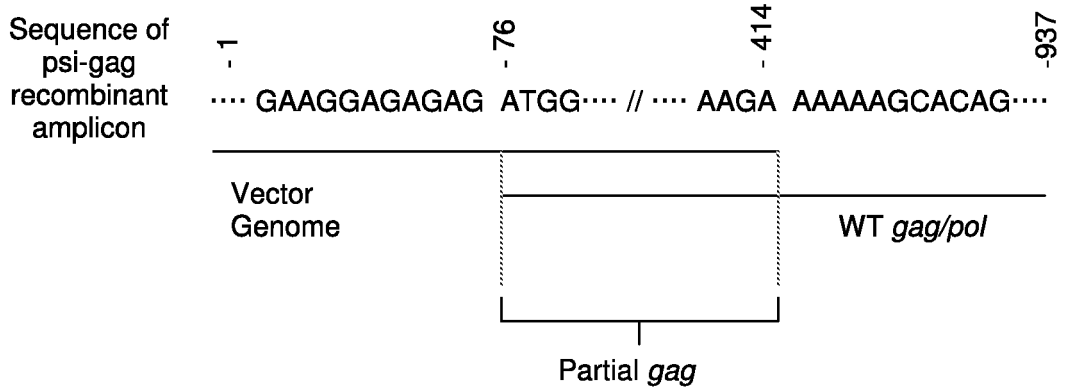


Figure 17C

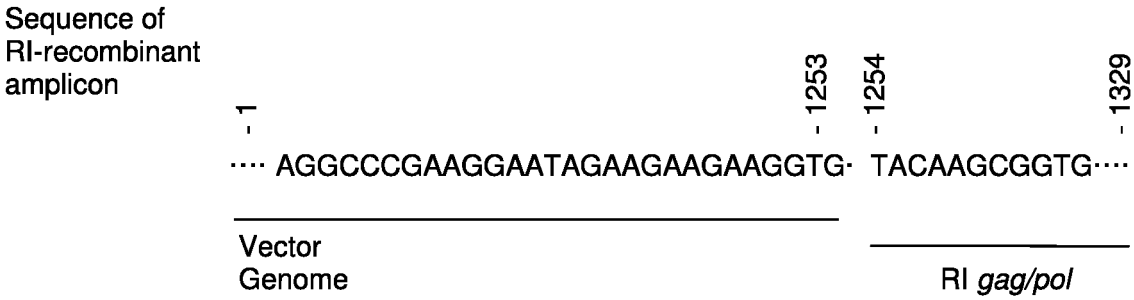
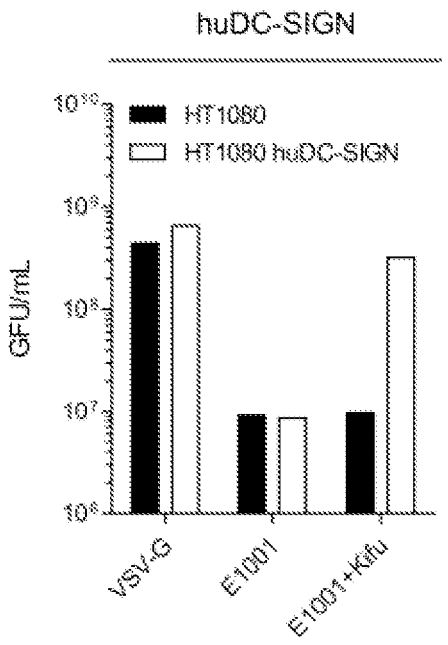
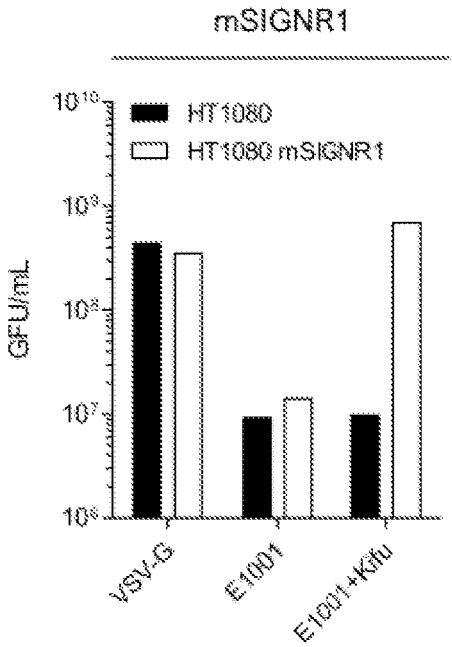


