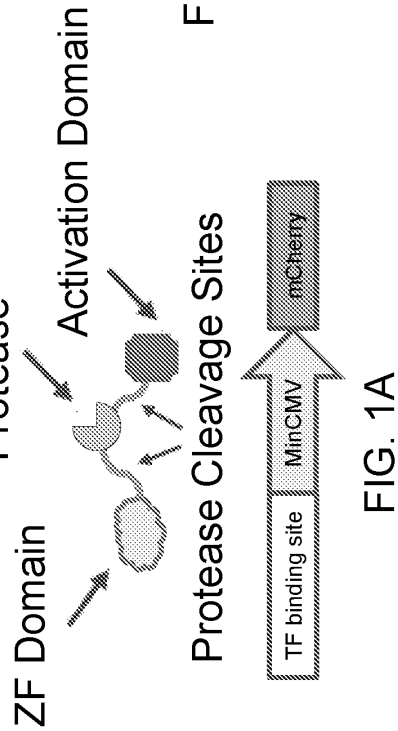


FIG. 1A

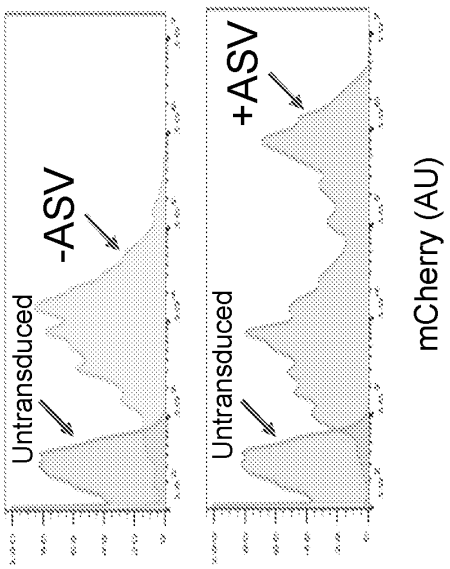


FIG. 1B

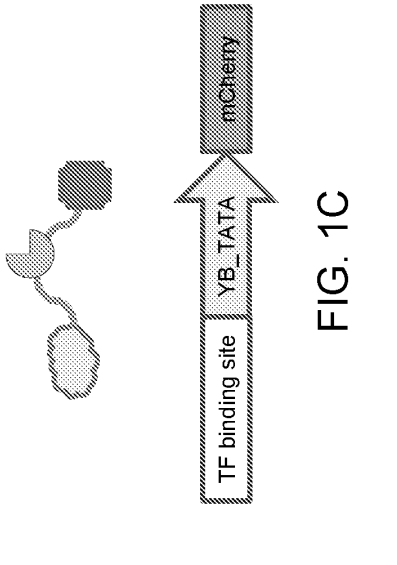


FIG. 1C

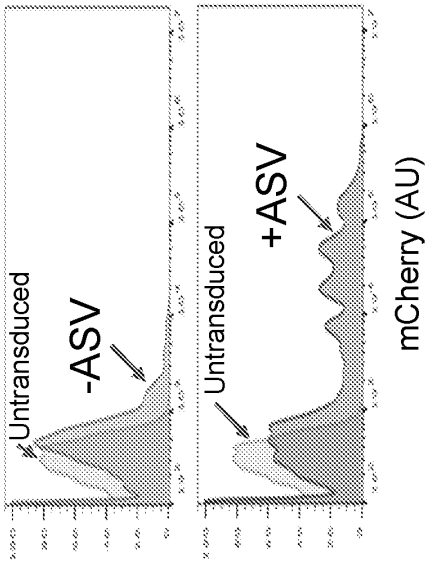


FIG. 1D

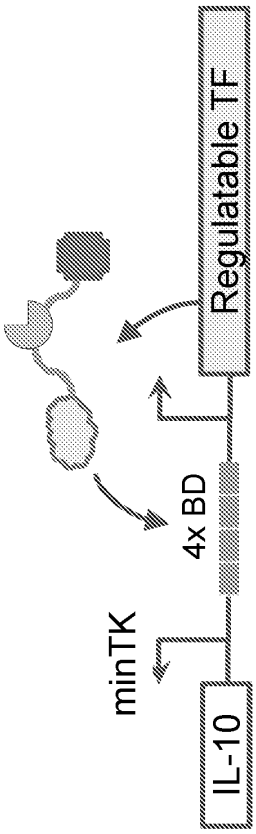

Regulatable TF
4x BD
minTK
IL-10

FIG. 2A

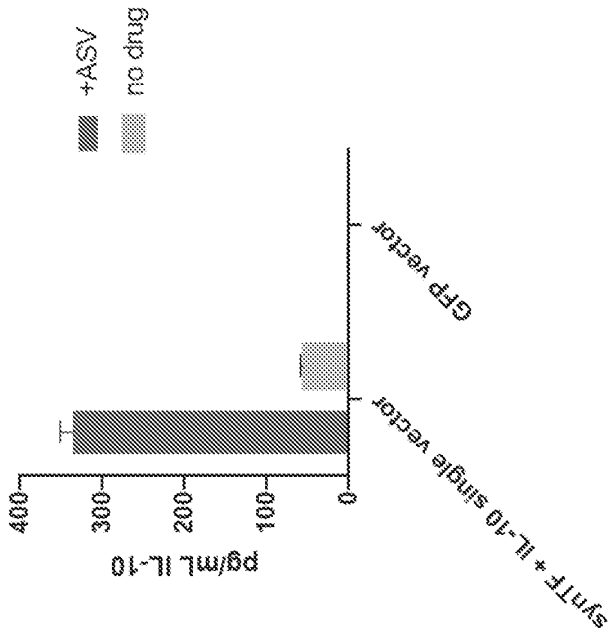

+ASV
no drug
pg/mL IL-10
400
300
200
100
0
GFP vector
synTF + IL-10 single vector

FIG. 2B

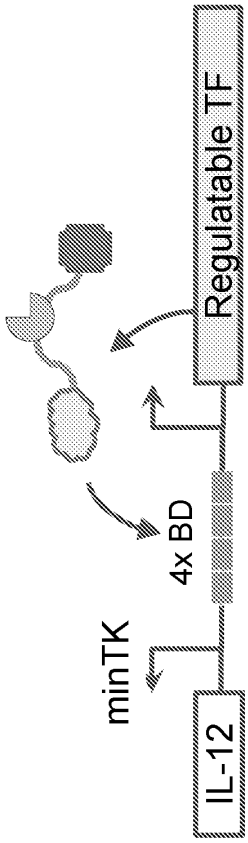

Regulatable TF
4x BD
minTK
IL-12

FIG. 3A

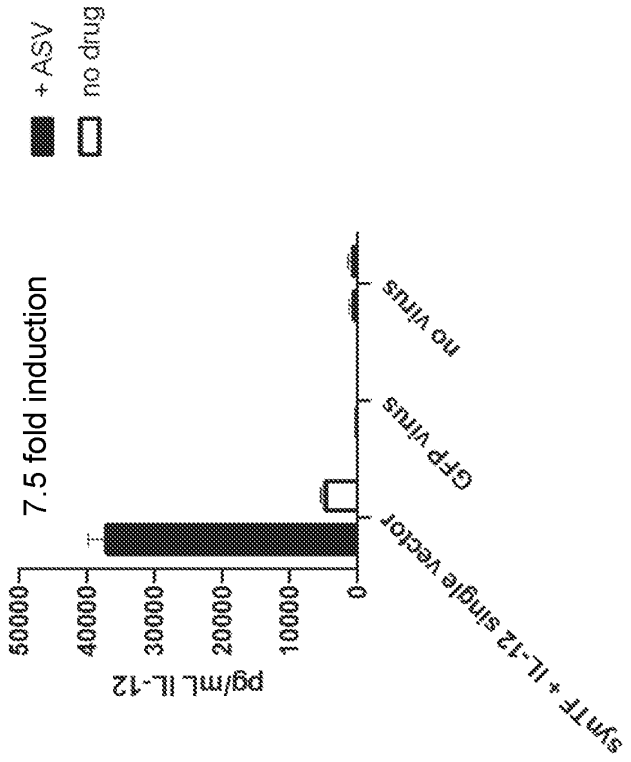

+ ASV
no drug
7.5 fold induction
pg/mL IL-12
50000
40000
30000
20000
10000
0
synTF + IL-12 single vector
GFP virus
no virus

FIG. 3B

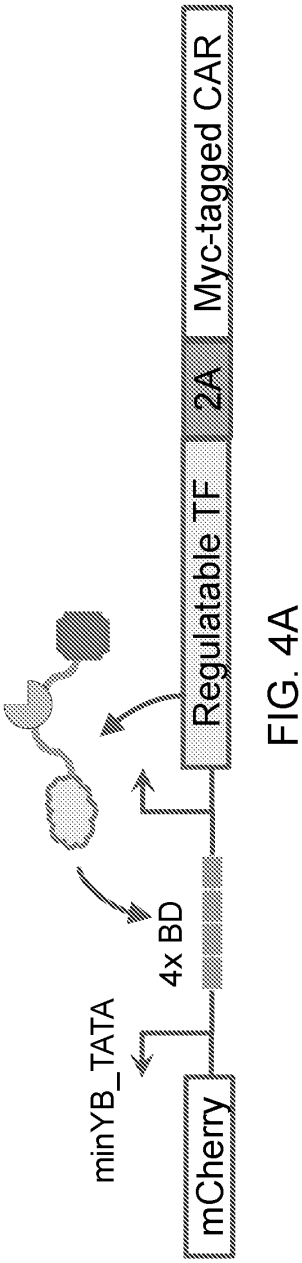


FIG. 4A

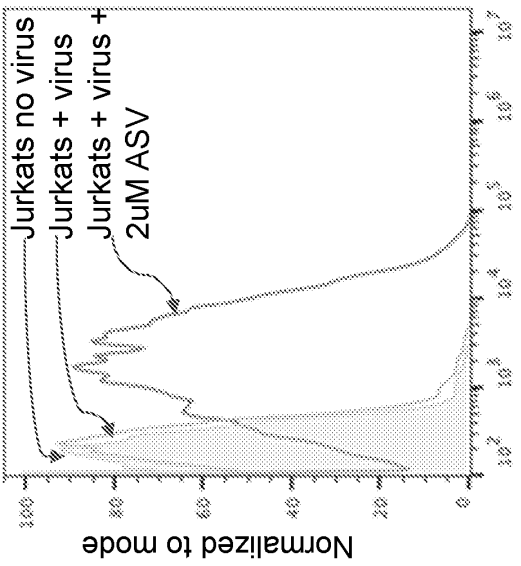


FIG. 4C

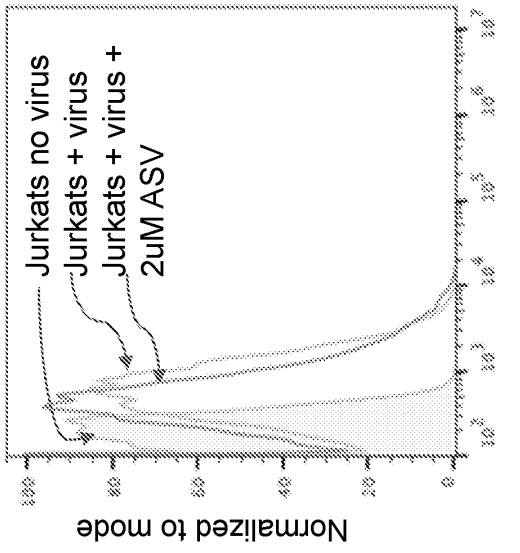
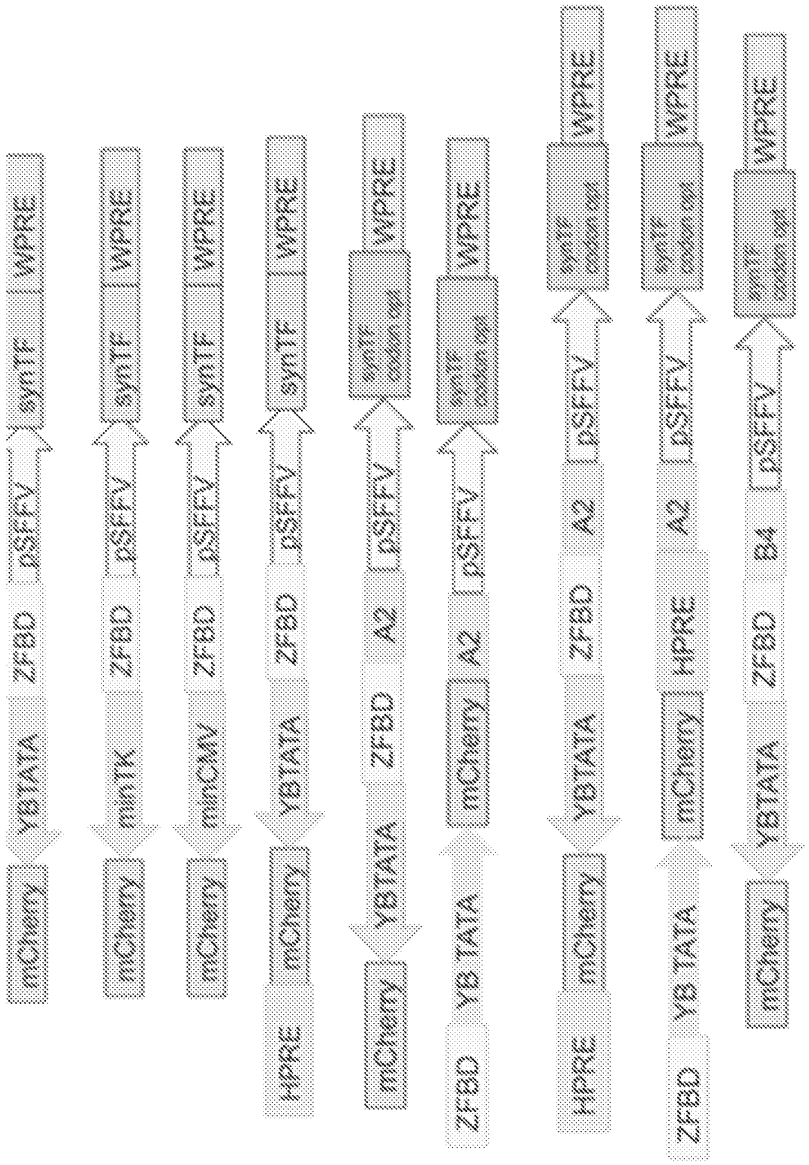


FIG. 4B

FIG. 5


mCherry
YBTATA
ZFBD
βSFFV
synTF
WPRE
mCherry
minTK
ZFBD
βSFFV
synTF
WPRE
mCherry
minCMV
ZFBD
βSFFV
synTF
WPRE
HPRE
mCherry
YBTATA
ZFBD
βSFFV
synTF
WPRE
mCherry
YBTATA
ZFBD
A2
βSFFV
synTF
codon opt
WPRE
ZFBD
YB TATA
mCherry
A2
βSFFV
synTF
codon opt
WPRE
HPRE
mCherry
YBTATA
ZFBD
A2
βSFFV
synTF
codon opt
WPRE
ZFBD
YB TATA
mCherry
HPRE
A2
βSFFV
synTF
codon opt
WPRE
mCherry
YBTATA
ZFBD
B4
βSFFV
synTF
codon opt
WPRE

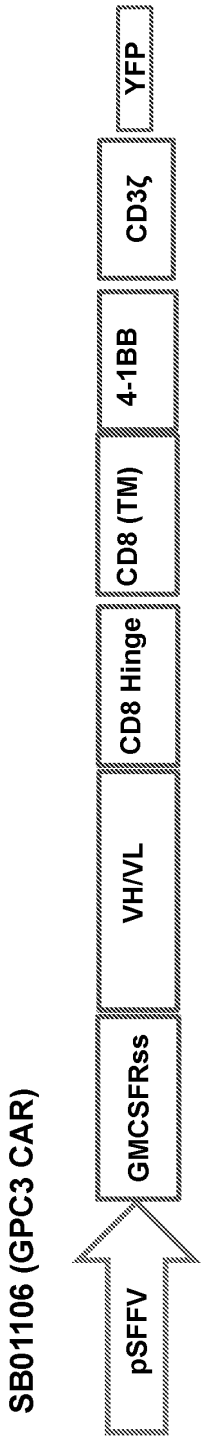

SB01106 (GPC3 CAR)
pSFFV
GMCSFRss
VH/VL
CD8 Hinge
CD8 (TM)
4-1BB
CD3ζ
YFP

FIG. 6A

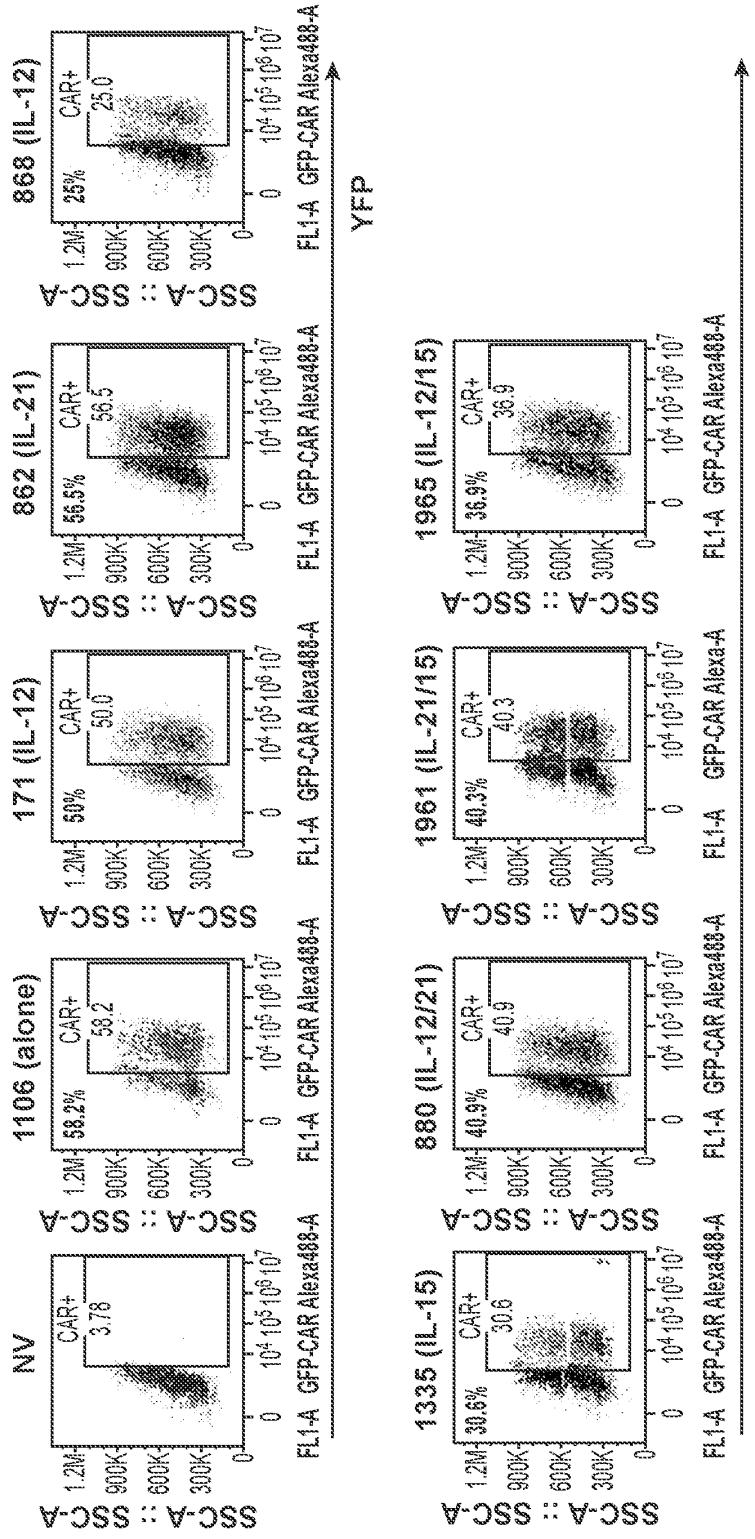

NV
1106 (alone)
171 (IL-12)
862 (IL-21)
868 (IL-12)
1335 (IL-15)
880 (IL-12/21)
1961 (IL-21/15)
1965 (IL-12/15)
CAR+
3.78
58.2%
58.2
50%
50.0
66.5%
56.5
25%
25.0
30.6%
30.6
40.9%
40.9
40.3%
40.3
36.9%
36.9
SSC-A
FL1-A GFP-CAR Alexa488-A
YFP

FIG. 6B

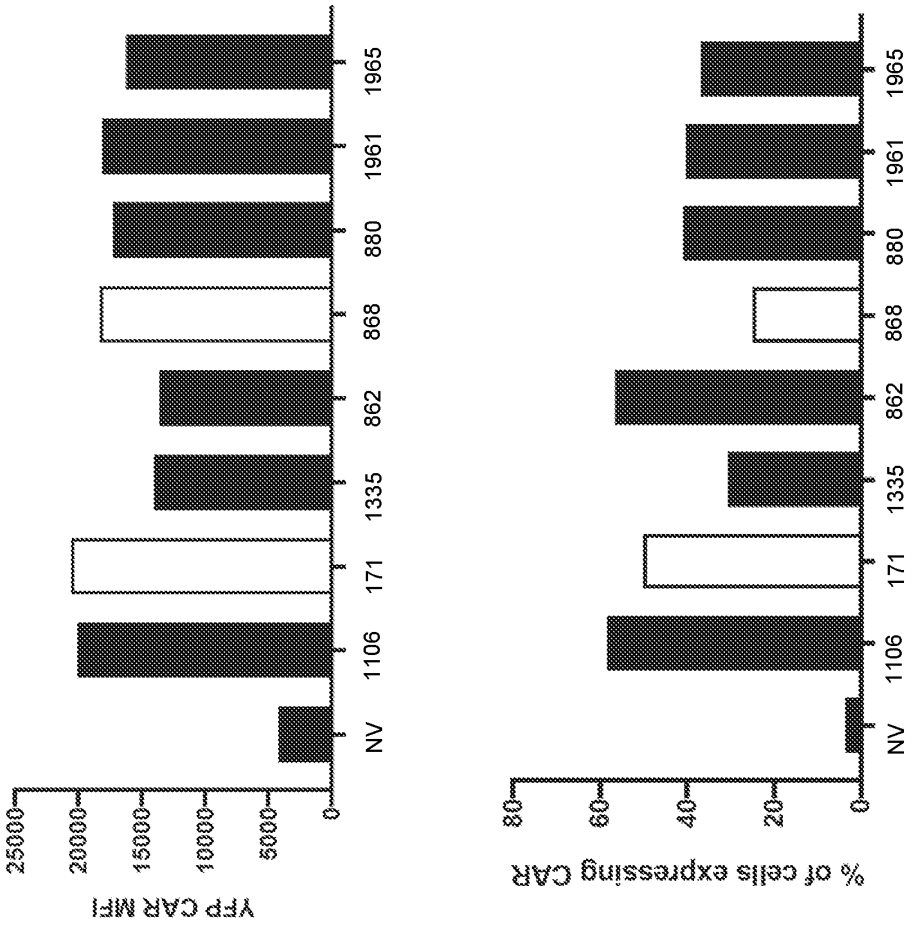

YFP CAR MFI
25000
20000
15000
10000
5000
0
NV
1106
171
1335
862
868
880
1961
1965
% of cells expressing CAR
80
60
40
20
0
NV
1106
171
1335
862
868
880
1961
1965