Figure 17D



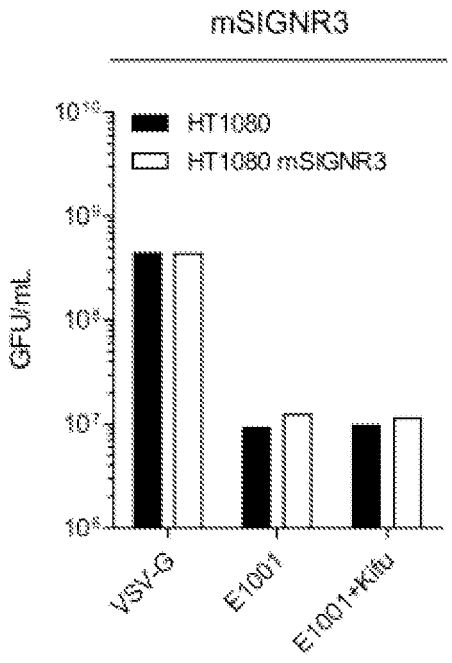
	Titer Ratio (HT1080 huDC-SIGN / HT1080)		
Vector	VSV-G	E1001	E1001 +Kifu
Ratio	1.4	0.9	33

Figure 18A



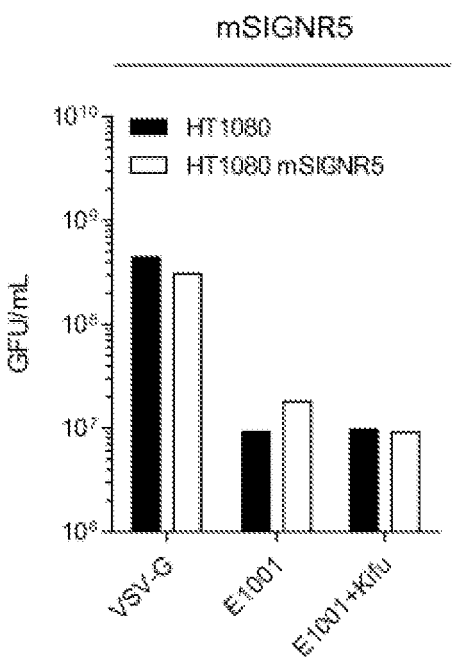
	Titer Ratio (HT1080 huDC-SIGN / HT1080)		
Vector	VSV-G	E1001	E1001 +Kifu
Ratio	0.8	1.5	71

Figure 18B



	Titer Ratio (HT1080 mSIGNR3 / HT1080)		
Vector	VSV-G	E1001	E1001 +Kifu
Ratio	1	1.3	1.2

Figure 18C



	Titer Ratio (HT1080 mSIGNR5 / HT1080)		
Vector	VSV-G	E1001	E1001 +Kifu
Ratio	0.7	1.9	0.9

Figure 18D

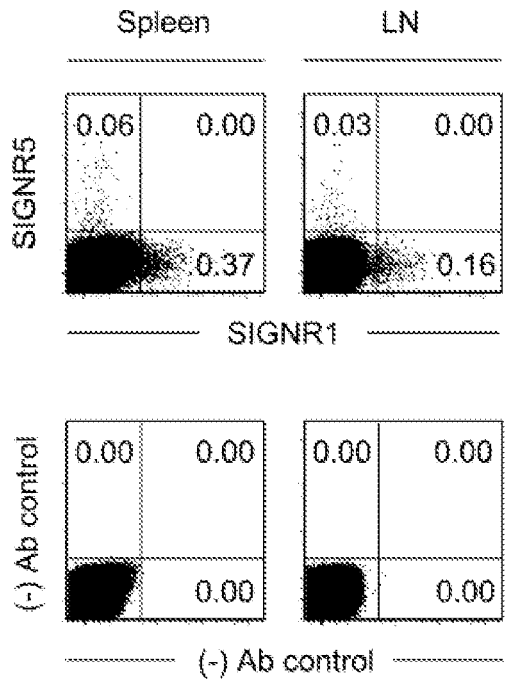


Figure 19A

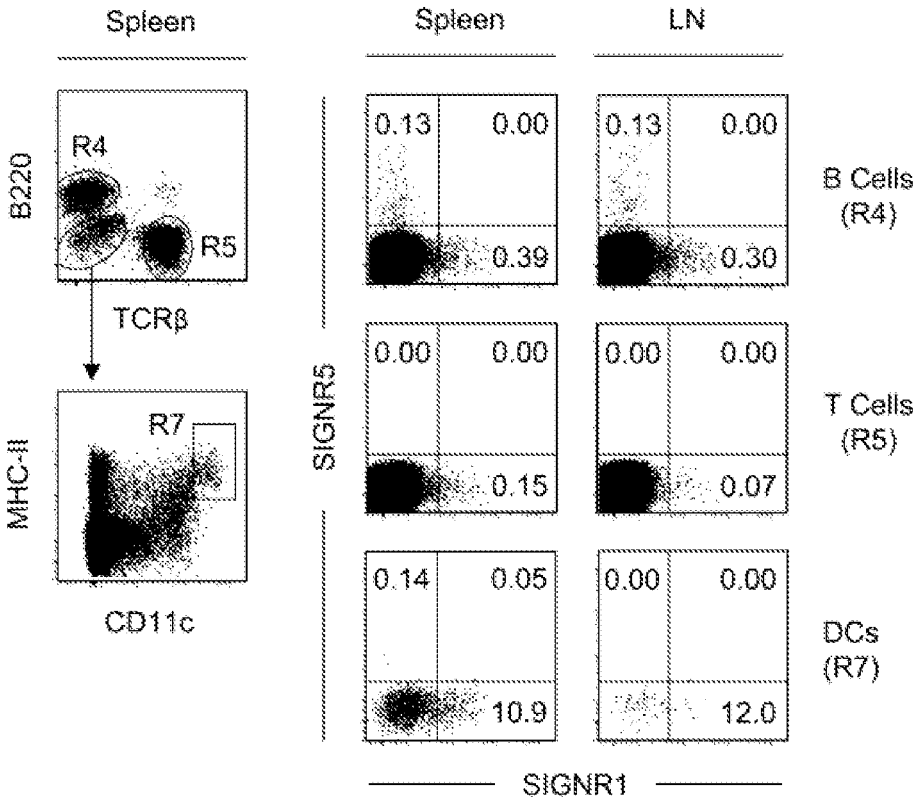


Figure 19B

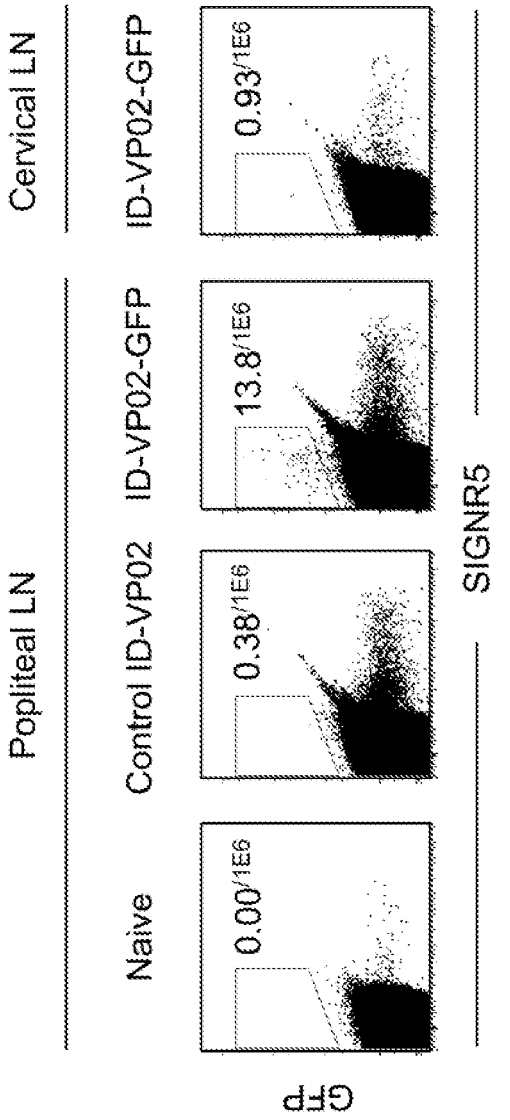


Figure 20A

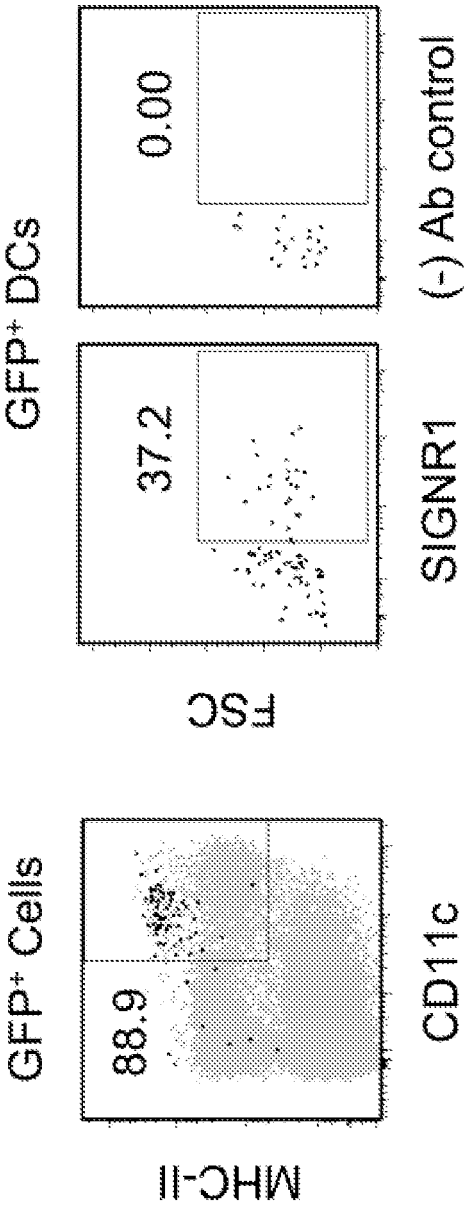


Figure 20B