FIG. 7

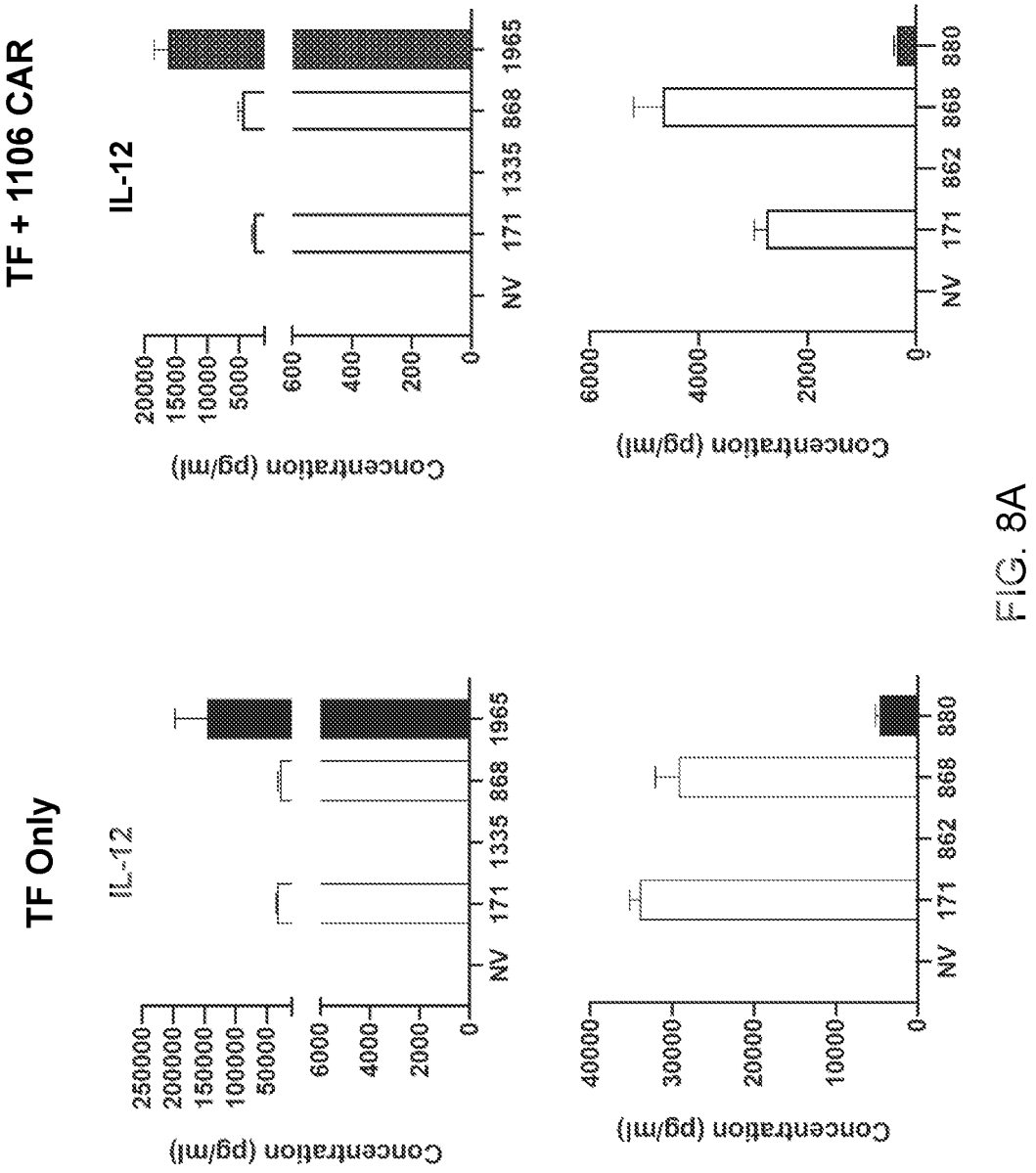

TF + 1106 CAR
TF Only
IL-12
Concentration (pg/ml)
NV
171
1335
868
1965
862
880
250000
200000
150000
100000
50000
20000
15000
10000
5000
6000
4000
2000
600
400
200
0
40000
30000

FIG. 8A

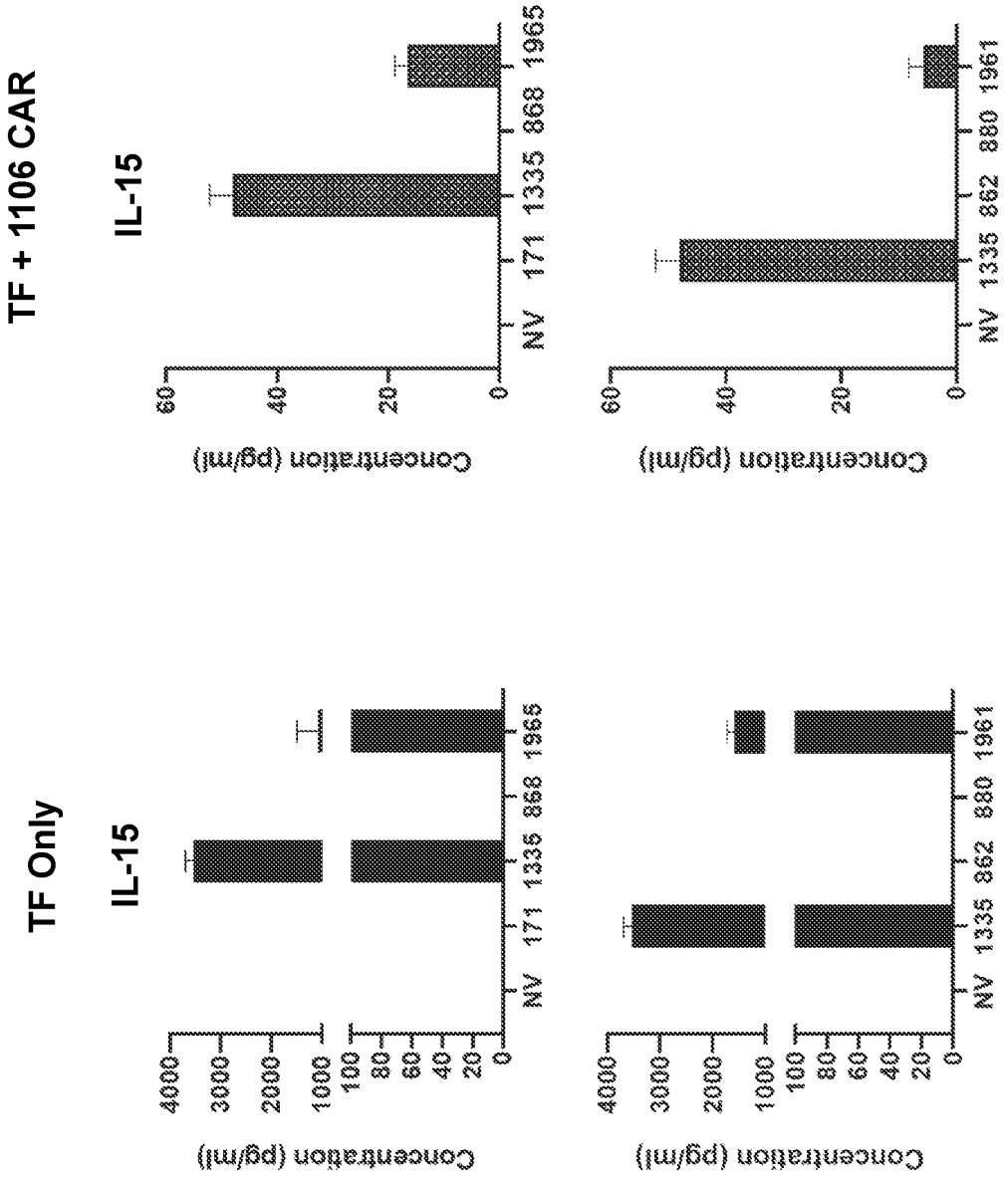

TF + 1106 CAR
IL-15
TF Only
IL-15
Concentration (pg/ml)
NV
171
1335
868
1965
862
880
1961
0
20
40
60
80
100
1000
2000
3000
4000

FIG. 8B

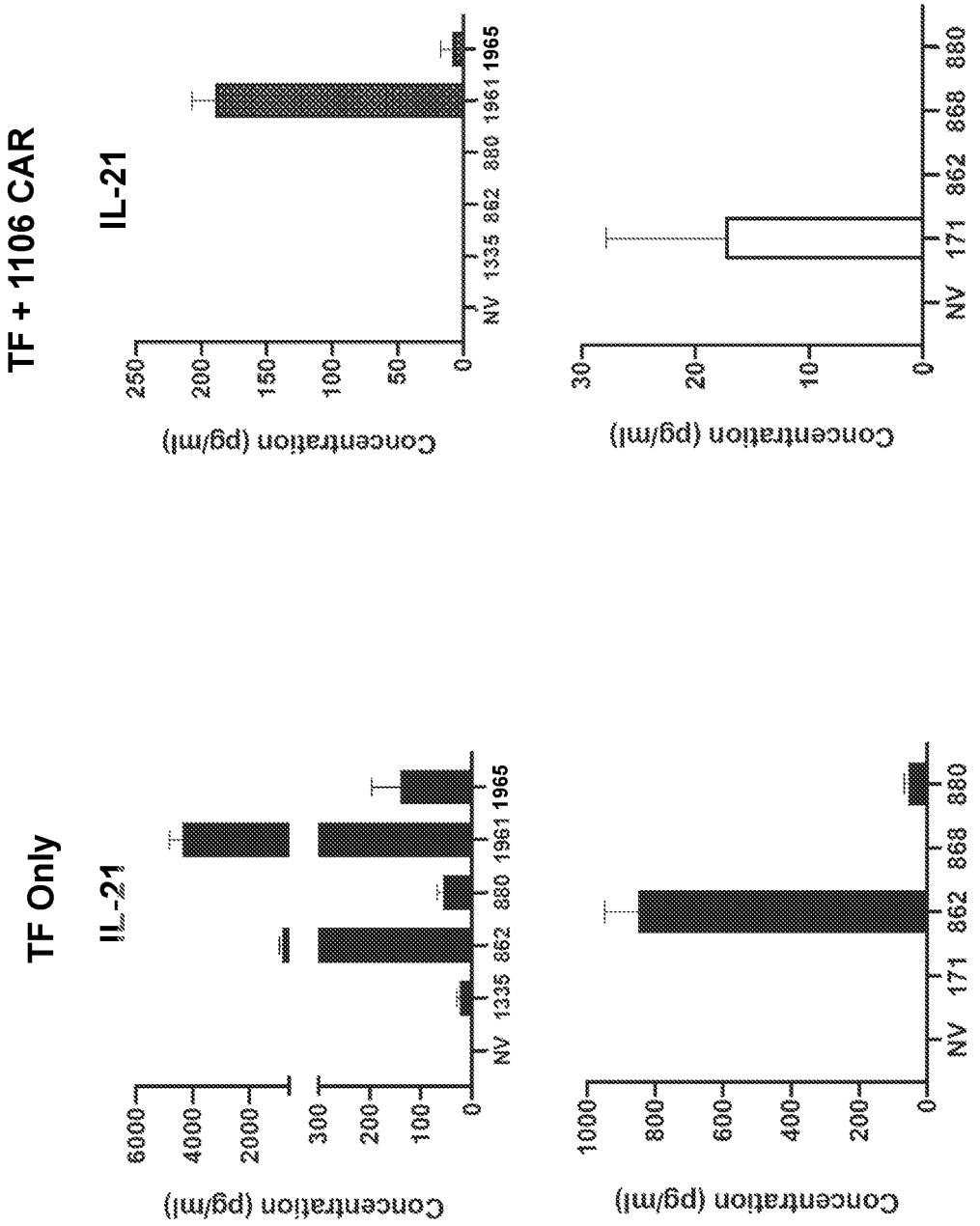

TF + 1106 CAR
IL-21
Concentration (pg/ml)
250
200
150
100
50
0
NV 1335 862 880 1961 1965
Concentration (pg/ml)
30
20
10
0
NV 171 862 868 880
TF Only
IL-21
Concentration (pg/ml)
6000
4000
2000
300
200
100
0
NV 1335 862 880 1961 1965
Concentration (pg/ml)
1000
800
600
400
200
0
NV 171 862 868 880

FIG. 8C

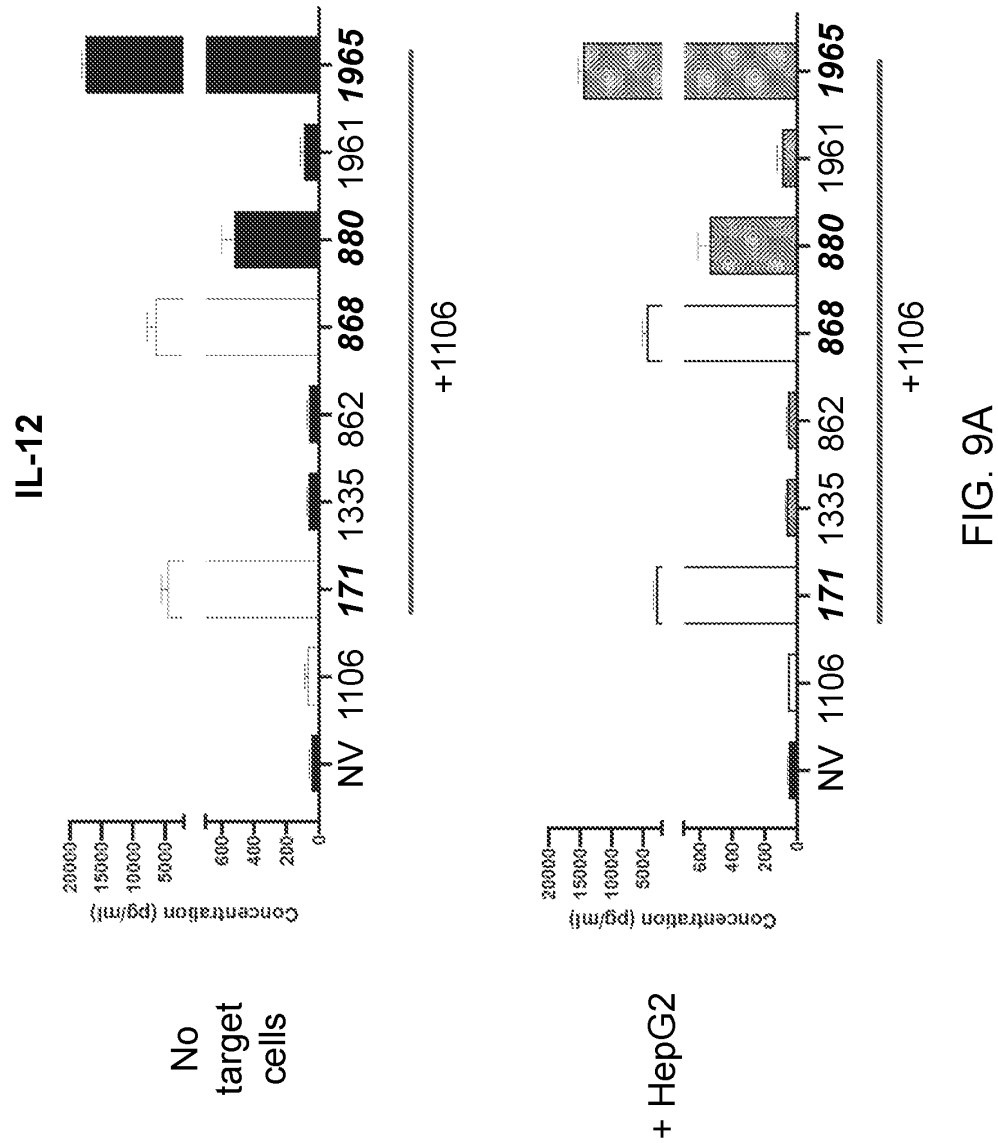

IL-12
Concentration (pg/ml)
20000
15000
10000
5000
600
400
200
0
NV
1106
171
1335
862
868
880
1961
1965
+1106
No target cells
+ HepG2

FIG. 9A

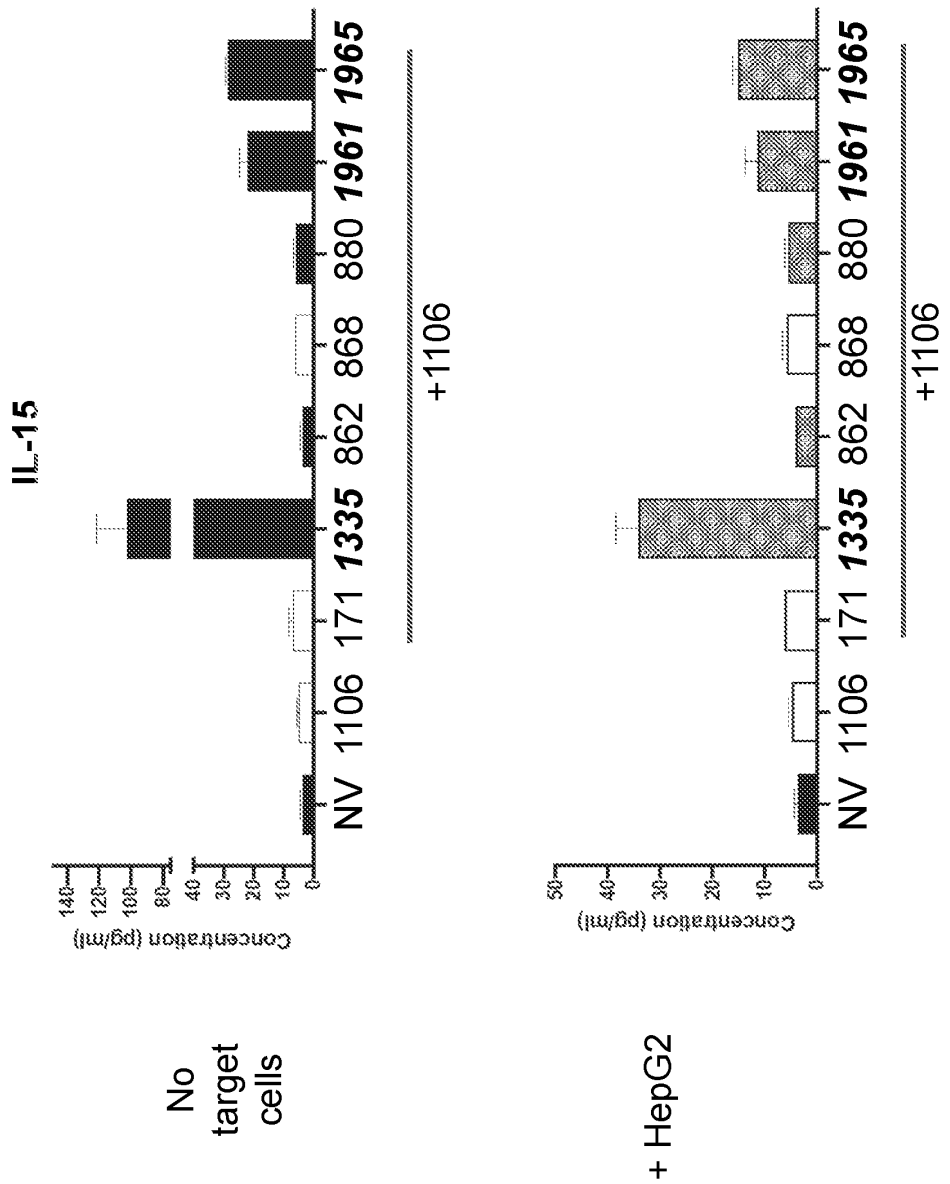

IL-15
Concentration (pg/ml)
0
10
20
30
40
80
100
120
140
NV 1106 171 1335 862 868 880 1961 1965
+1106
No target cells
Concentration (pg/ml)
0
10
20
30
40
50
NV 1106 171 1335 862 868 880 1961 1965
+1106
+ HepG2

FIG. 9B

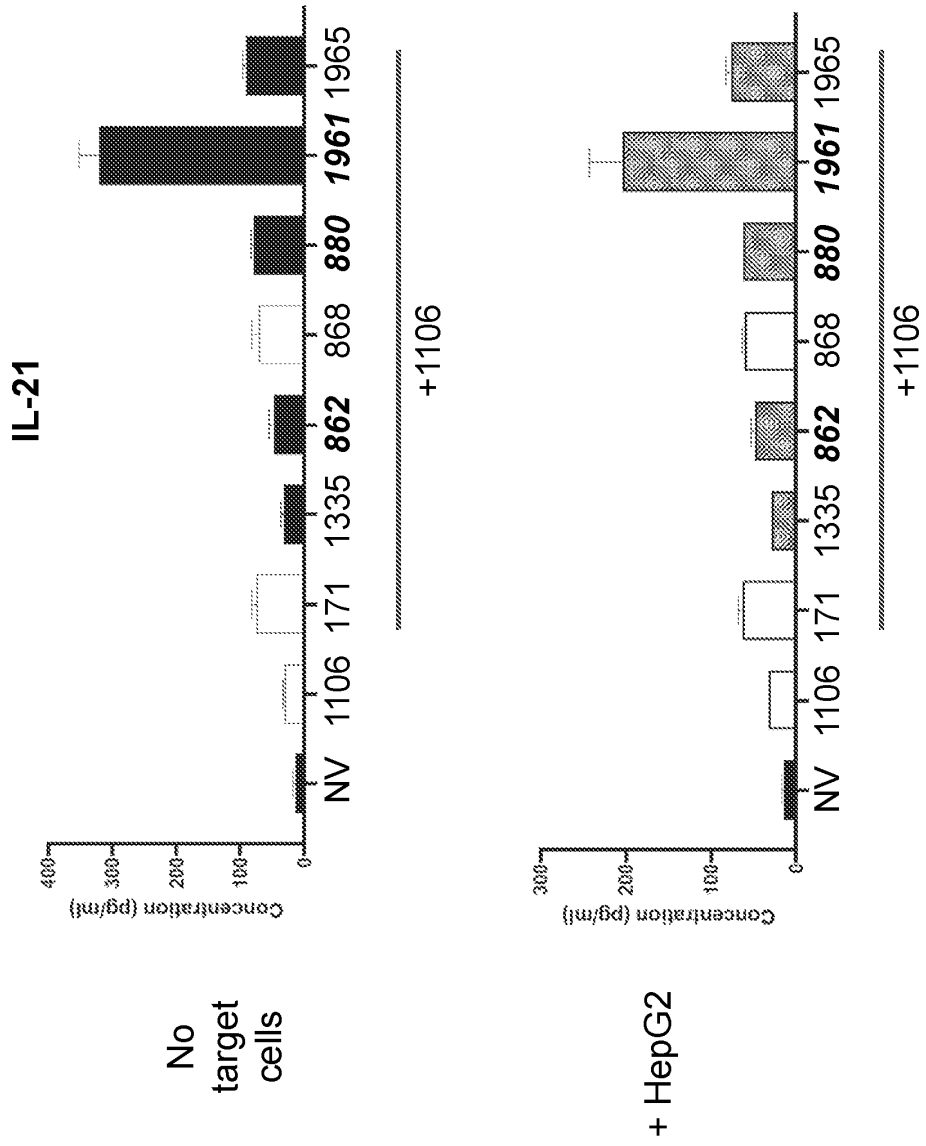

IL-21
Concentration (pg/ml)
0
100
200
300
400
NV
1106
171
1335
862
868
880
1961
1965
+1106
No target cells
+ HepG2

FIG. 9C

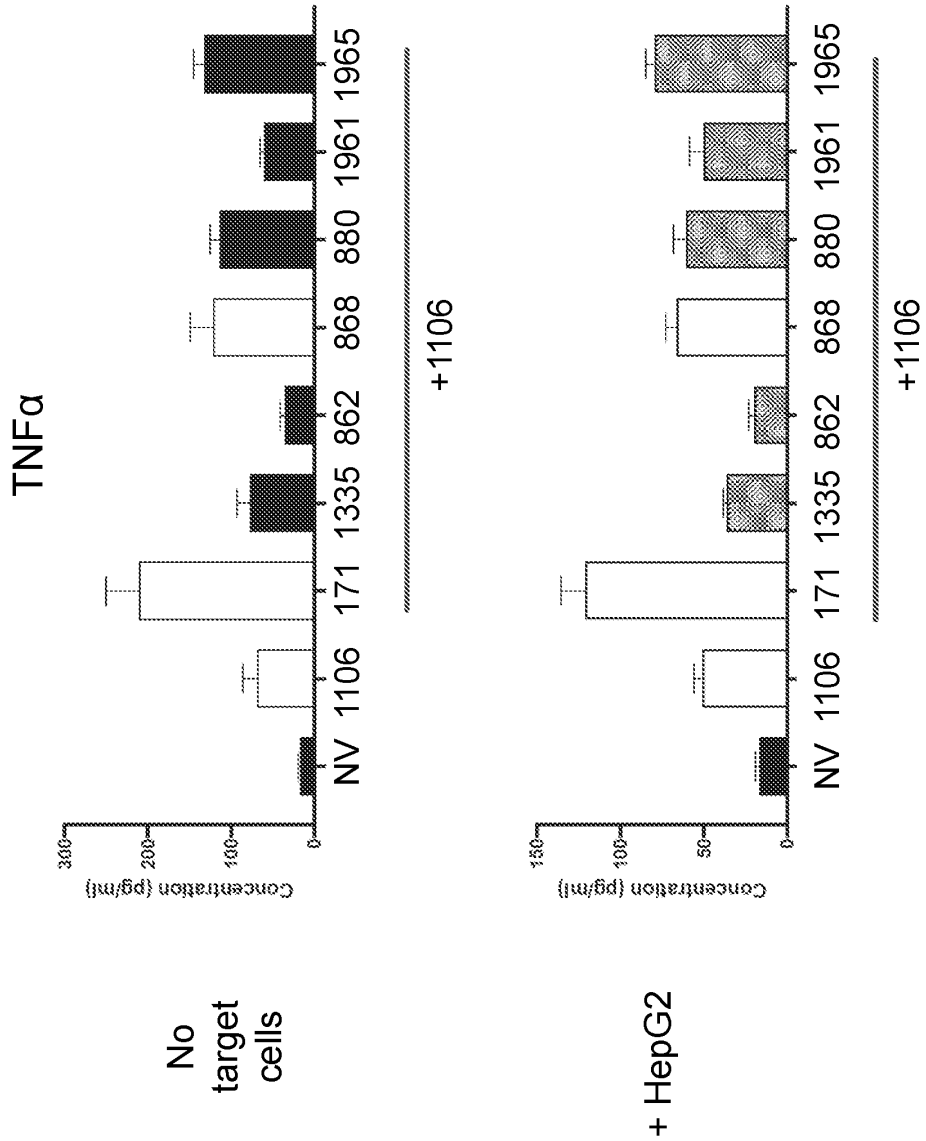

TNFα
Concentration (pg/ml)
300
200
100
0
NV
1106
171
1335
862
868
880
1961
1965
+1106
No target cells
Concentration (pg/ml)
150
100
50
0
NV
1106
171
1335
862
868
880
1961
1965
+1106
+ HepG2

FIG. 10A

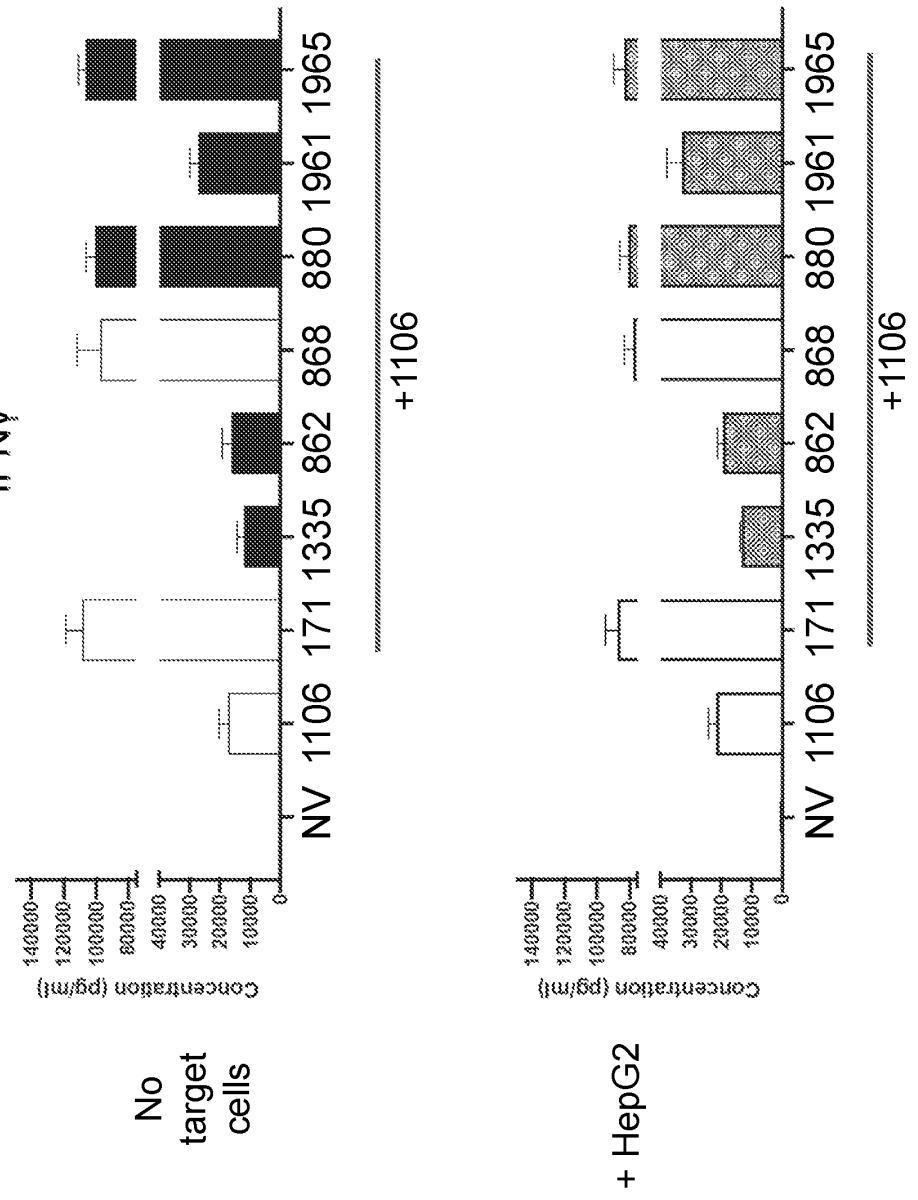

IFNγ
No target cells
+ HepG2
Concentration (pg/ml)
140000
120000
100000
80000
40000
30000
20000
10000
0
NV 1106 171 1335 862 868 880 1961 1965
+1106

FIG. 10B

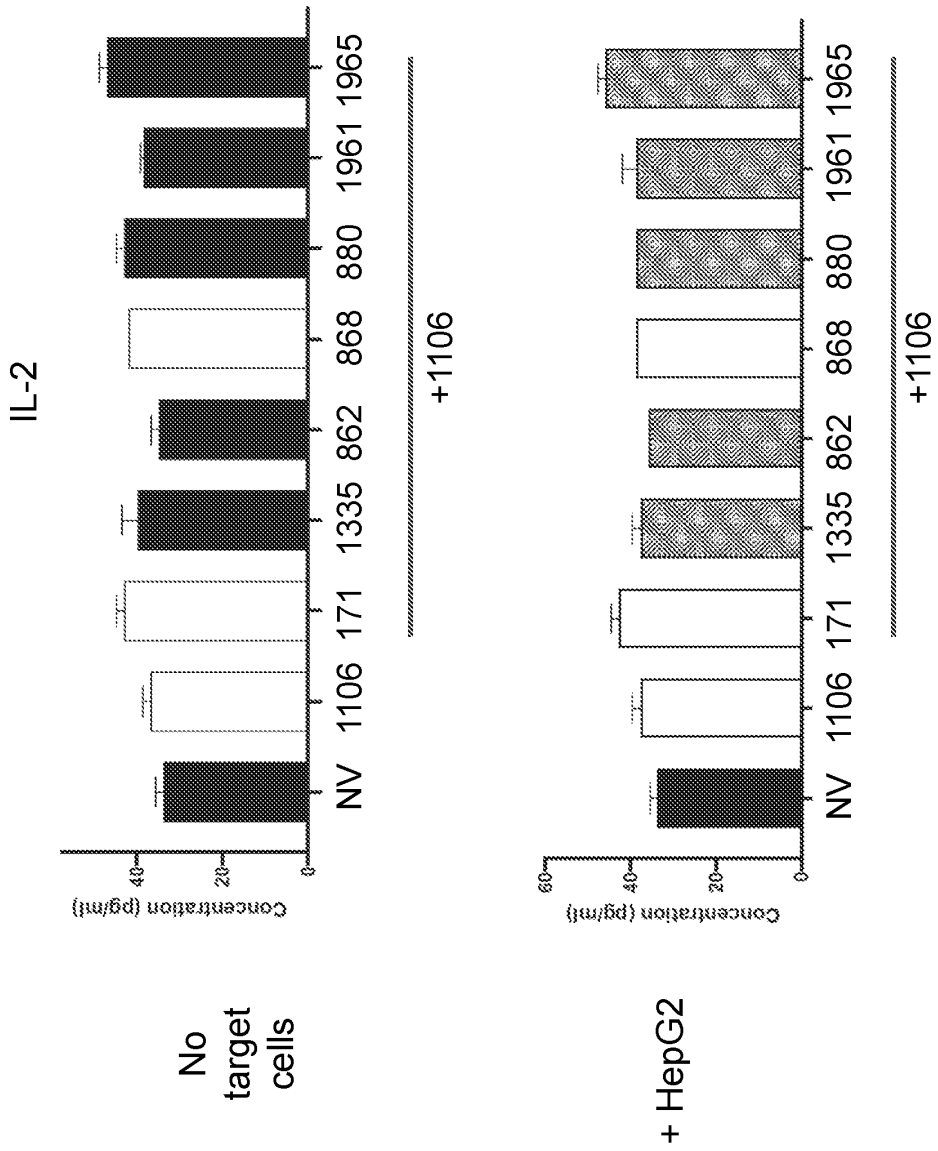

IL-2
No target cells
+ HepG2
Concentration (pg/ml)
0
20
40
60
NV
1106
171
1335
862
868
880
1961
1965
+1106

FIG. 10C

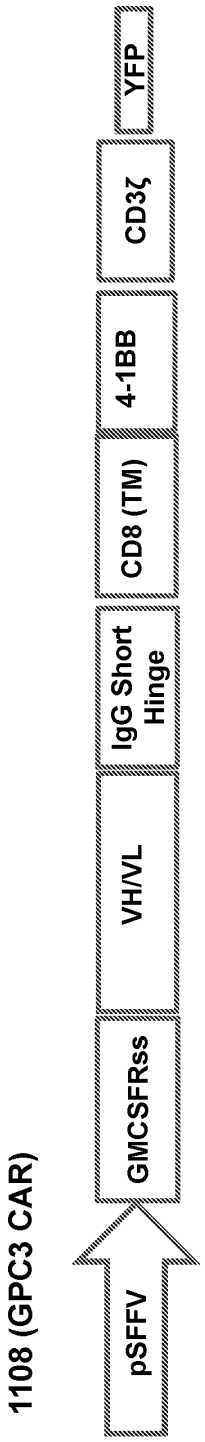

1108 (GPC3 CAR)
pSFFV
GMCSFRss
VH/VL
IgG Short Hinge
CD8 (TM)
4-1BB
CD3ζ
YFP

FIG. 11A

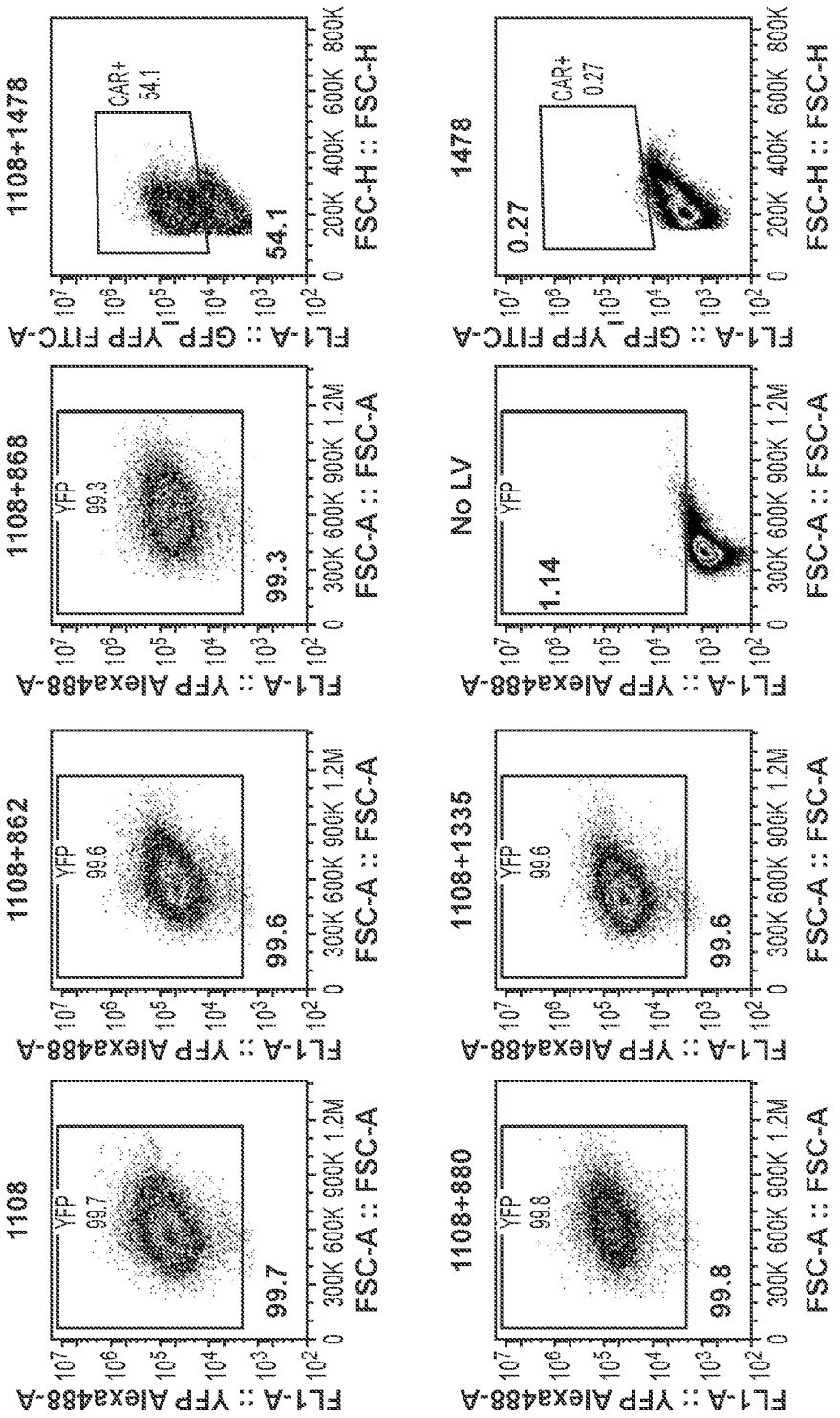

1108
YFP
99.7
99.7
FL1-A :: YFP Alexa488-A
FSC-A :: FSC-A
1108+862
YFP
99.6
99.6
FL1-A :: YFP Alexa488-A
FSC-A :: FSC-A
1108+868
YFP
99.3
99.3
FL1-A :: YFP Alexa488-A
FSC-A :: FSC-A
1108+1478
CAR+
54.1
54.1
FL1-A :: GFP_YFP FITC-A
FSC-H :: FSC-H
1108+880
YFP
99.8
99.8
FL1-A :: YFP Alexa488-A
FSC-A :: FSC-A
1108+1335
YFP
99.6
99.6
FL1-A :: YFP Alexa488-A
FSC-A :: FSC-A
No LV
YFP
1.14
FL1-A :: YFP Alexa488-A
FSC-A :: FSC-A
1478
CAR+
0.27
0.27
FL1-A :: GFP_YFP FITC-A
FSC-H :: FSC-H

FIG. 11B

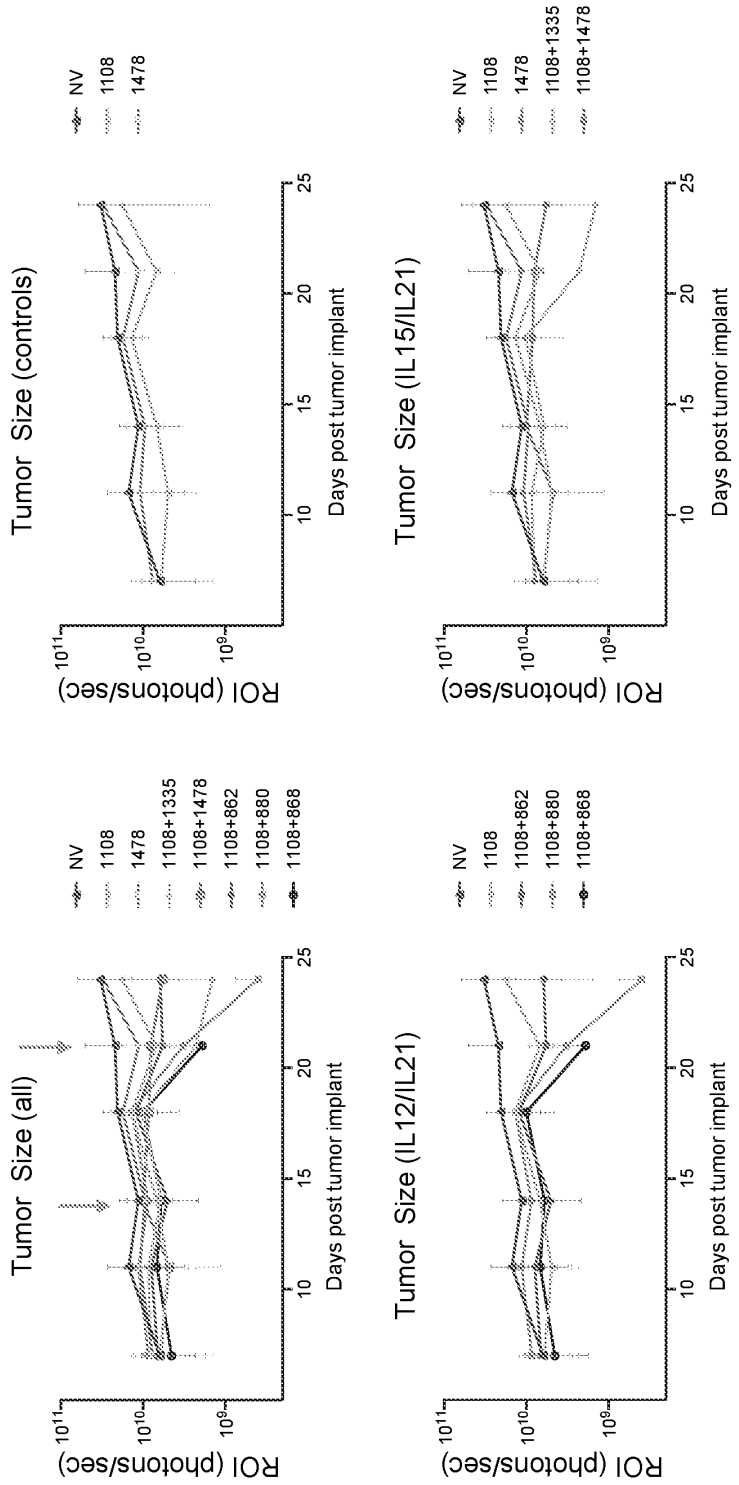

Tumor Size (all)
ROI (photons/sec)
Days post tumor implant
NV
1108
1478
1108+1335
1108+1478
1108+862
1108+880
1108+868
Tumor Size (controls)
Tumor Size (IL15/IL21)
Tumor Size (IL12/IL21)