Figure 20C

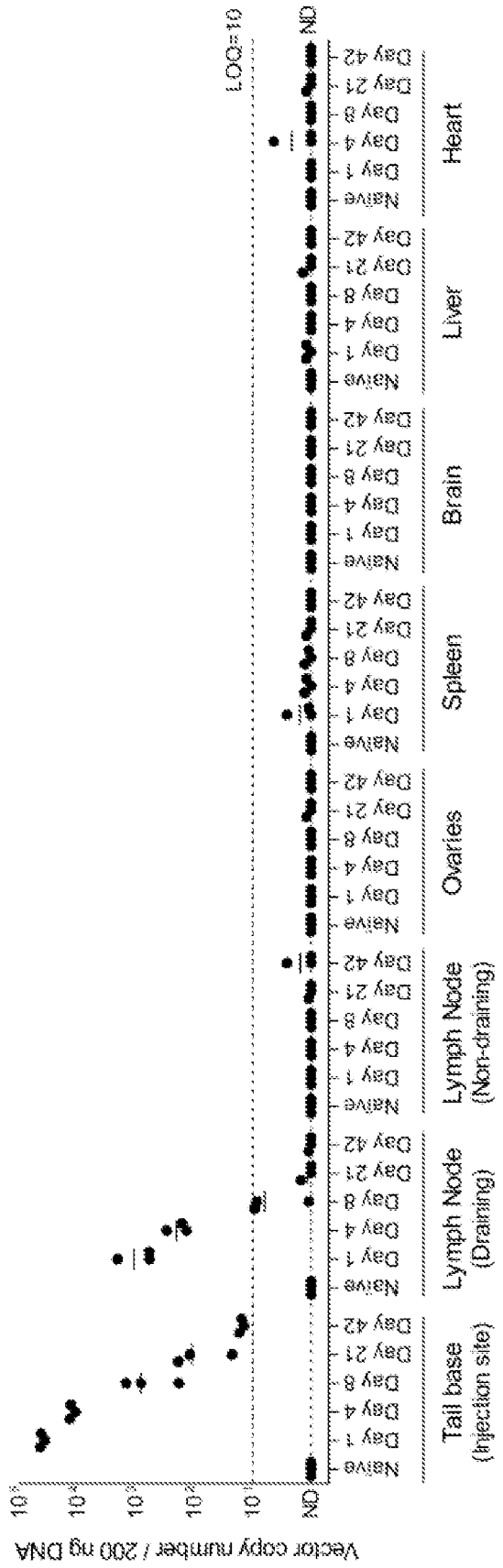

Vector copy number / 200 ng DNA
LOQ=10
ND
Tail base (Injection site)
Lymph Node (Draining)
Lymph Node (Non-draining)
Ovaries
Spleen
Brain
Liver
Heart
Naïve
Day 1
Day 4
Day 8
Day 21
Day 42

Figure 21

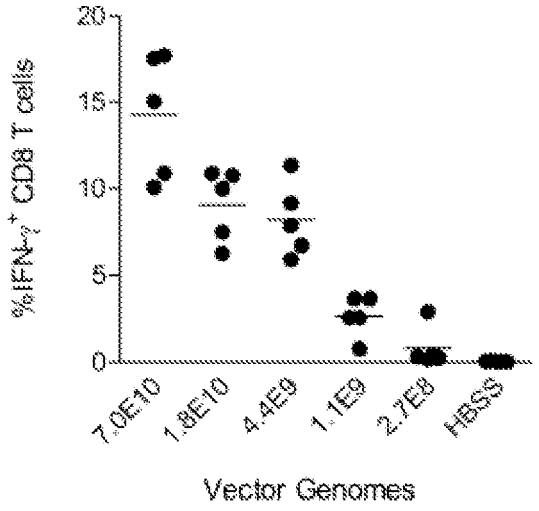


Figure 22A

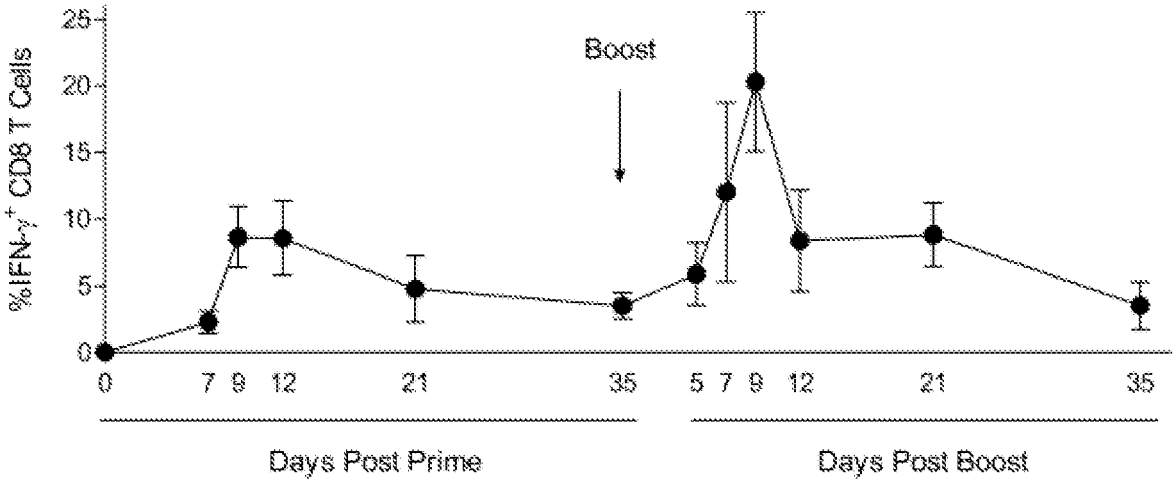


Figure 22B

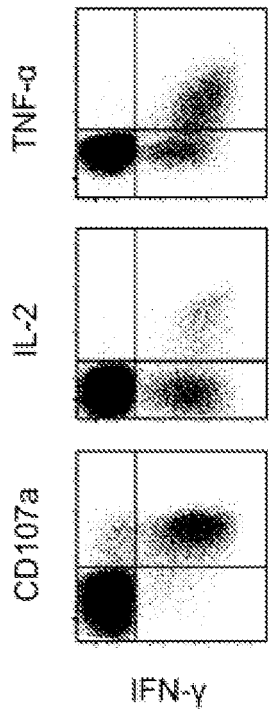


Figure 22C