FIG. 12

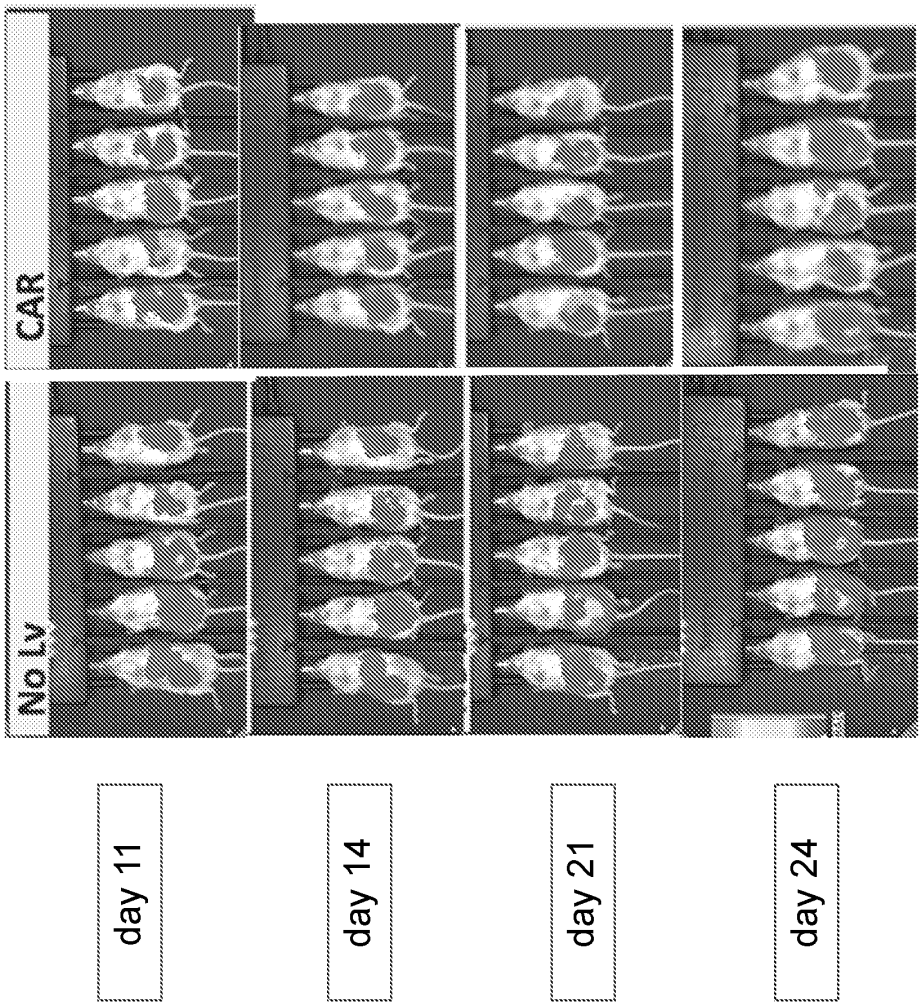


FIG. 13A

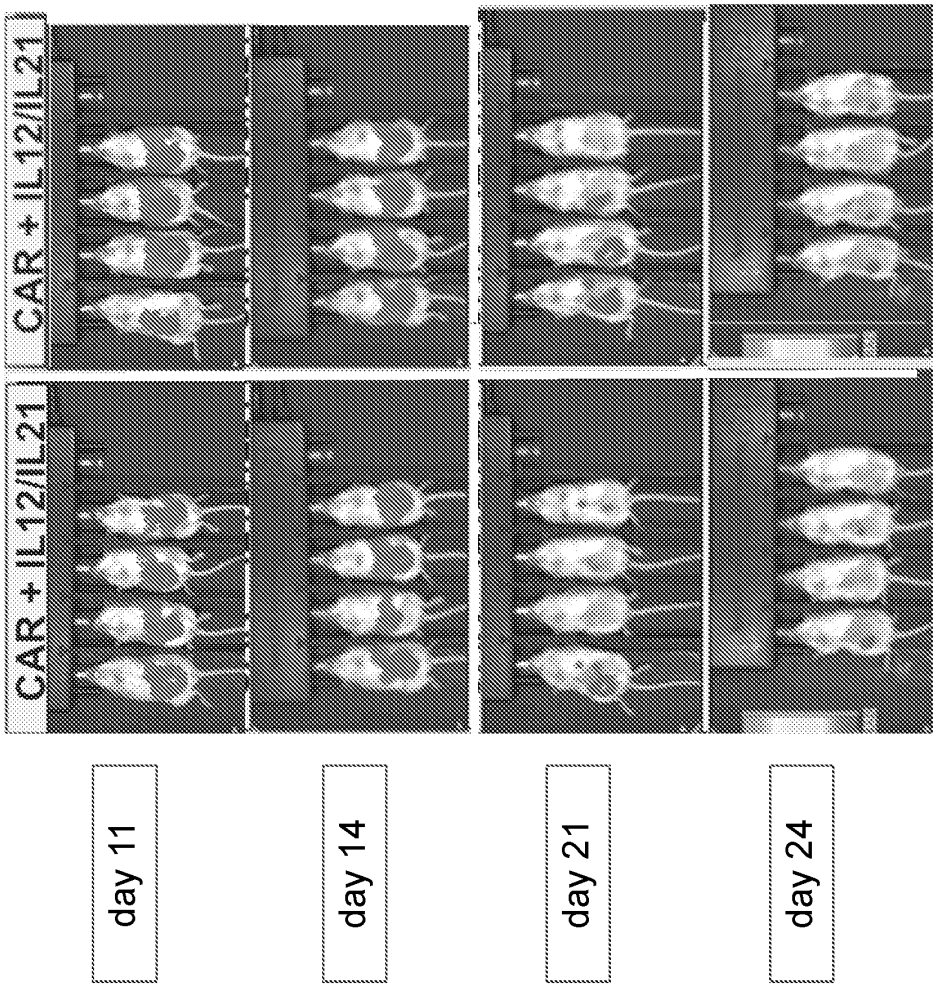


FIG. 13B

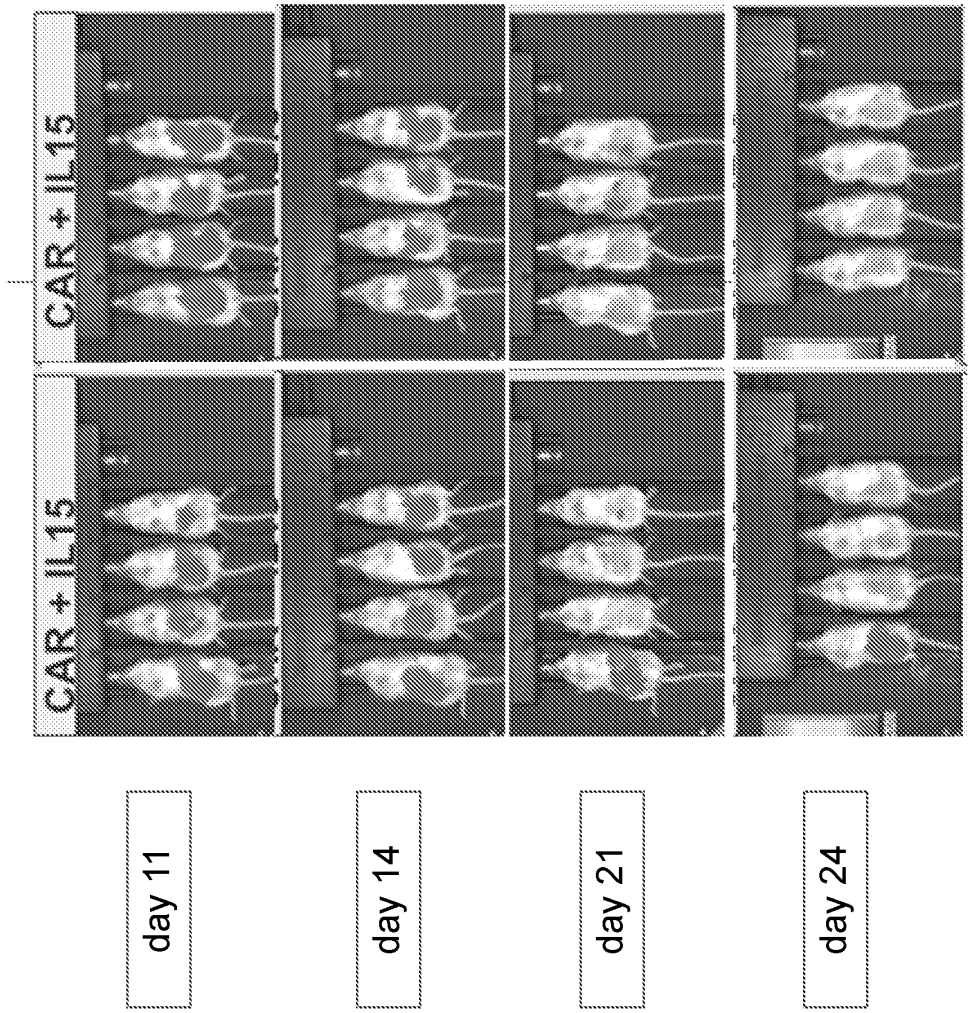


FIG. 13C

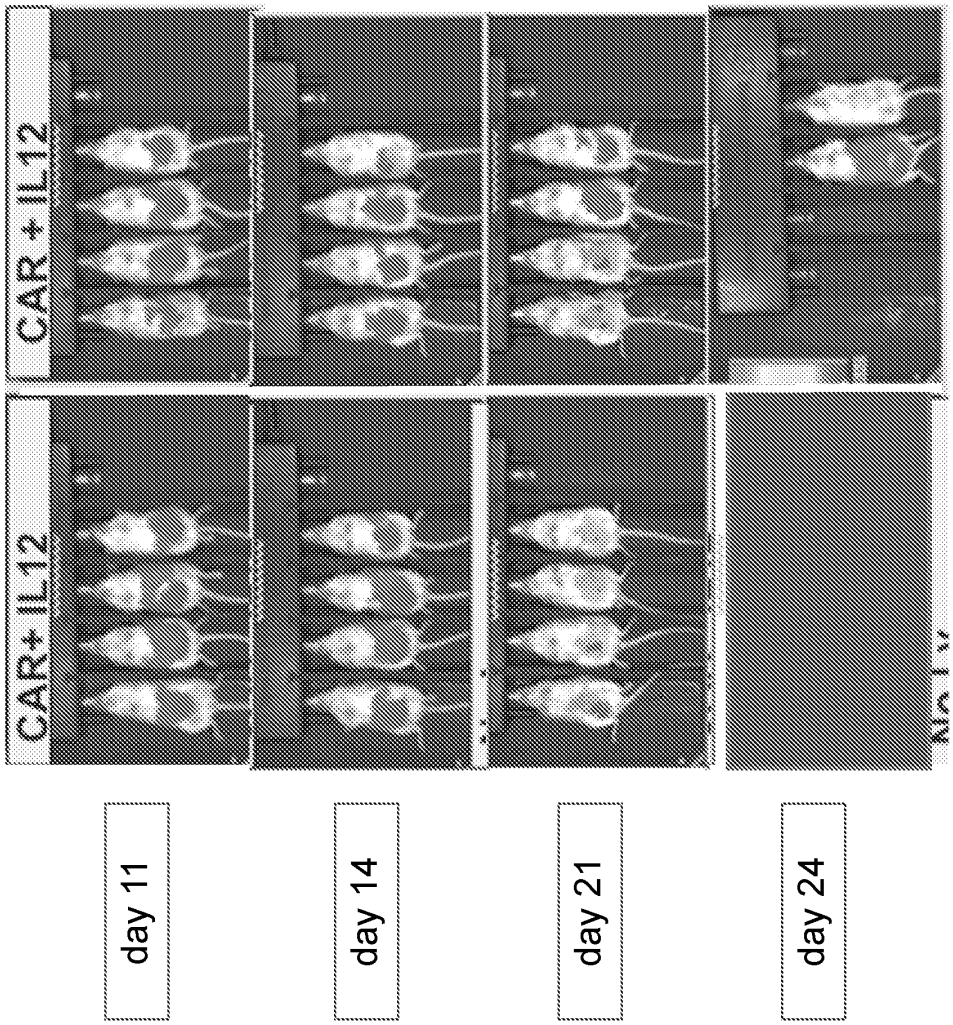


FIG. 13D

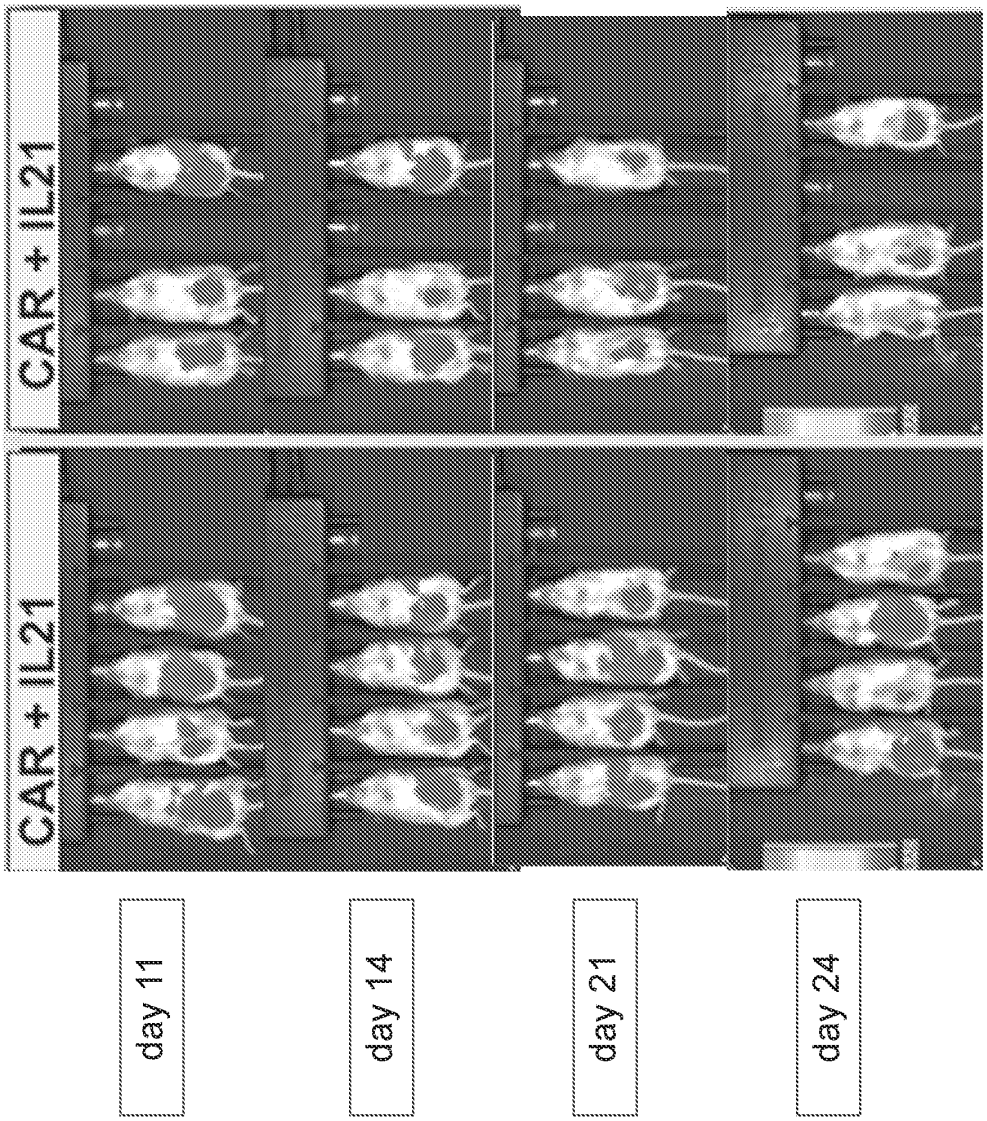


FIG. 13E

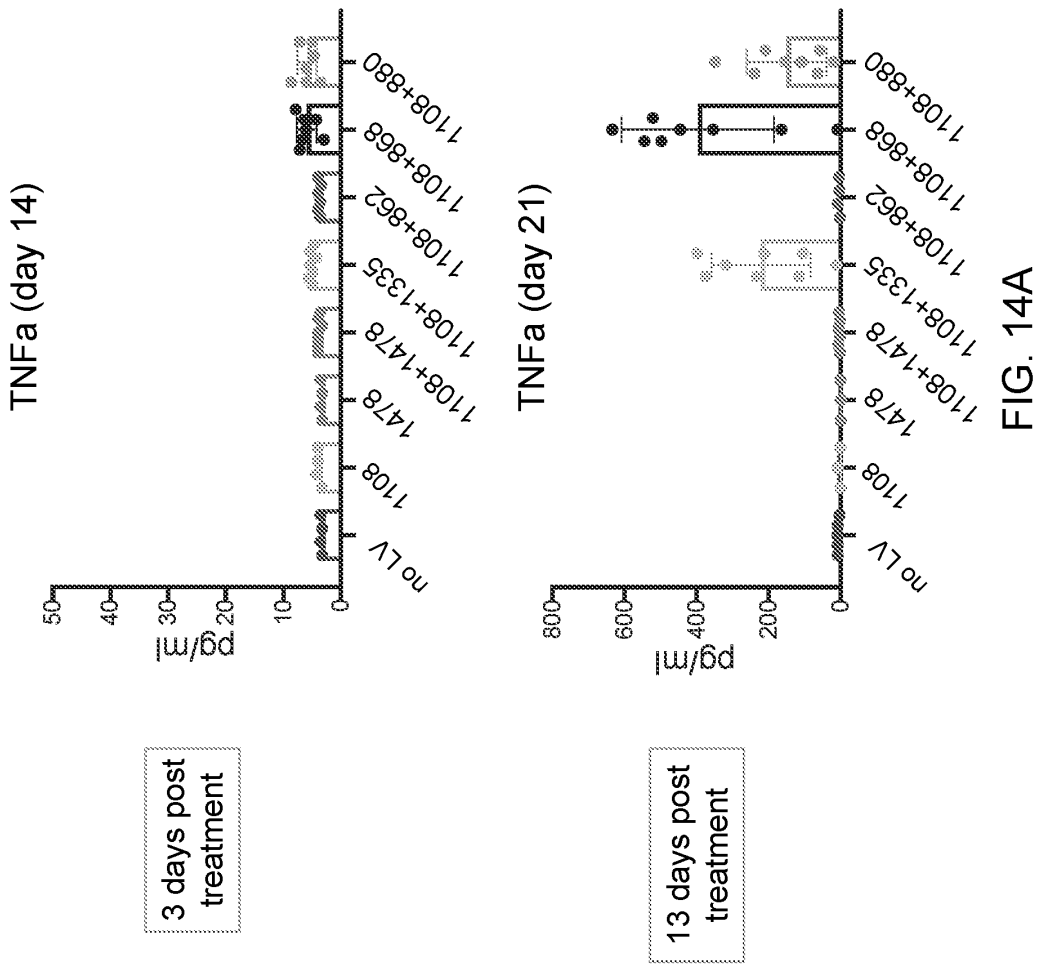

TNFa (day 14)
pg/ml
0
10
20
30
40
50
no LV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880
3 days post treatment
TNFa (day 21)
pg/ml
0
200
400
600
800
no LV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880
13 days post treatment

FIG. 14A

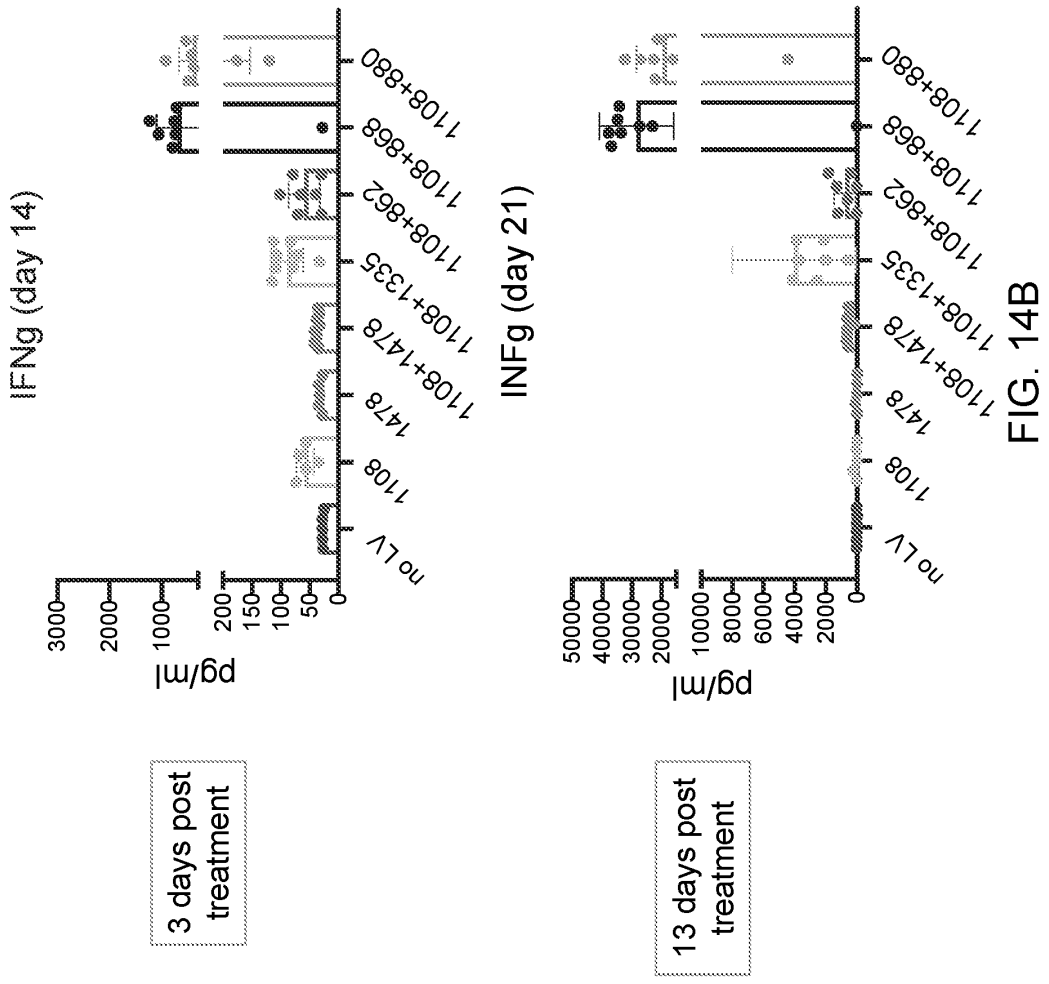

IFNg (day 14)
pg/ml
3000
2000
1000
200
150
100
50
0
no LV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880
3 days post treatment
INFg (day 21)
pg/ml
50000
40000
30000
20000
10000
8000
6000
4000
2000
0
no LV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880
13 days post treatment

FIG. 14B

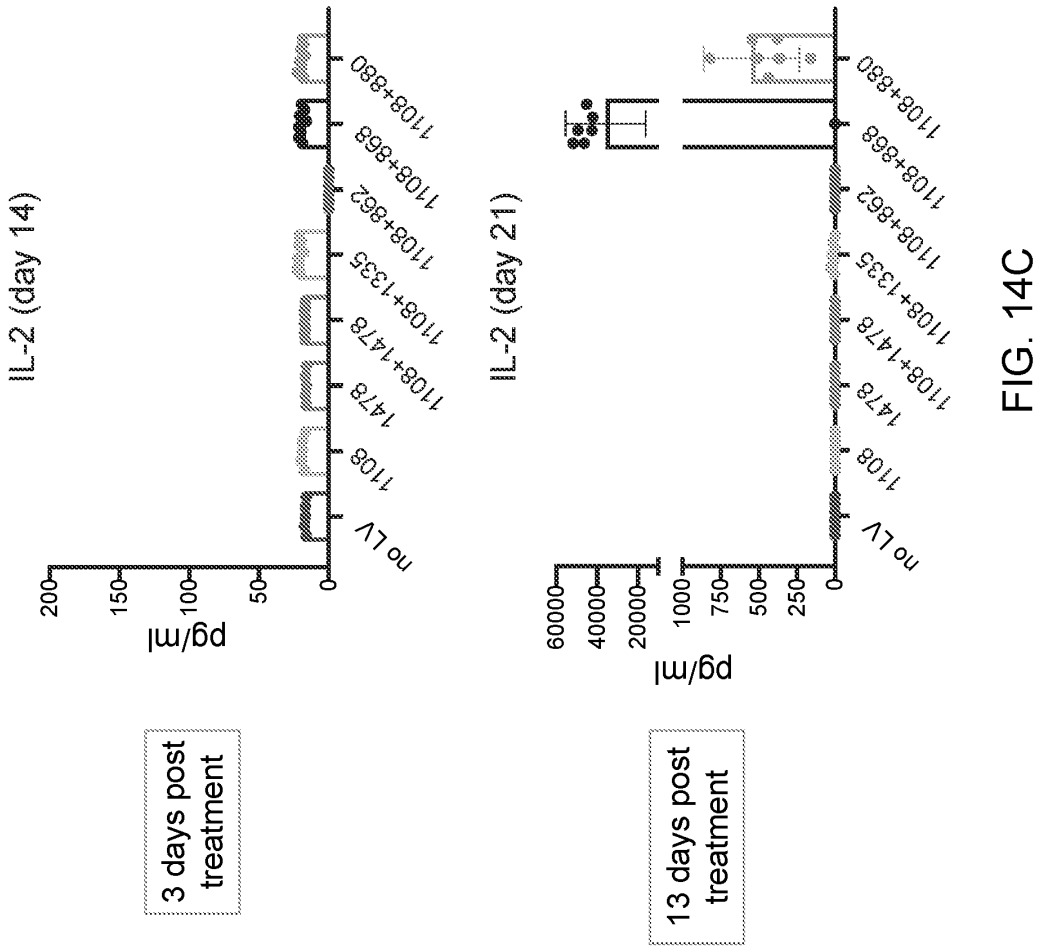

IL-2 (day 14)
pg/ml
200
150
100
50
0
no LV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880
3 days post treatment
IL-2 (day 21)
pg/ml
60000
40000
20000
1000
750
500
250
0
no LV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880
13 days post treatment

FIG. 14C

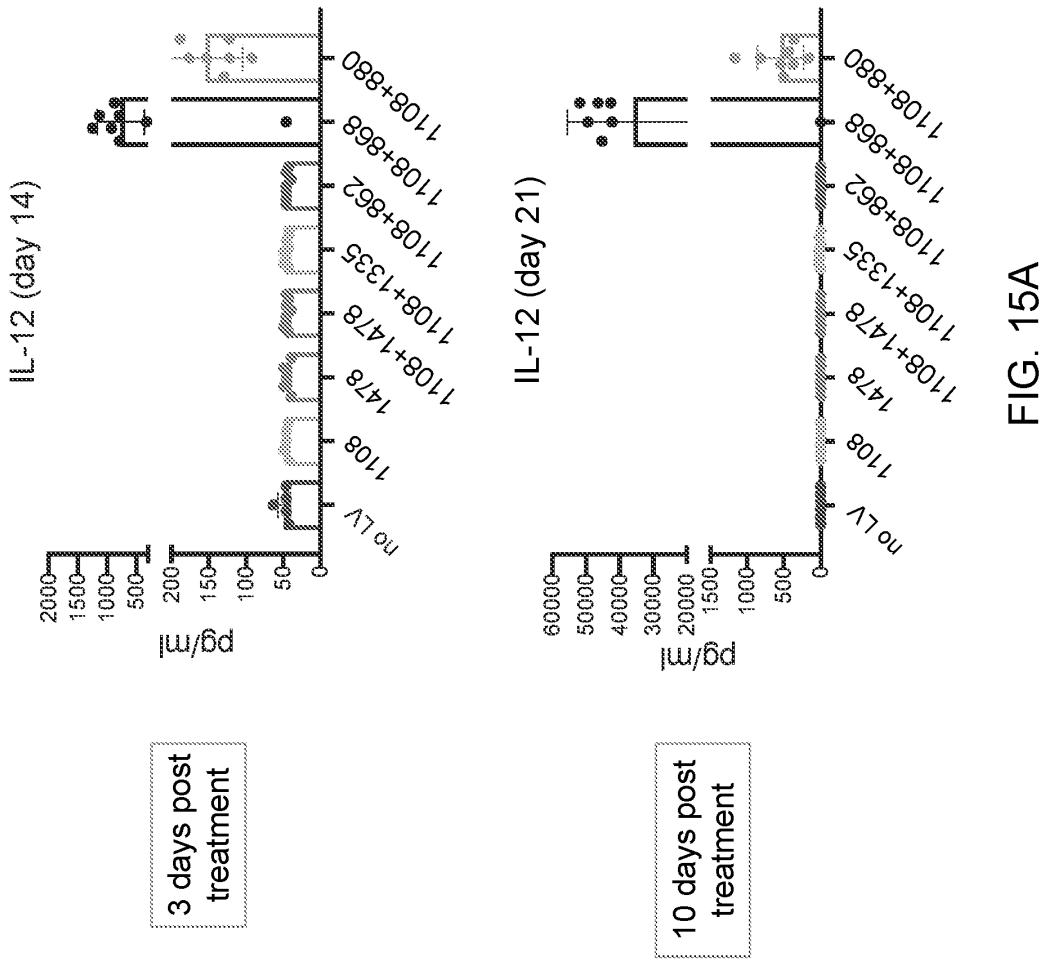

IL-12 (day 14)
pg/ml
2000
1500
1000
500
200
150
100
50
0
no LV
1108
1478
1108+1335
1108+862
1108+868
1108+880
3 days post treatment
IL-12 (day 21)
pg/ml
60000
50000
40000
30000
20000
1500
1000
500
0
no LV
1108
1478
1108+1335
1108+862
1108+868
1108+880
10 days post treatment