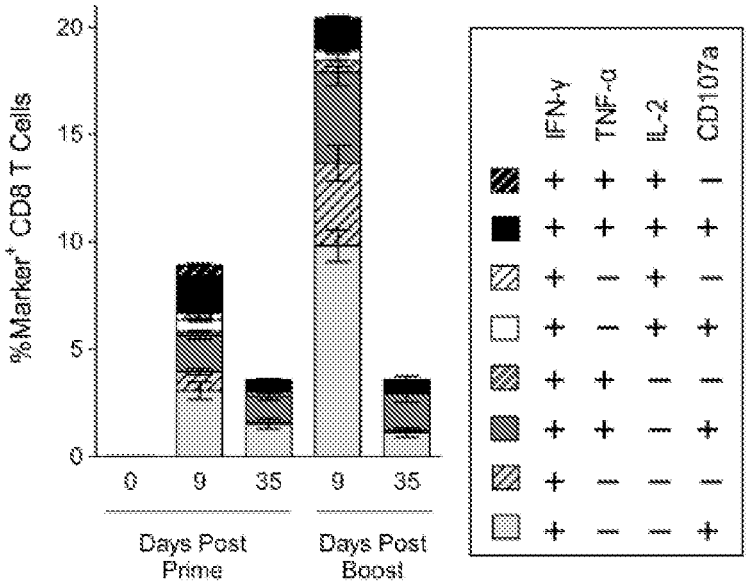


Figure 22D

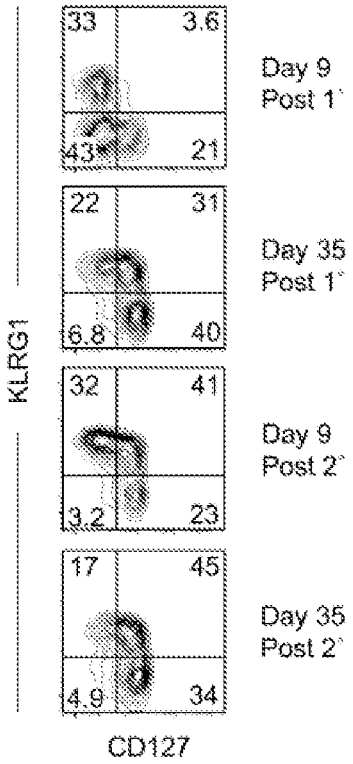


Figure 22E

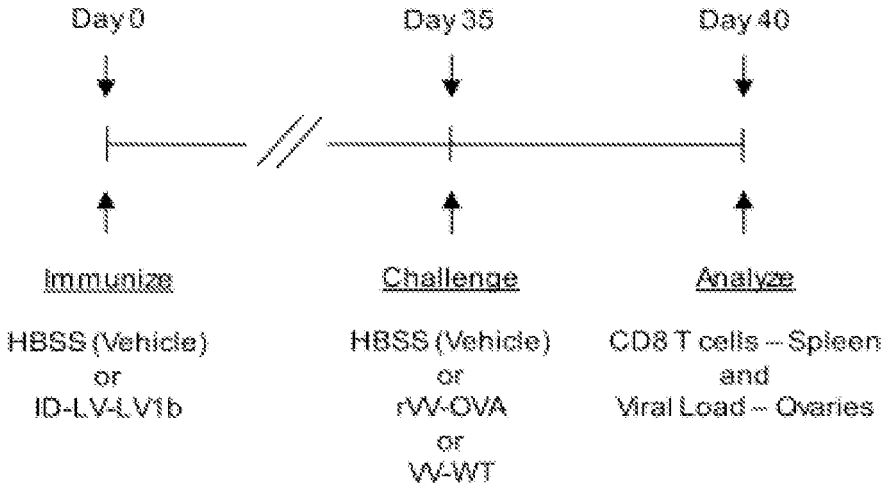


Figure 23A