FIG. 15A

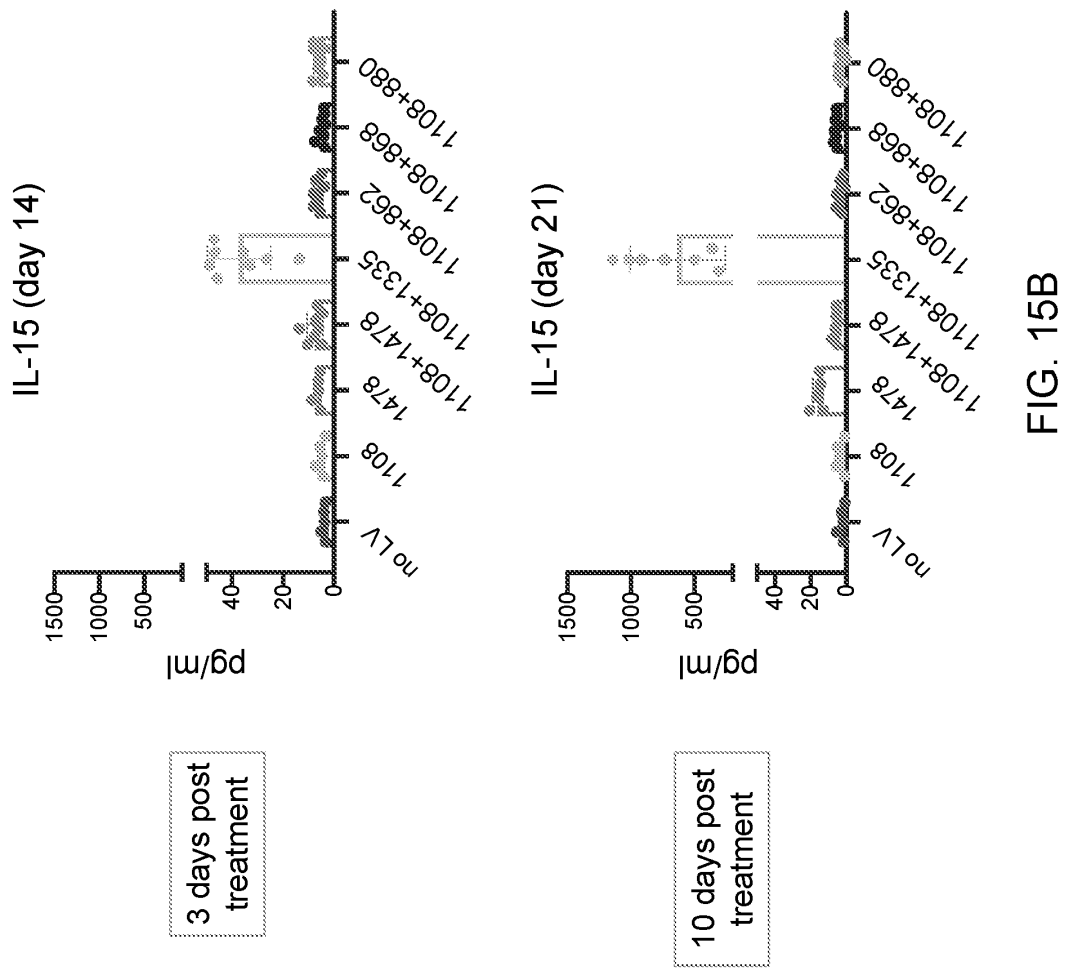

IL-15 (day 14)
pg/ml
1500
1000
500
40
20
0
noLV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880
3 days post treatment
IL-15 (day 21)
pg/ml
1500
1000
500
40
20
0
noLV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880
10 days post treatment

FIG. 15B

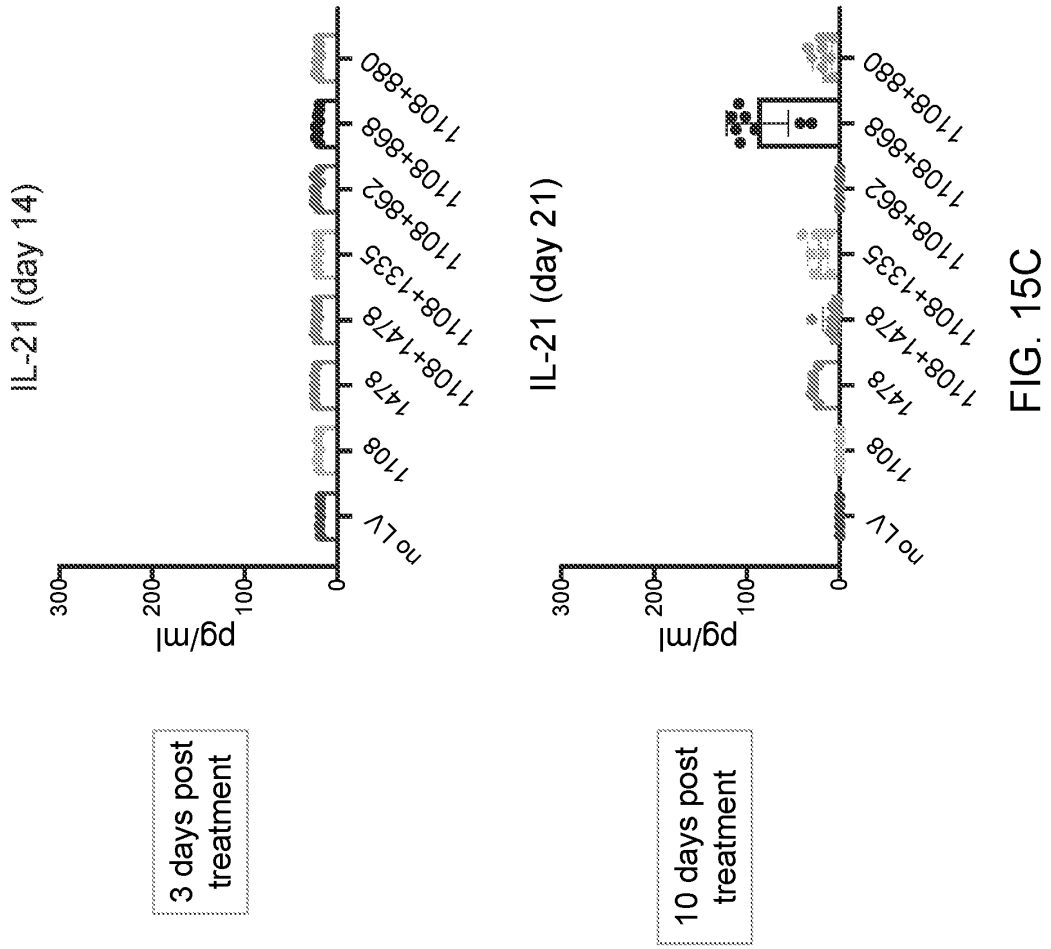

IL-21 (day 14)
pg/ml
300
200
100
0
noLV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880
3 days post treatment
IL-21 (day 21)
pg/ml
300
200
100
0
noLV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880
10 days post treatment

FIG. 15C

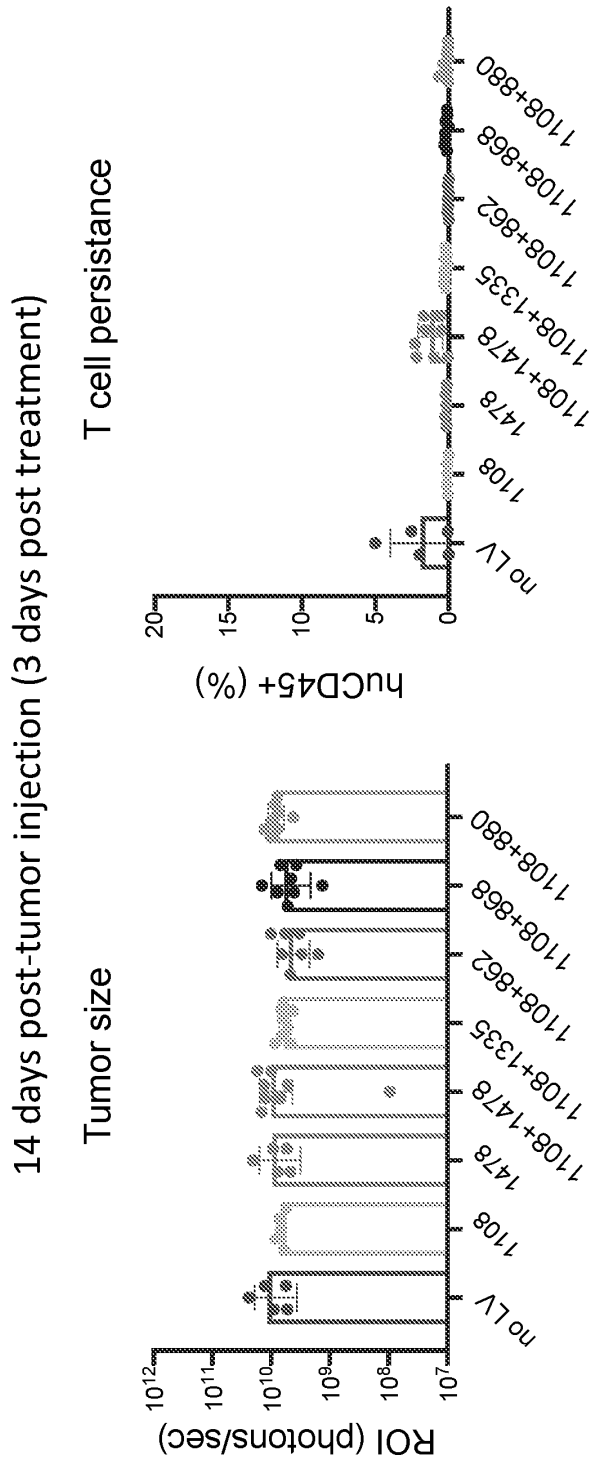

14 days post-tumor injection (3 days post treatment)
Tumor size
ROI (photons/sec)
10^{12}
10^{11}
10^{10}
10^{9}
10^{8}
10^{7}
no LV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880
T cell persistance
huCD45+ (%)
20
15
10
5
0
no LV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880

FIG. 16A

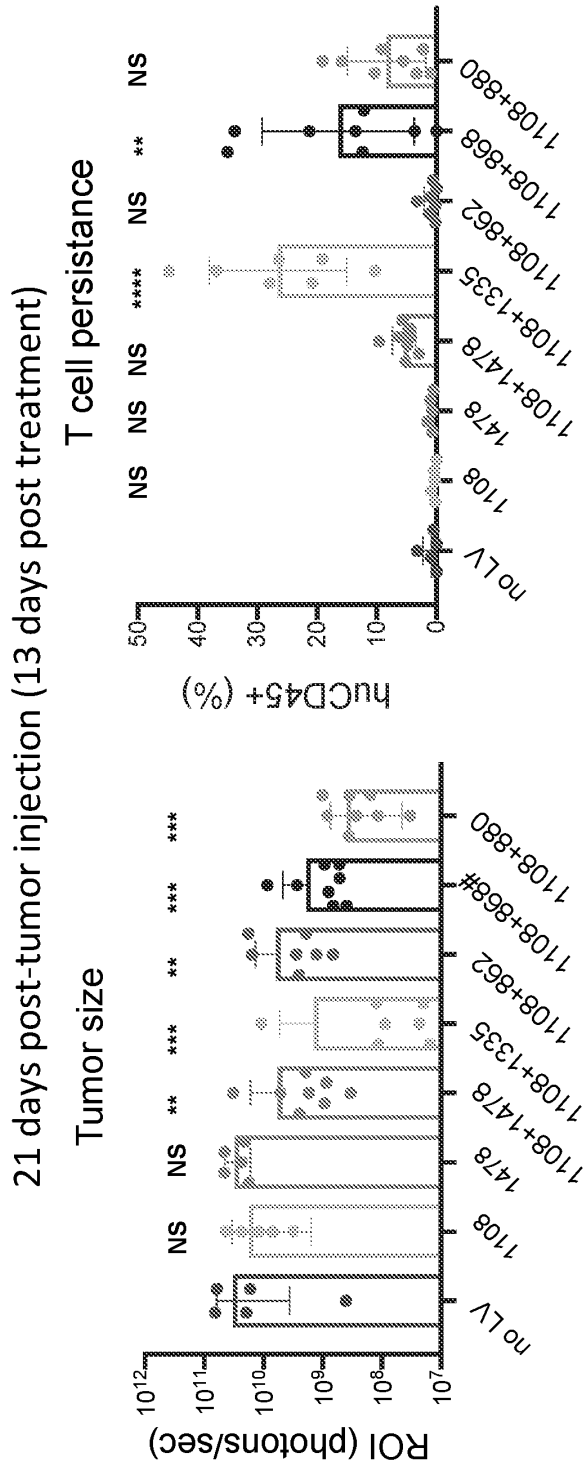

21 days post-tumor injection (13 days post treatment)
Tumor size
ROI (photons/sec)
10^{12}
10^{11}
10^{10}
10^{9}
10^{8}
10^{7}
NS NS ** *** ** *** ***
no LV
1108
1478
1108+1478
1108+1335
1108+862
1108+868#
1108+880
T cell persistance
huCD45+ (%)
50
40
30
20
10
0
NS NS NS **** NS ** NS
no LV
1108
1478
1108+1478
1108+1335
1108+862
1108+868
1108+880

FIG. 16B

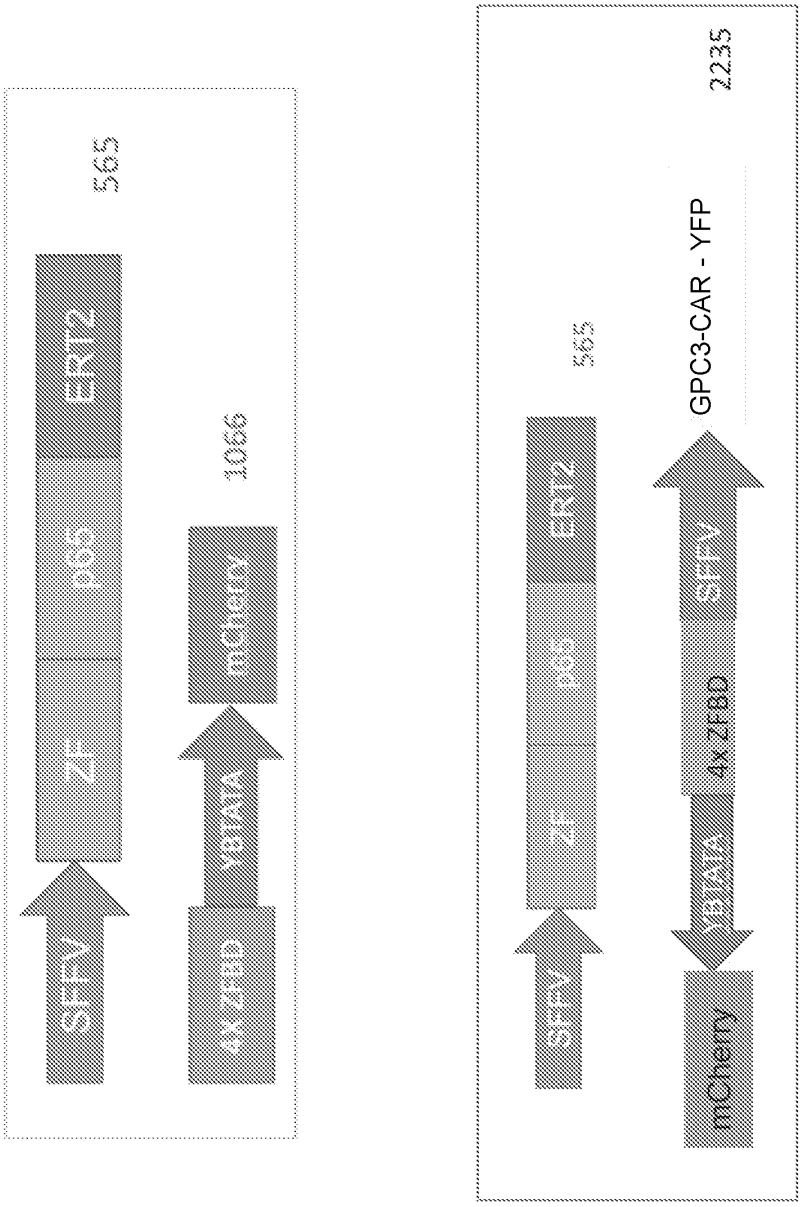

SFFV
4x ZFBD
YBTATA
mCherry
1066
ZF
p65
ERT2
565
SFFV
4x ZFBD
YBTATA
mCherry
SFFV
GPC3-CAR - YFP
2235
ZF
p65
ERT2
565

FIG. 17A

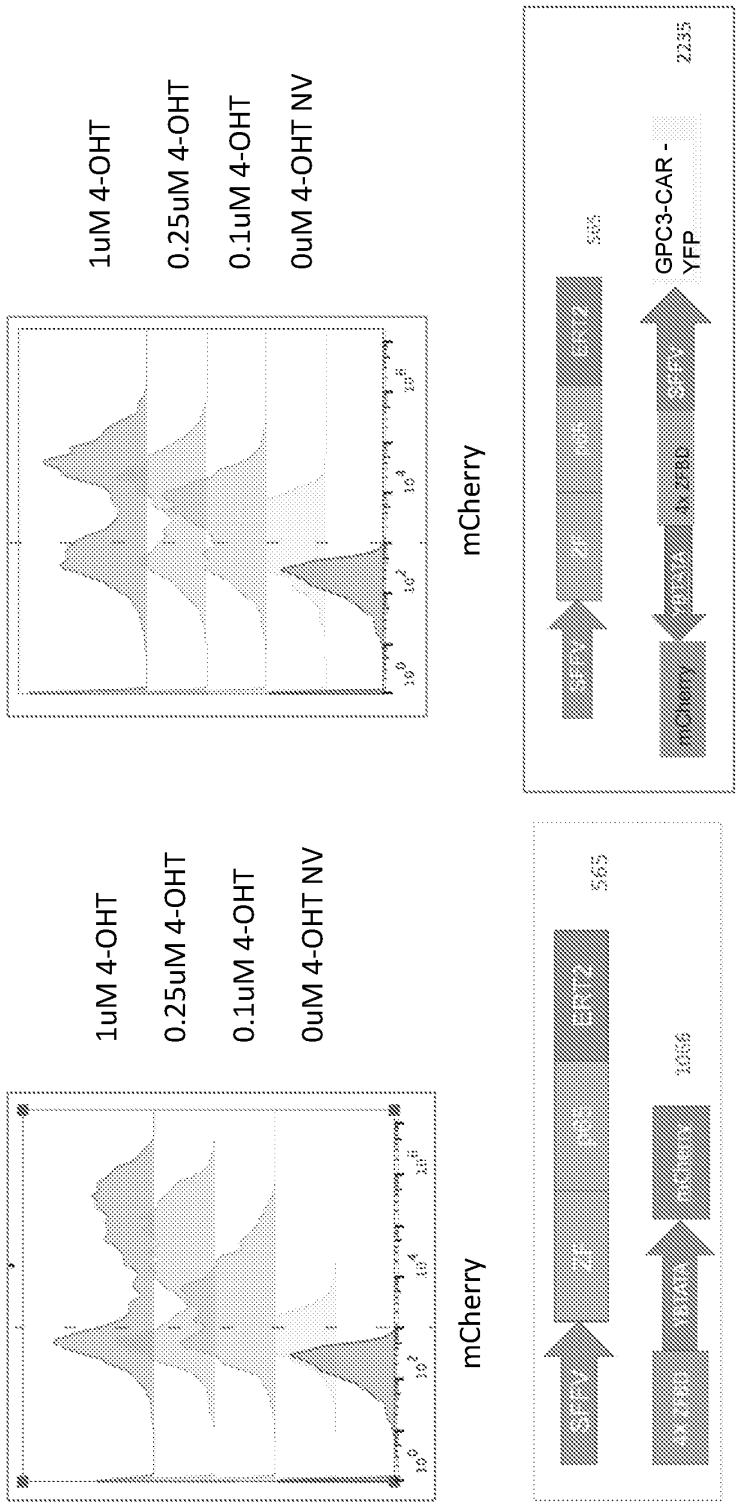

1uM 4-OHT
0.25uM 4-OHT
0.1uM 4-OHT
0uM 4-OHT NV
mCherry
1uM 4-OHT
0.25uM 4-OHT
0.1uM 4-OHT
0uM 4-OHT NV
mCherry
GPC3-CAR - YFP
2235
565
506

FIG. 17B

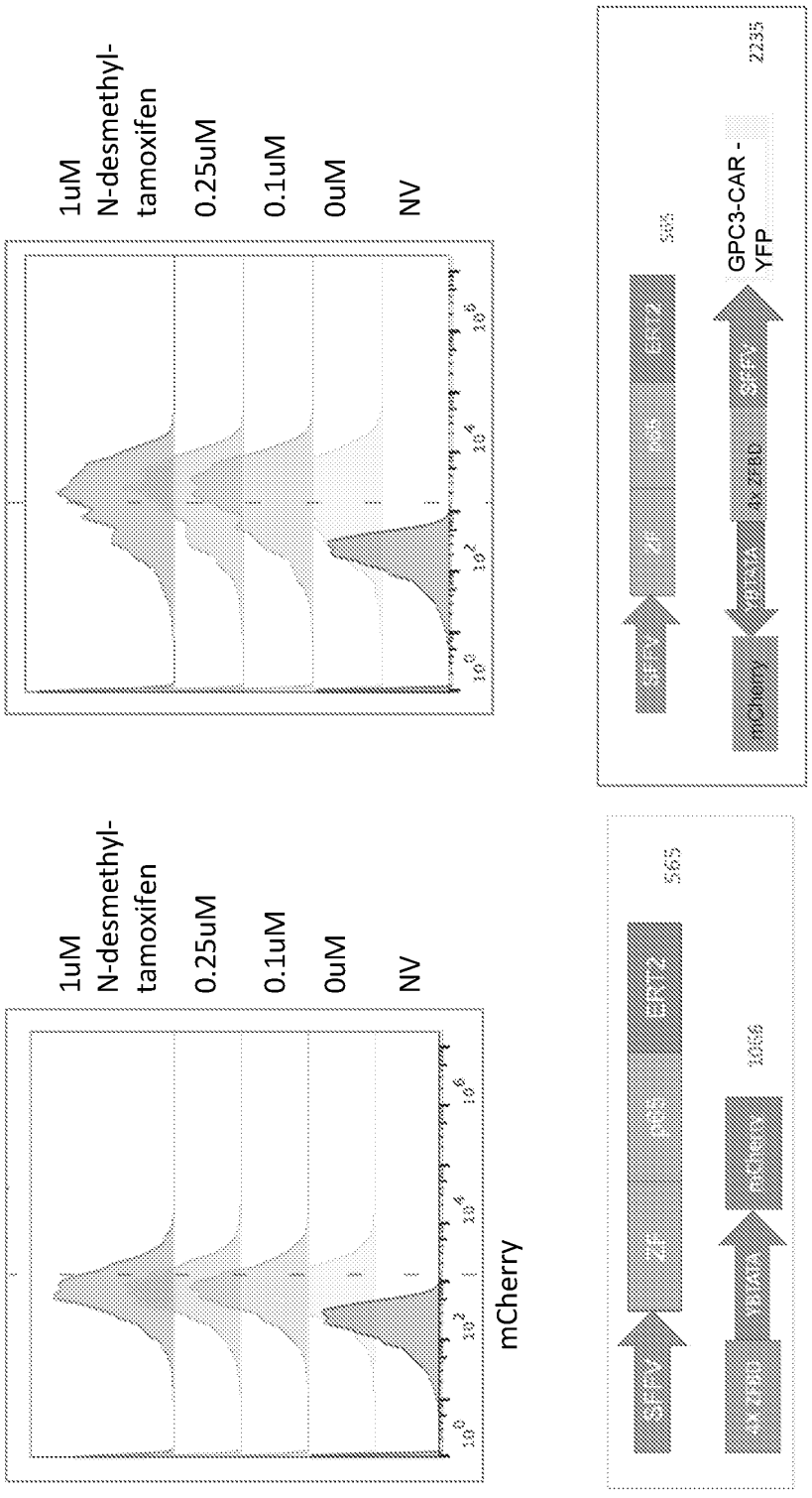

1uM N-desmethyl-tamoxifen
0.25uM
0.1uM
0uM
NV
mCherry
1uM N-desmethyl-tamoxifen
0.25uM
0.1uM
0uM
NV
GPC3-CAR - YFP
2235
506
565
3656

FIG. 17C

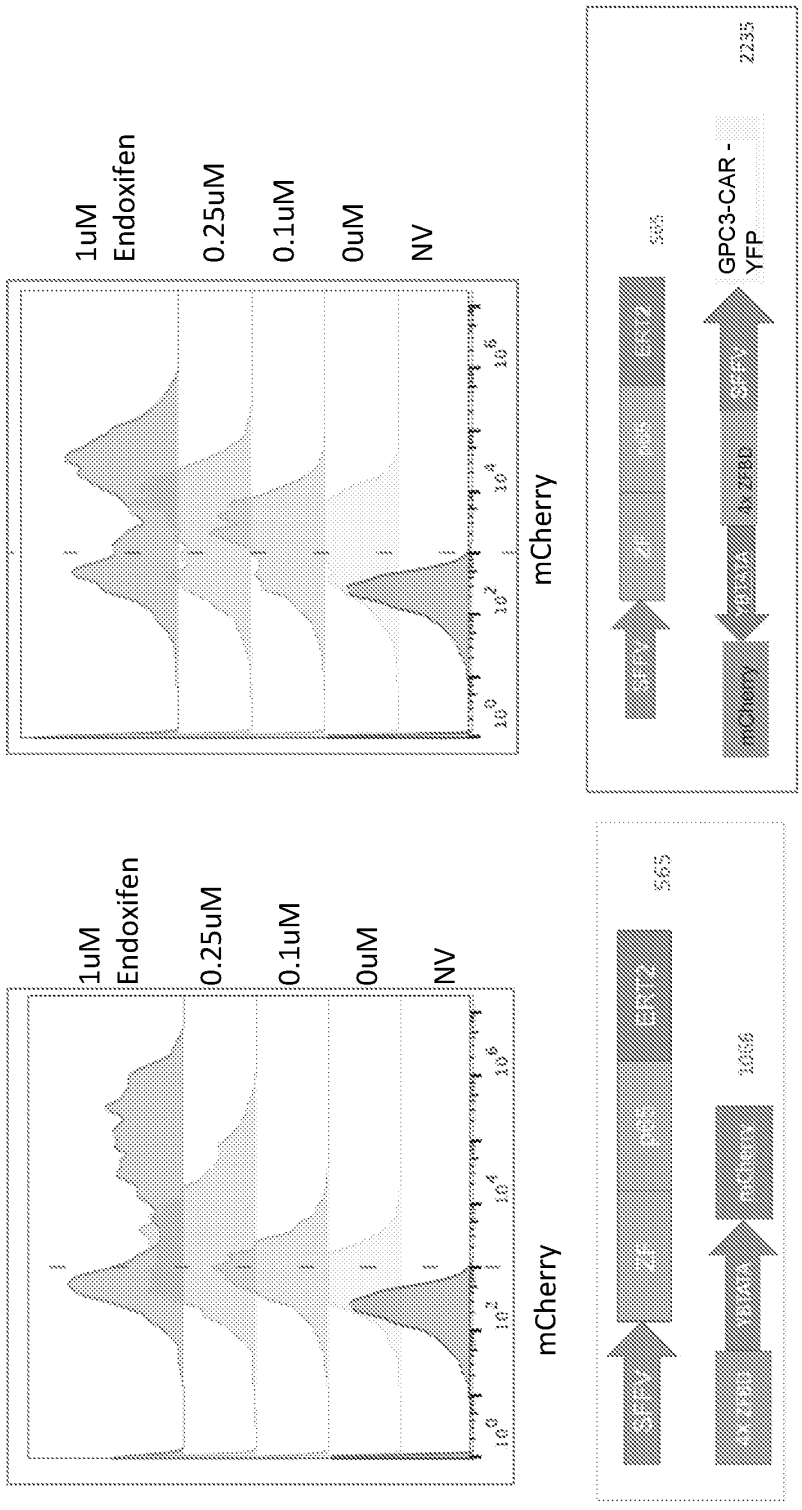

1uM Endoxifen
0.25uM
0.1uM
0uM
NV
mCherry
1uM Endoxifen
0.25uM
0.1uM
0uM
NV
mCherry
GPC3-CAR - YFP
2235
565
3656

FIG. 17D

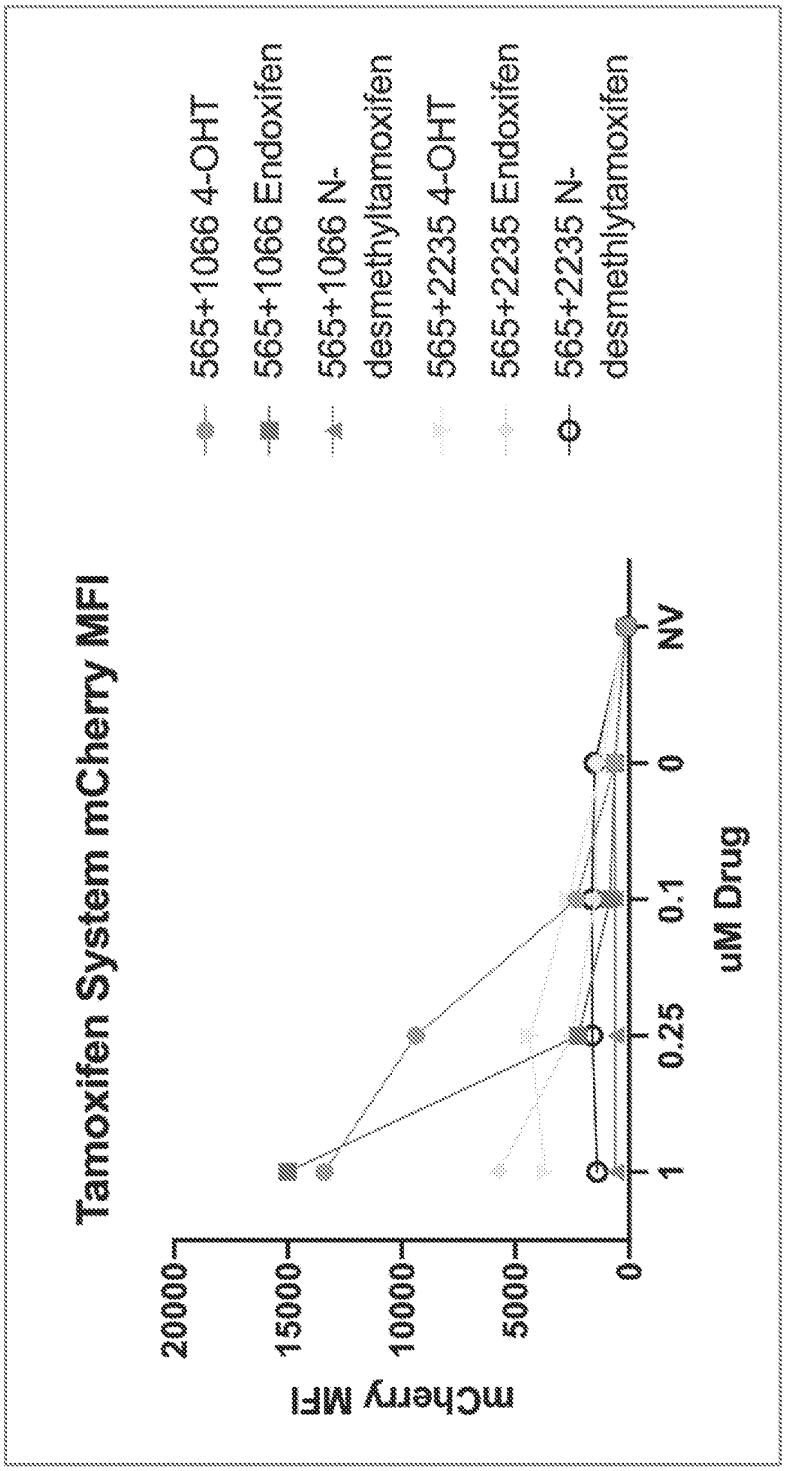

Tamoxifen System mCherry MFI
mcherry MFI
20000
15000
10000
5000
0
1
0.25
0.1
0
NV
uM Drug
565+1066 4-OHT
565+1066 Endoxifen
565+1066 N-desmethyltamoxifen
565+2235 4-OHT
565+2235 Endoxifen
565+2235 N-desmethlytamoxifen

FIG. 17E

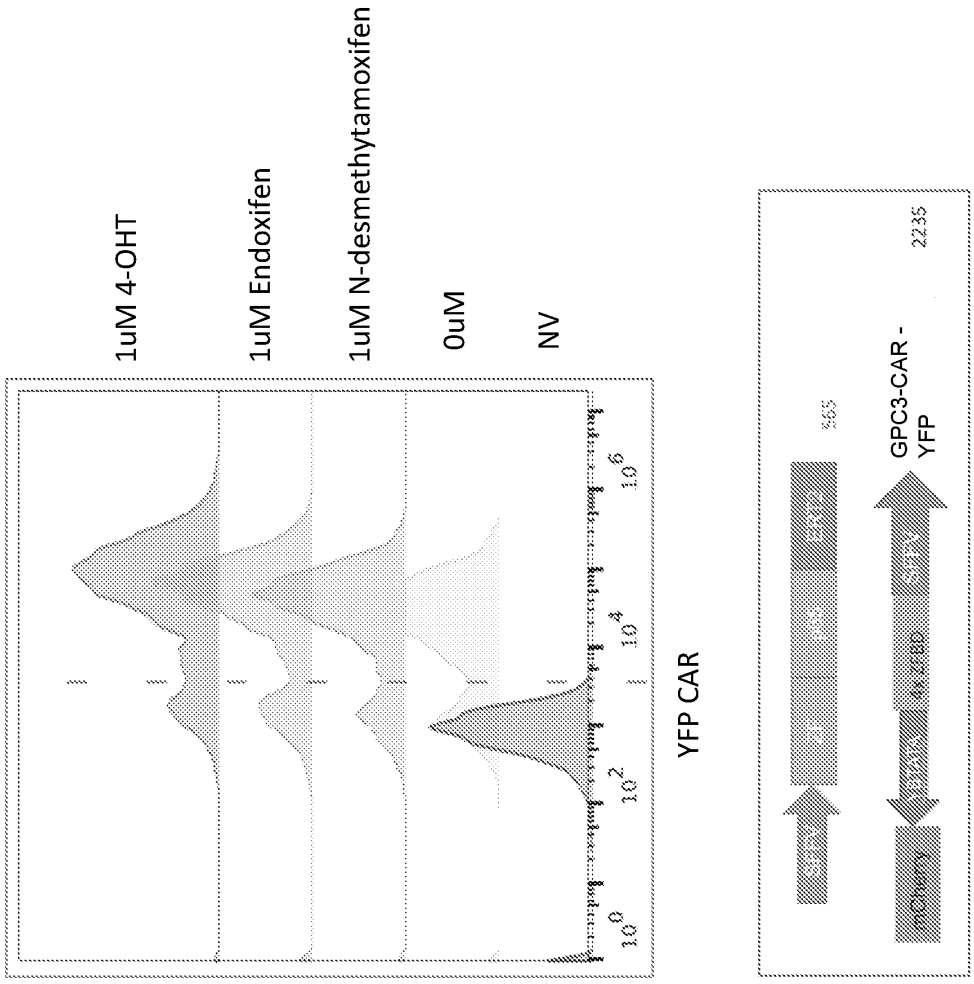

1uM 4-OHT
1uM Endoxifen
1uM N-desmethytamoxifen
0uM
NV
YFP CAR
10^0
10^2
10^4
10^6
GPC3-CAR - YFP
2235

FIG. 18

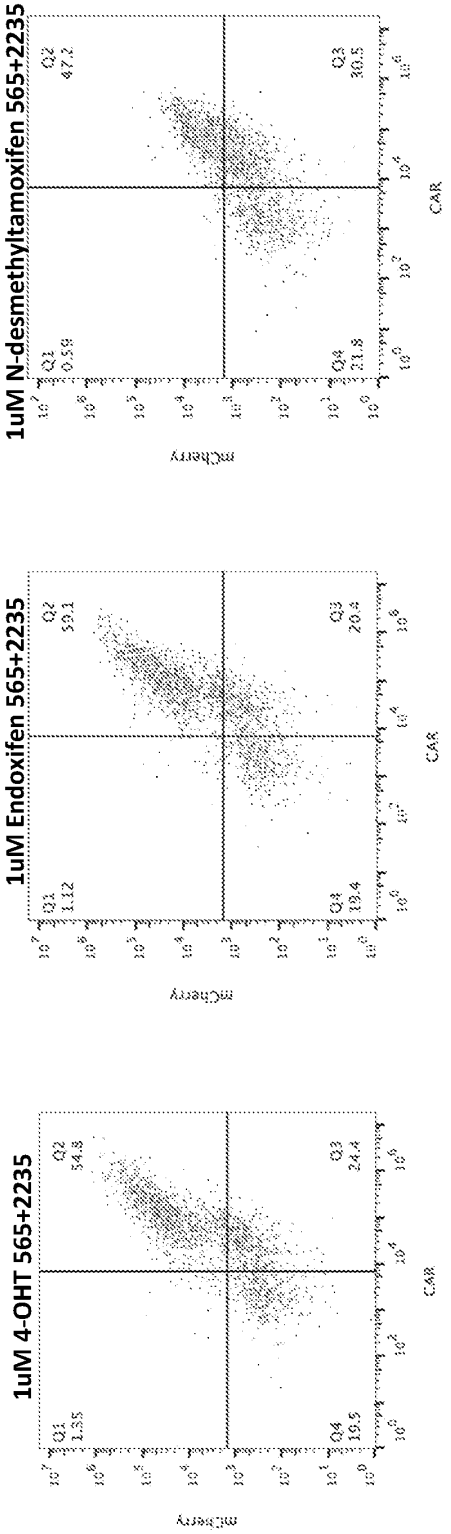

1uM N-desmethyltamoxifen 565+2235
Q1 0.59
Q2 47.2
Q3 30.5
Q4 21.8
mCherry
CAR
1uM Endoxifen 565+2235
Q1 1.12
Q2 59.1
Q3 20.4
Q4 19.4
mCherry
CAR
1uM 4-OHT 565+2235
Q1 1.35
Q2 54.8
Q3 24.4
Q4 19.5
mCherry
CAR

FIG. 19

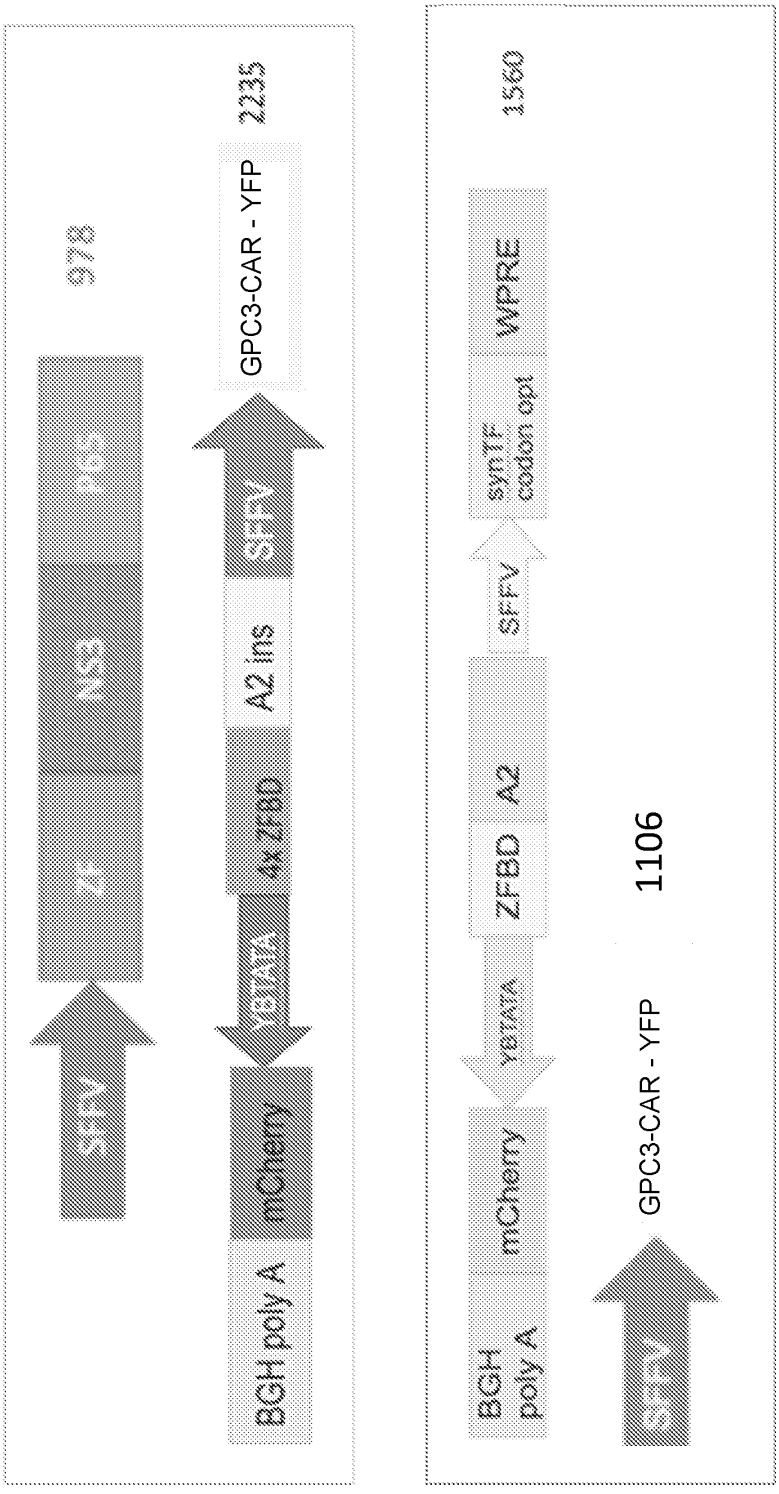

978
2235
1560
1106
SFFV
NS3
P65
GPC3-CAR - YFP
SFFV
A2 ins
4x ZFBD
YBTATA
mCherry
BGH poly A
SFFV
symTF codon opt
WPRE
SFFV
A2
ZFBD
YBTATA
mCherry
BGH poly A
GPC3-CAR - YFP
SFFV

FIG. 20

Vector 1	Vector 2
No virus	
1066: 4xBS min YBTATA mCherry	2233: SFFV_GPC3 CAR, inverted PGK_synTF-VPR
1066: 4xBS min YBTATA mCherry	2234: SFFV_synTF-VPR, inverted PGK_GPC3 CAR
1066: 4xBS min YBTATA mCherry	1845: SFFV_synTF-VPR
1066: 4xBS min YBTATA mCherry	978: SFFV_synTF-p65
978: SFFV_synTF-p65	2235: SFFV_GPC3 CAR inverted 4xBS minYBTATA mCherry
978: SFFV_synTF-p65	2236: SFFV_GPC3 CAR inverted 8xBS minYBTATA mCherry
1845: SFFV_synTF-VPR	2235: SFFV_GPC3 CAR inverted 4xBS minYBTATA mCherry
1845: SFFV_synTF-VPR	2236: SFFV_GPC3 CAR inverted 8xBS minYBTATA mCherry

FIG. 21

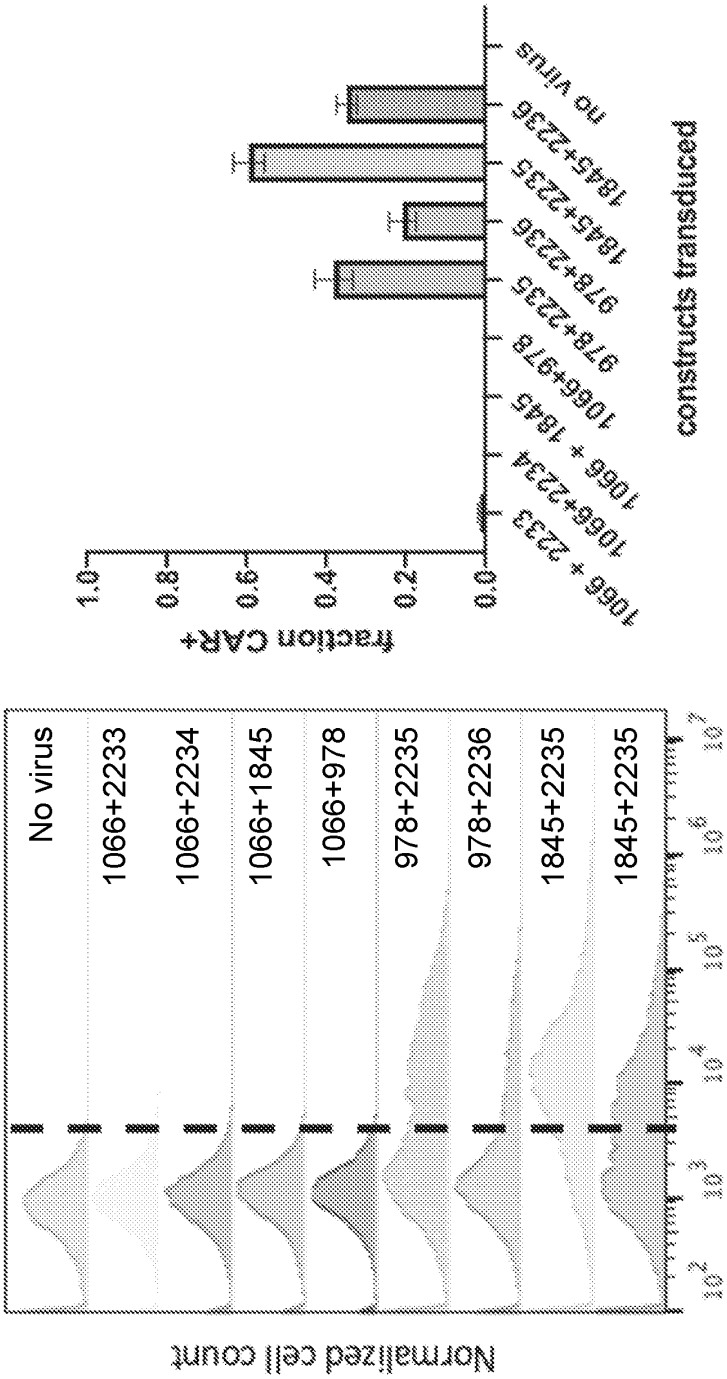

Normalized cell count
YFP
No virus
1066+2233
1066+2234
1066+1845
1066+978
978+2235
978+2236
1845+2235
1845+2236
fraction CAR+
constructs transduced
1066 + 2233
1066+2234
1066 + 1845
1066+978
978+2235
978+2236
1845+2235
1845+2236
no virus