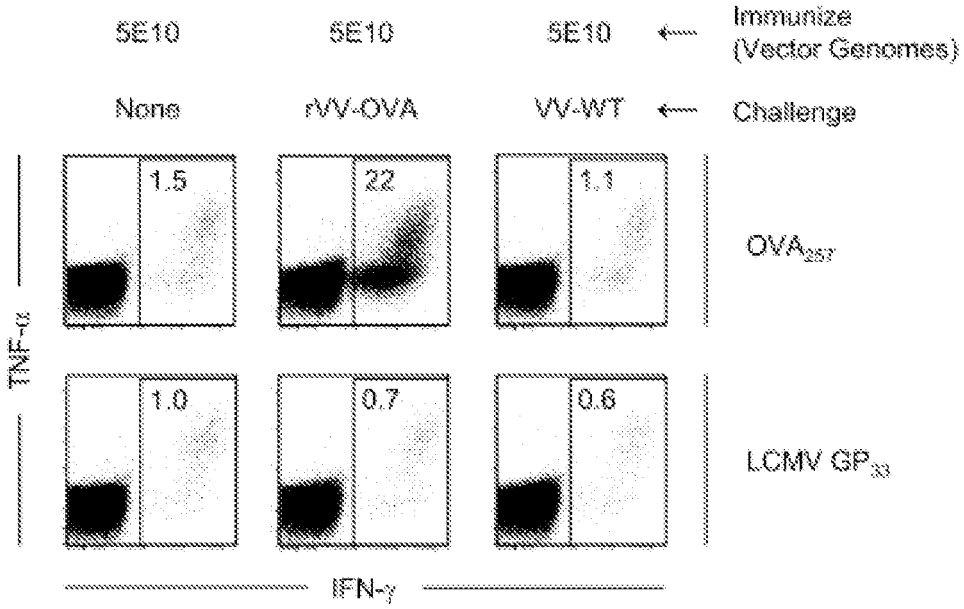


Figure 23B

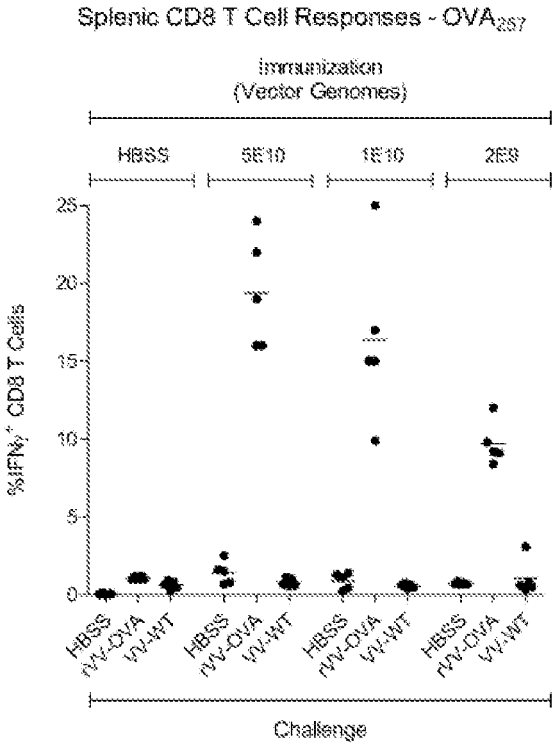


Figure 23C

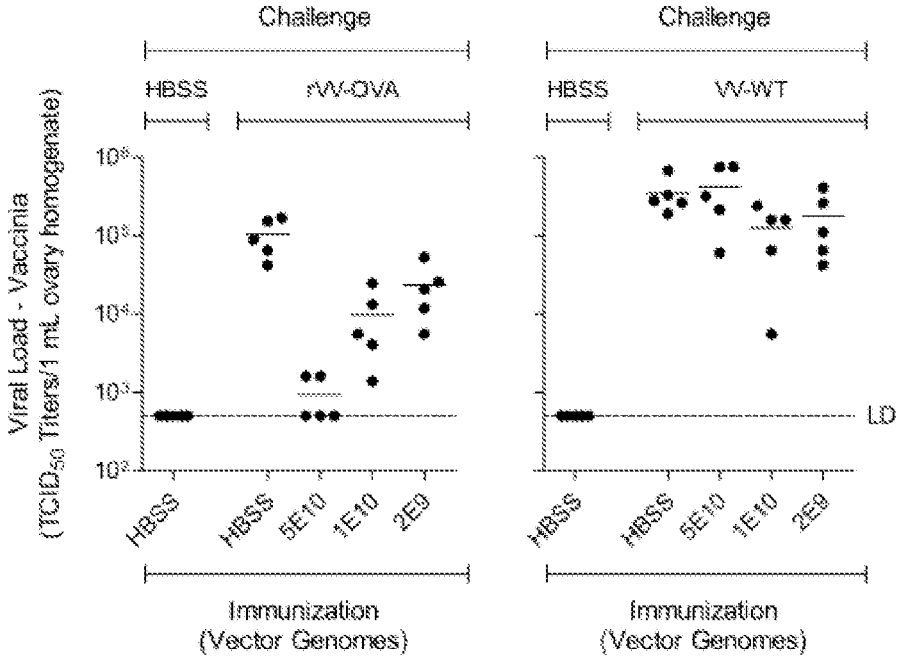


Figure 23D

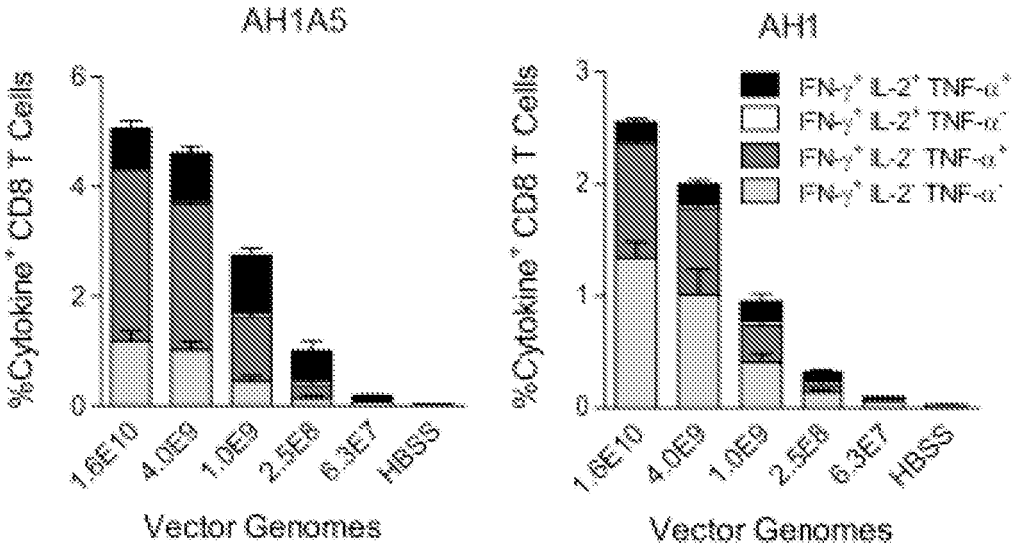


Figure 24A

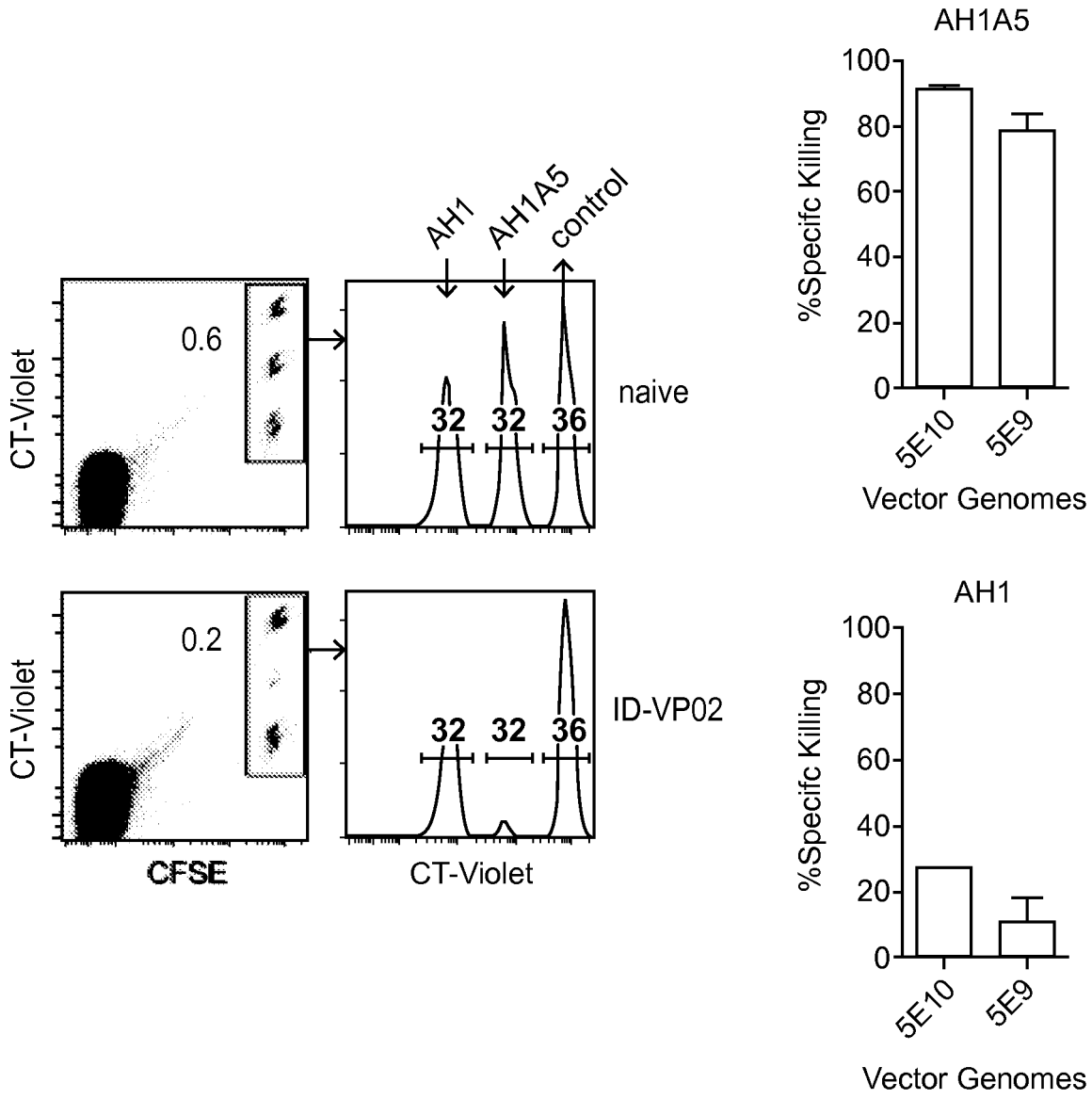


Figure 24B

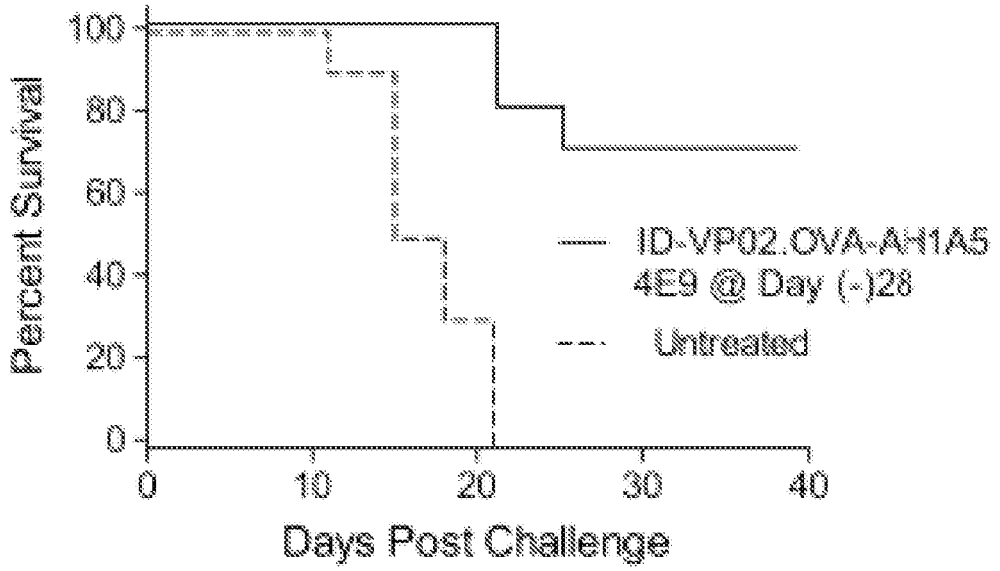


Figure 24C

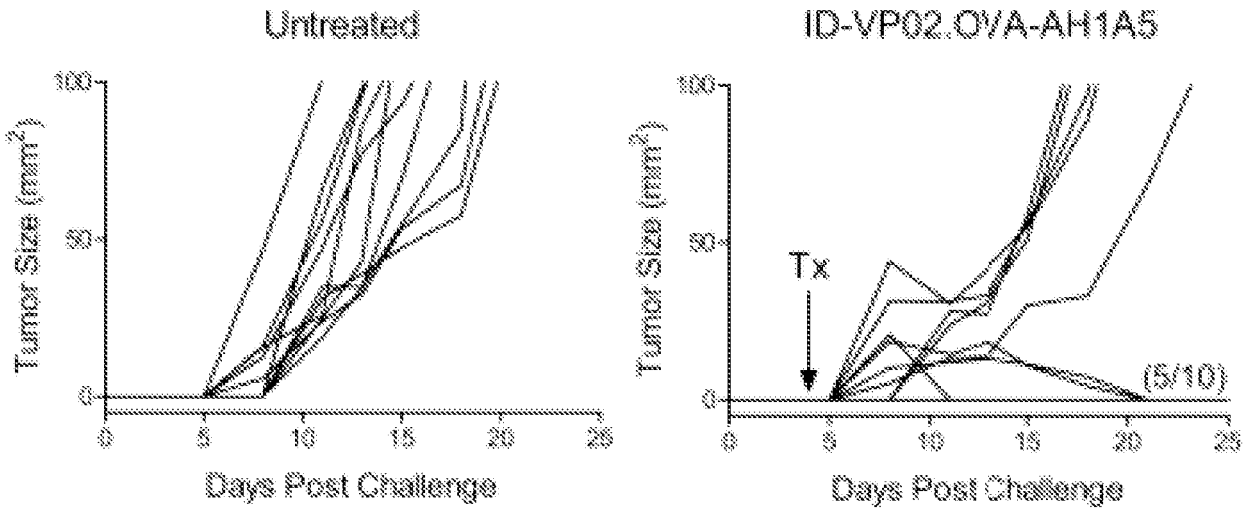


Figure 24D