FIG. 22

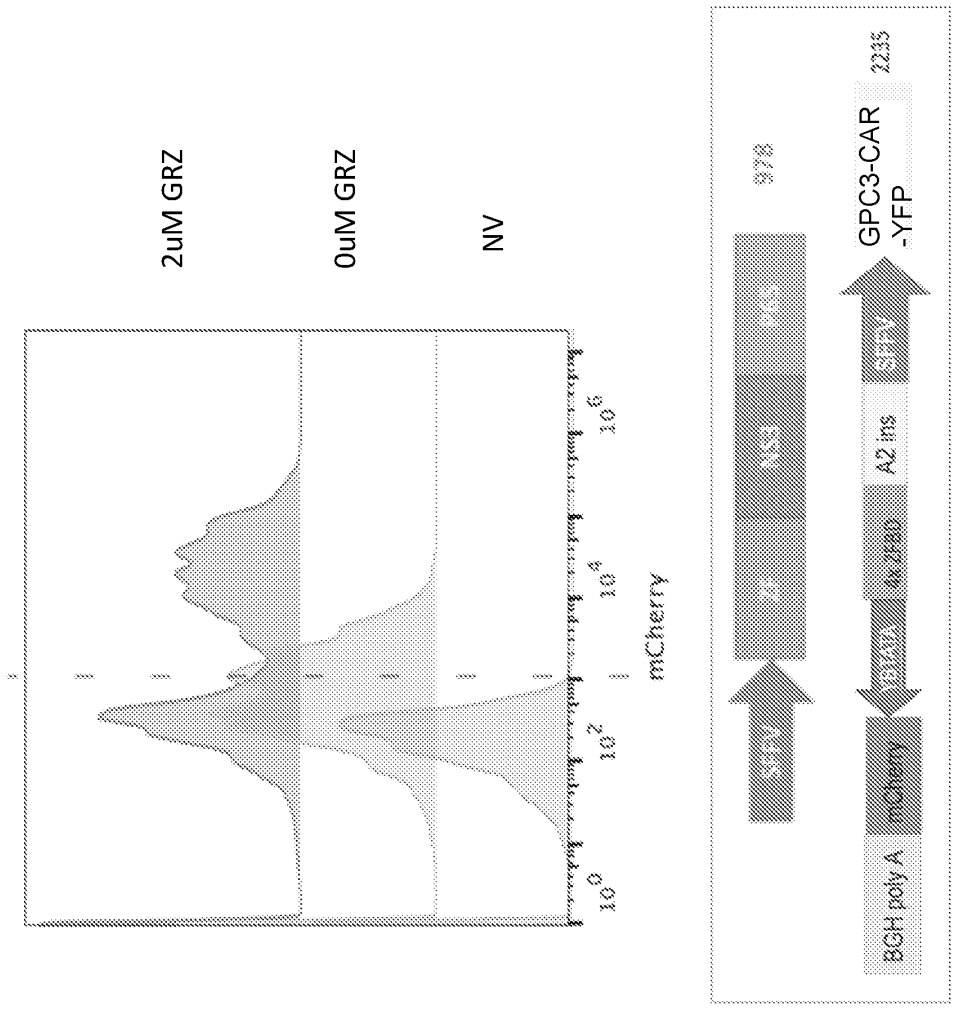

2uM GRZ
0uM GRZ
NV
mCherry
10^0
10^2
10^4
10^6
BGH poly A
mCherry
SV40
GPC3
4x1BB
A2 ins
SP78
GPC3-CAR
-YFP
2235

FIG. 23A

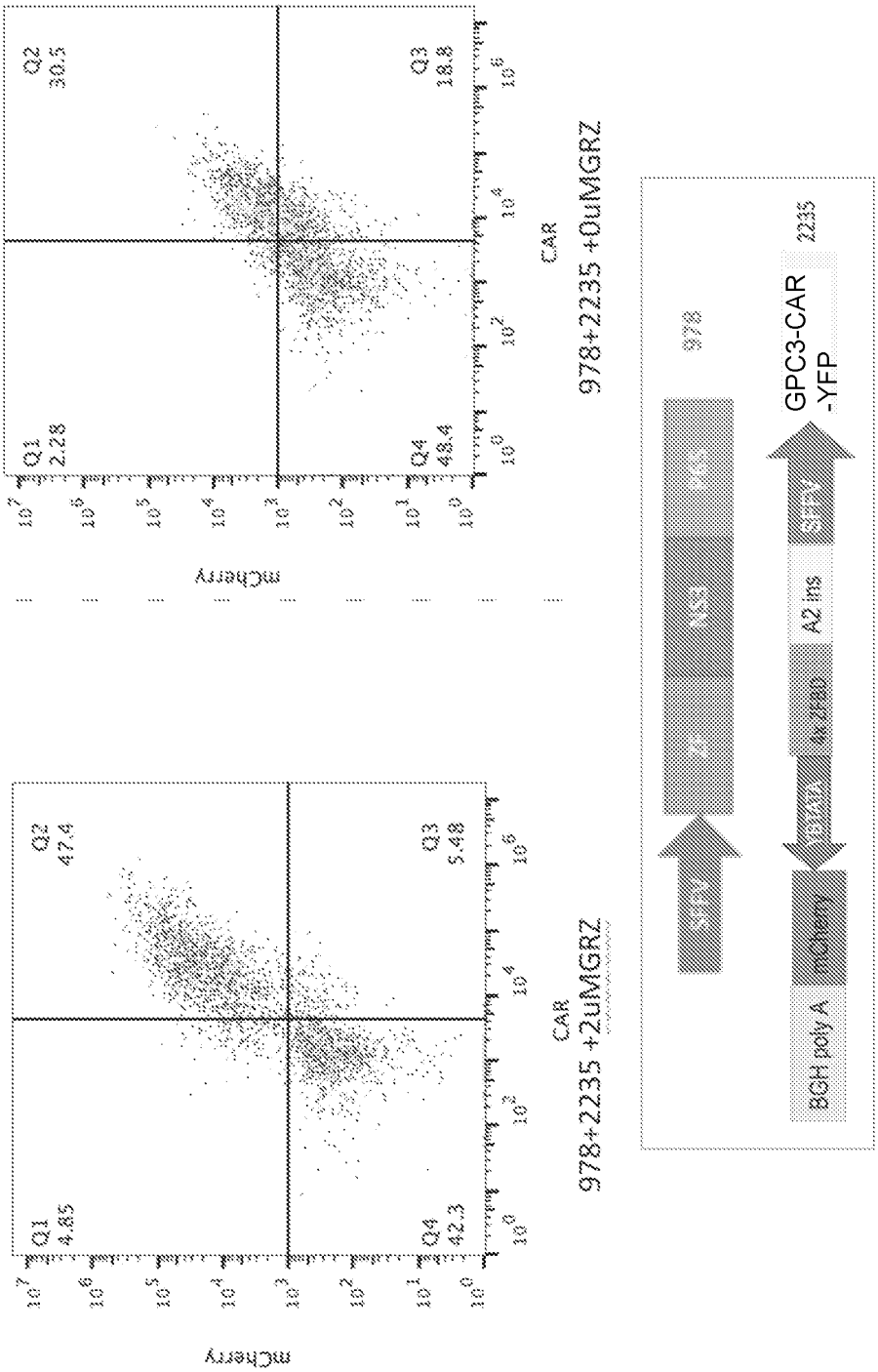

Q2
30.5
Q3
18.8
Q1
2.28
Q4
48.4
mCherry
CAR
978+2235 +0uMGRZ
Q2
47.4
Q3
5.48
Q1
4.85
Q4
42.3
mCherry
CAR
978+2235 +2uMGRZ
978
GPC3-CAR
-YFP
2235
BGH poly A
mCherry
A2 ins

FIG. 23B

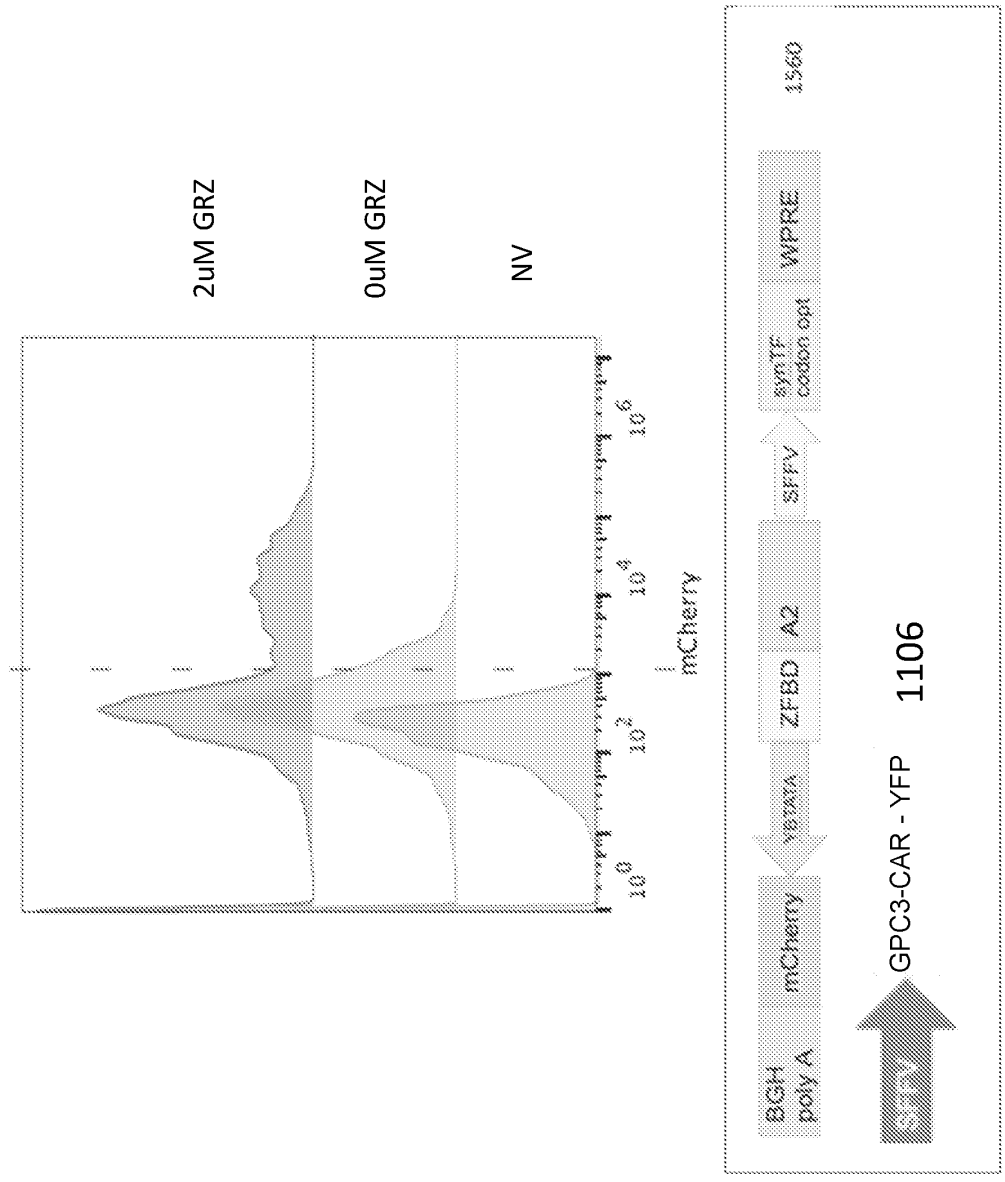

2uM GRZ
0uM GRZ
NV
mCherry
10^0
10^2
10^4
10^6
BGH poly A
mCherry
YBTATA
ZFBD A2
SFFV
synTF codon opt
WPRE
1560
GPC3-CAR - YFP
1106

FIG. 24A

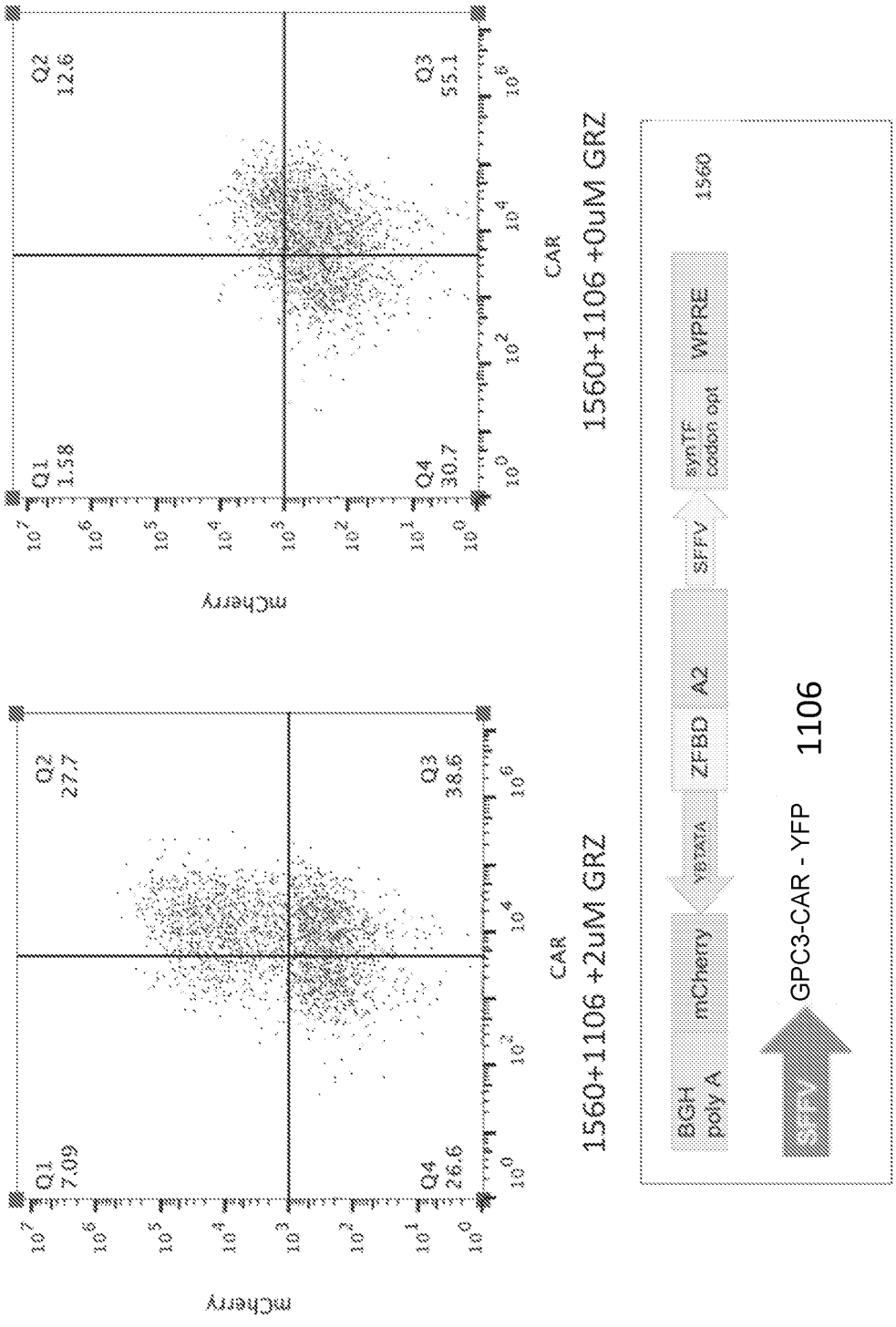

Q2
12.6
Q3
55.1
Q1
1.58
Q4
30.7
mCherry
CAR
1560+1106 +0uM GRZ
Q2
27.7
Q3
38.6
Q1
7.09
Q4
26.6
mCherry
CAR
1560+1106 +2uM GRZ
BGH poly A
mCherry
YBTATA
ZFBD A2
SFFV
synTF codon opt
WPRE
1560
GPC3-CAR - YFP
1106

FIG. 24B

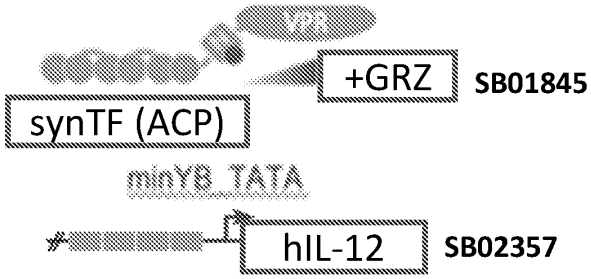

VP16
+GRZ
SB01845
synTF (ACP)
minY8_TATA
hIL-12
SB02357

FIG. 25

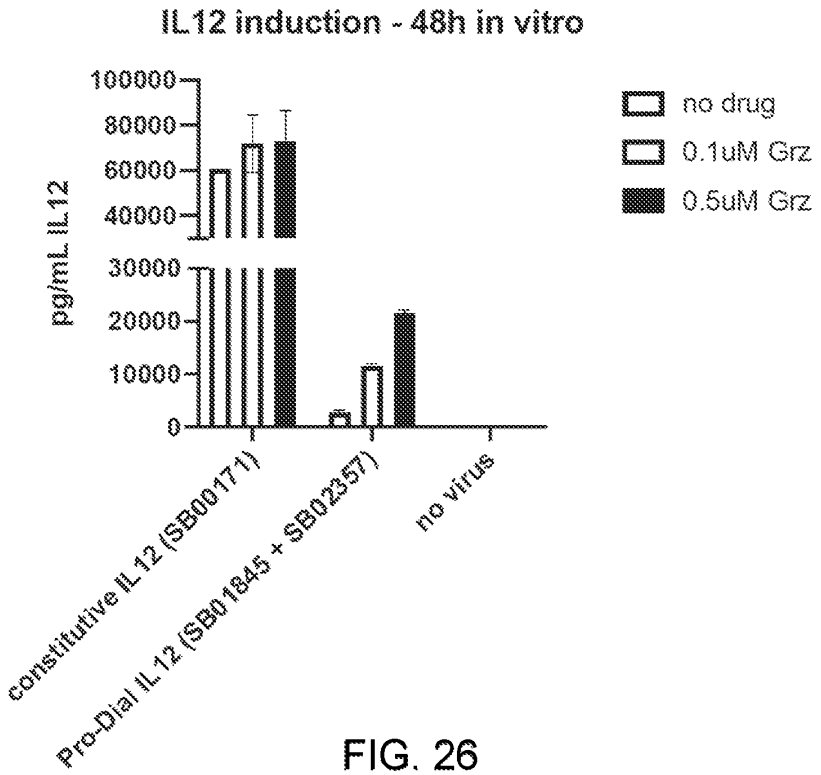

IL12 induction - 48h in vitro
pg/mL IL12
100000
80000
60000
40000
30000
20000
10000
0
no drug
0.1uM Grz
0.5uM Grz
constitutive IL12 (SB00171)
Pro-Dial IL12 (SB01845 + SB02357)
no virus

FIG. 26

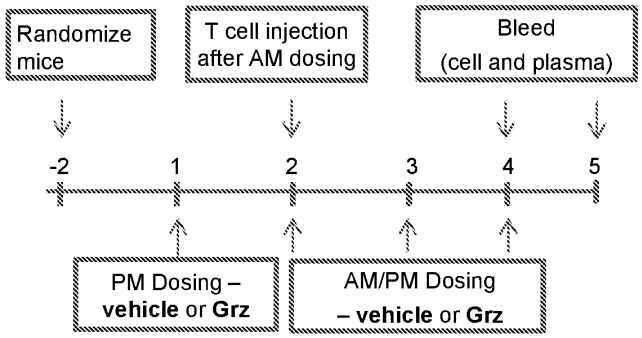

Randomize mice
T cell injection after AM dosing
Bleed (cell and plasma)
-2
1
2
3
4
5
PM Dosing – vehicle or Grz
AM/PM Dosing – vehicle or Grz

FIG. 27

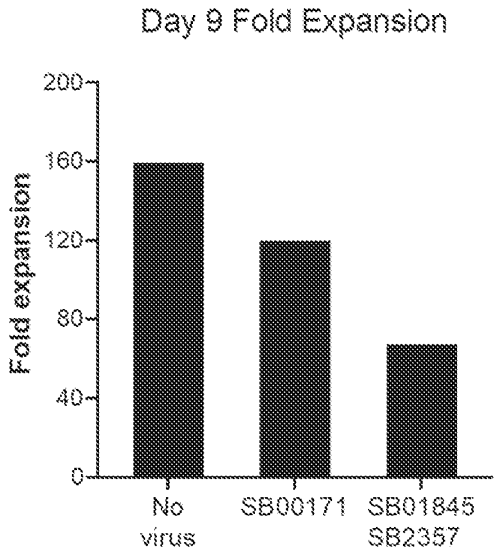

Day 9 Fold Expansion
Fold expansion
200
160
120
80
40
0
No virus
SB00171
SB01845 SB2357

FIG. 28

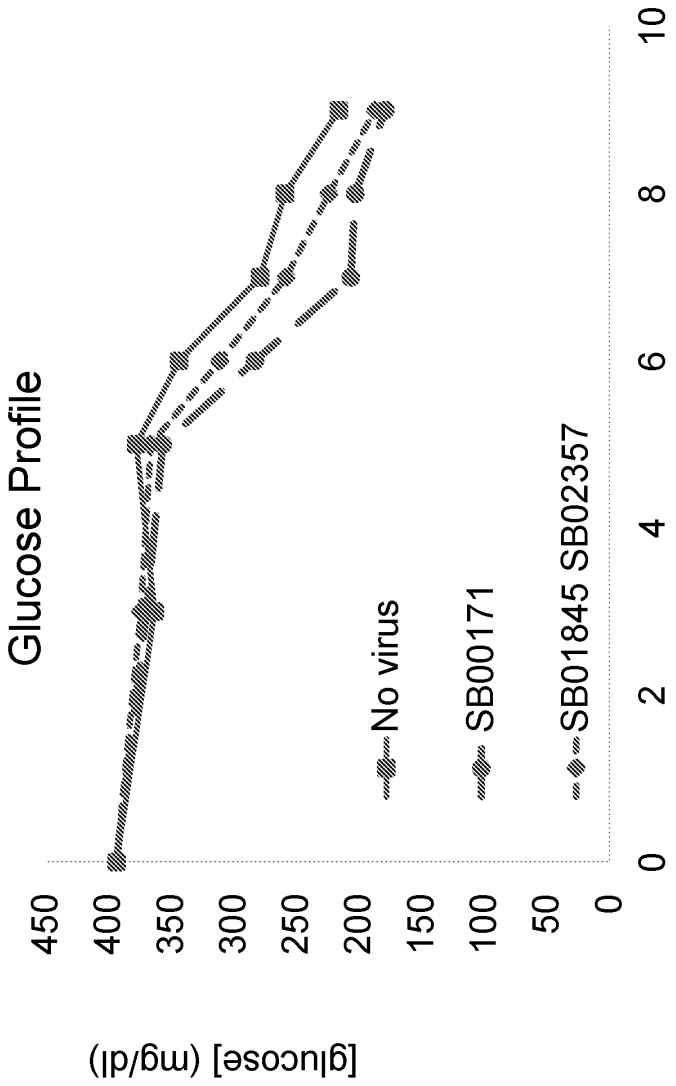

Glucose Profile
[glucose] (mg/dl)
450
400
350
300
250
200
150
100
50
0
0
2
4
6
8
10
No virus
SB00171
SB01845 SB02357

FIG. 29

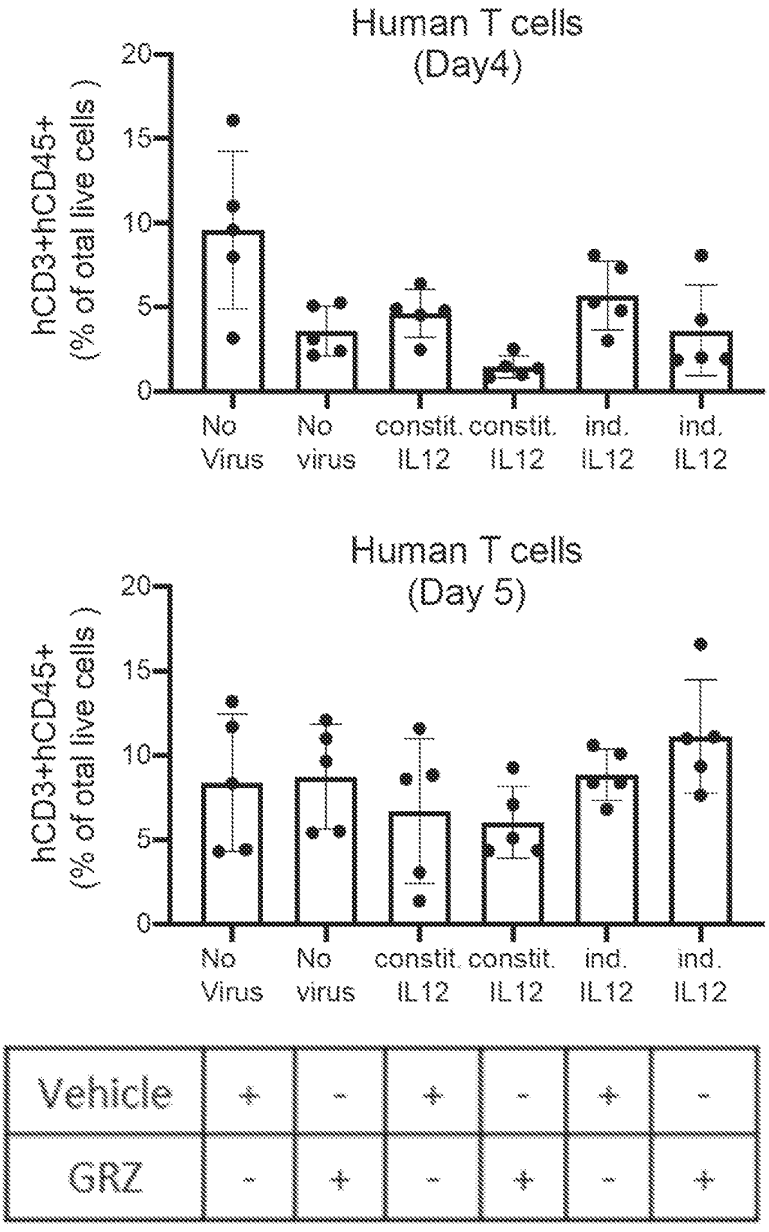
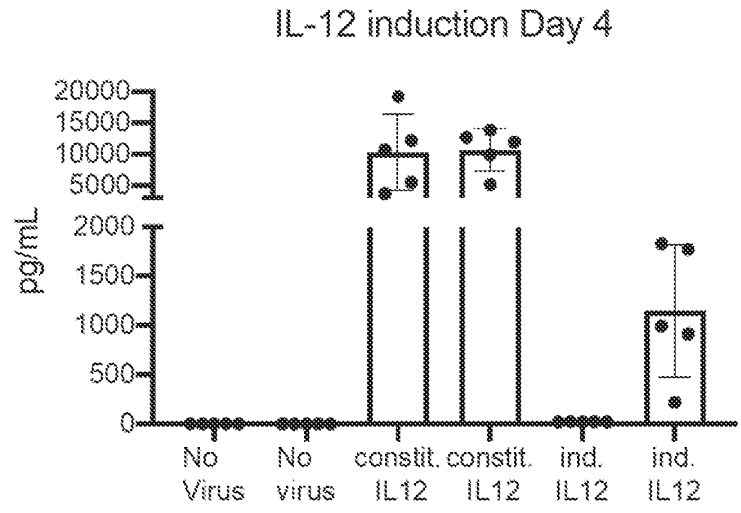
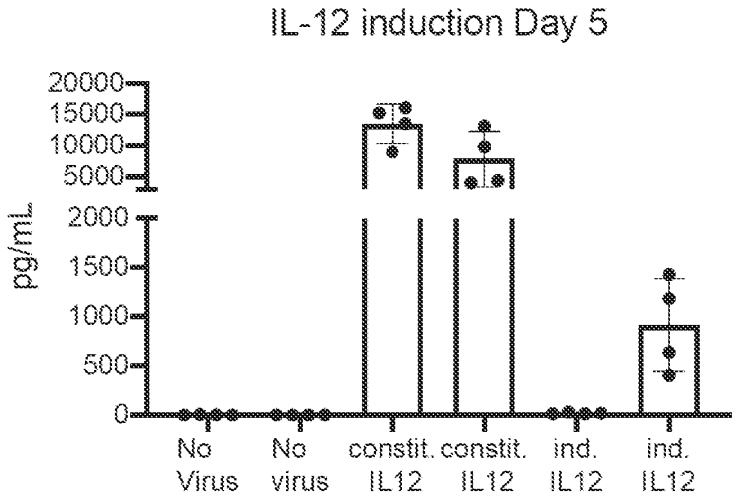

Human T cells
(Day4)
hCD3+hCD45+
(% of otal live cells)
20
15
10
5
0
No Virus
No virus
constit. IL12
constit. IL12
ind. IL12
ind. IL12
Human T cells
(Day 5)
hCD3+hCD45+
(% of otal live cells)
20
15
10
5
0
No Virus
No virus
constit. IL12
constit. IL12
ind. IL12
ind. IL12
Vehicle
GRZ

FIG. 30





Vehicle	+	-	+	-	+	-
GRZ	-	+	-	+	-	+

FIG. 31

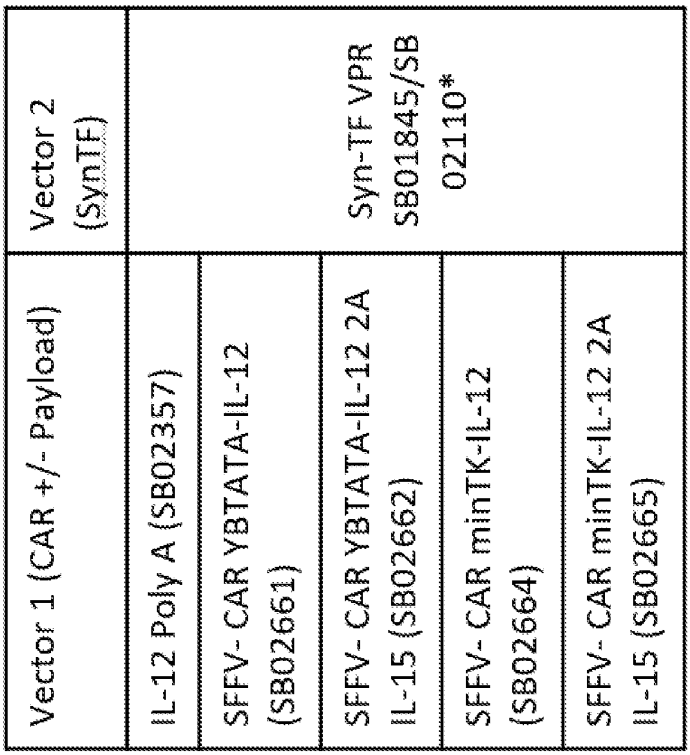

Vector 1 (CAR +/- Payload)
Vector 2 (SynTF)
IL-12 Poly A (SB02357)
SFFV- CAR YBTATA-IL-12 (SB02661)
SFFV- CAR YBTATA-IL-12 2A IL-15 (SB02662)
SFFV- CAR minTK-IL-12 (SB02664)
SFFV- CAR minTK-IL-12 2A IL-15 (SB02665)
Syn-TF VPR SB01845/SB 02110*
* SB02110 is a codon optimized version of SB01845 (Syn-TF VPR)

FIG. 32

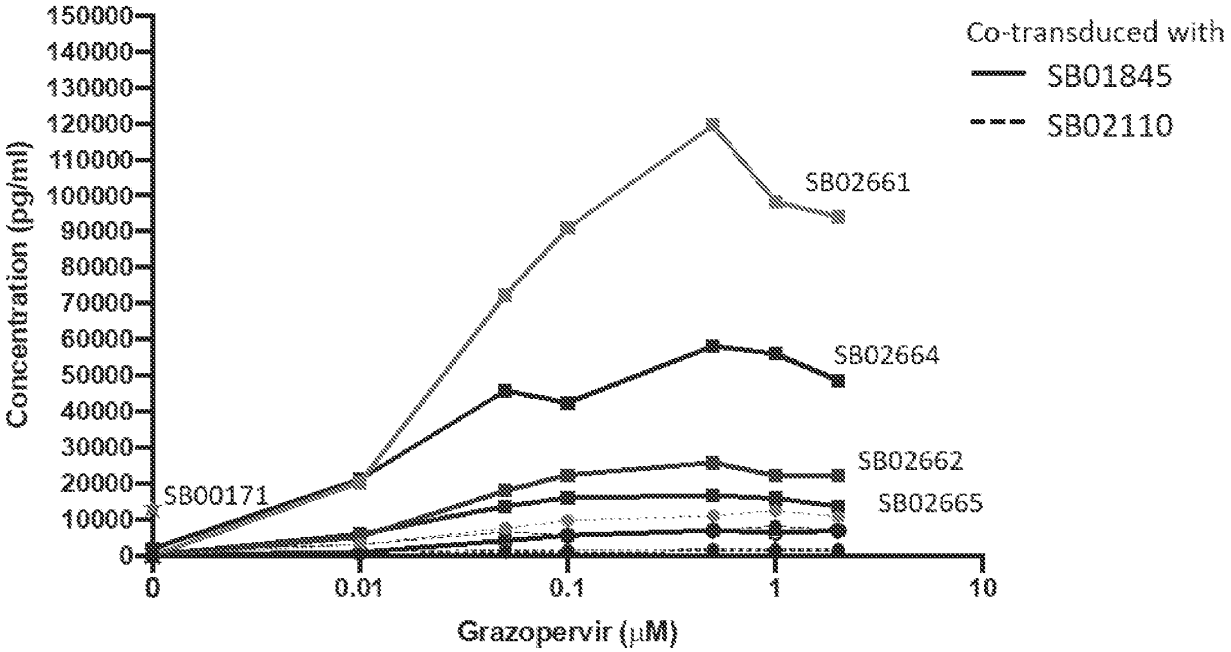

Co-transduced with
SB01845
SB02110
Concentration (pg/ml)
150000
140000
130000
120000
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
SB02661
SB02664
SB02662
SB02665
SB00171
0
0.01
0.1
1
10
Grazopervir (μM)

FIG. 33

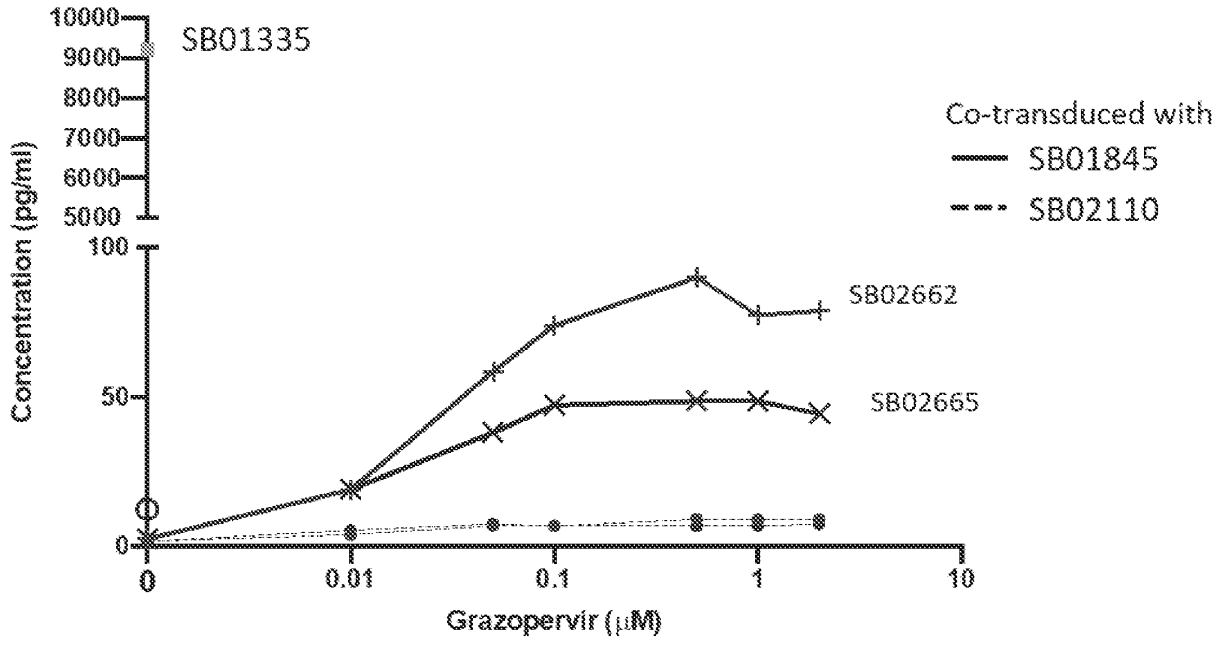

SB01335
Co-transduced with
SB01845
SB02110
Concentration (pg/ml)
10000
9000
8000
7000
6000
5000
100
50
0
SB02662
SB02665
0
0.01
0.1
1
10
Grazopervir (μM)

FIG. 34

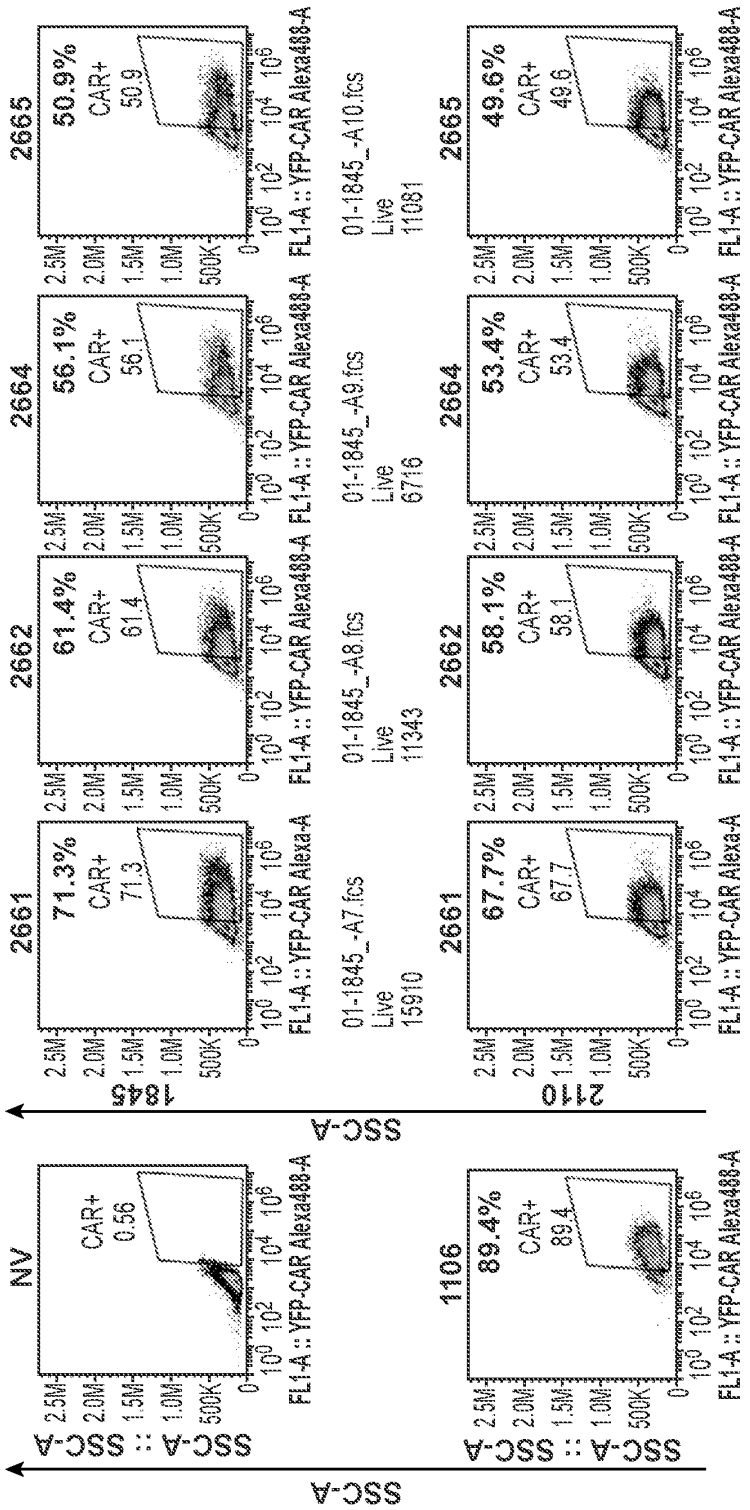

NV
1106
2661
2662
2664
2665
1845
2110
SSC-A
YFP-CAR
CAR+
0.56
89.4%
71.3%
61.4%
56.1%
50.9%
67.7%
58.1%
53.4%
49.6%
01-1845_-A7.fcs
01-1845_-A8.fcs
01-1845_-A9.fcs
01-1845_-A10.fcs
Live
15910
11343
6716
11081
FL1-A :: YFP-CAR Alexa-A
FL1-A :: YFP-CAR Alexa488-A

FIG. 35

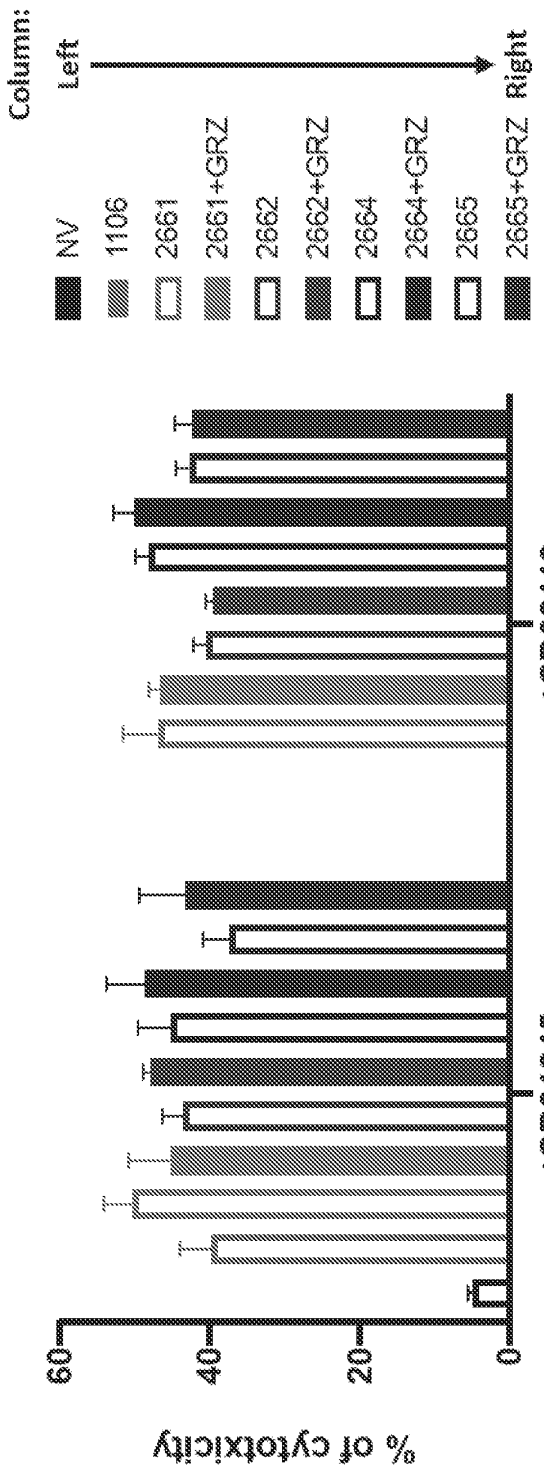

Column:
Left
Right
NV
1106
2661
2661+GRZ
2662
2662+GRZ
2664
2664+GRZ
2665
2665+GRZ
% of cytotxicity
0
20
40
60
+SB01845
+SB02110

FIG. 36

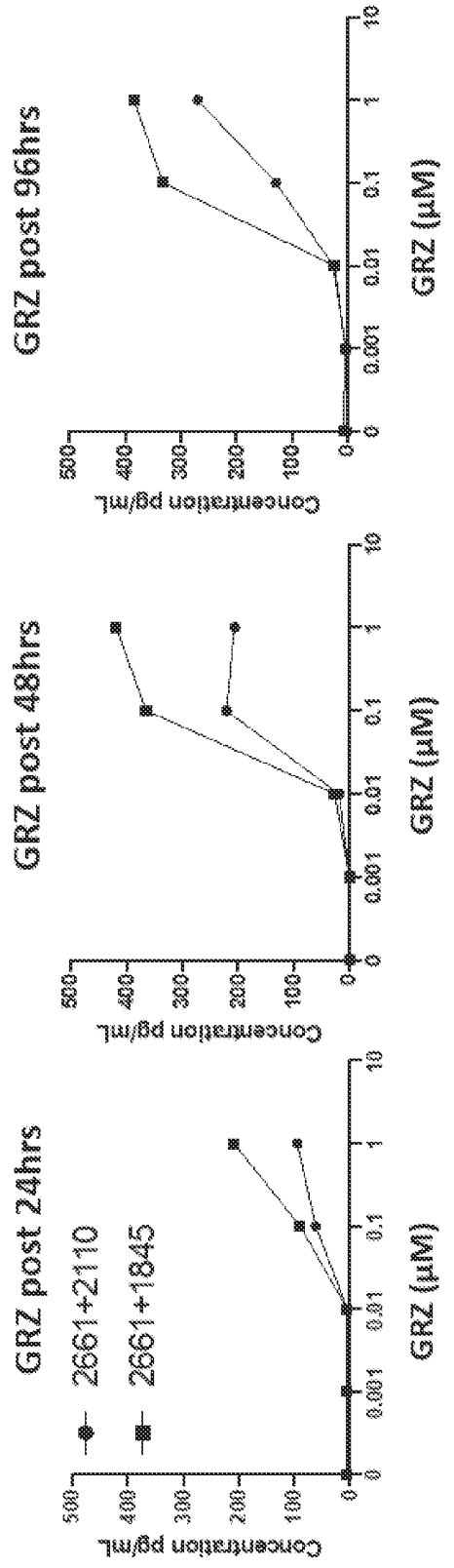

GRZ post 24hrs
GRZ post 48hrs
GRZ post 96hrs
2661+2110
2661+1845
Concentration pg/mL
GRZ (µM)

FIG. 37

Vector (Syn-TF + Payload)
SB02667 (p65 YBTATA IL-12)
SB02668 (p65 YBTATA IL-12/IL-15)
SB02670 (VPR YBTATA IL-12)
SB02671 (VPR YBTATA IL-12/IL-15)
SB02675 (p65 YBTATA IL-15)
SB02676 (VPR YBTATA IL-15)

FIG. 38

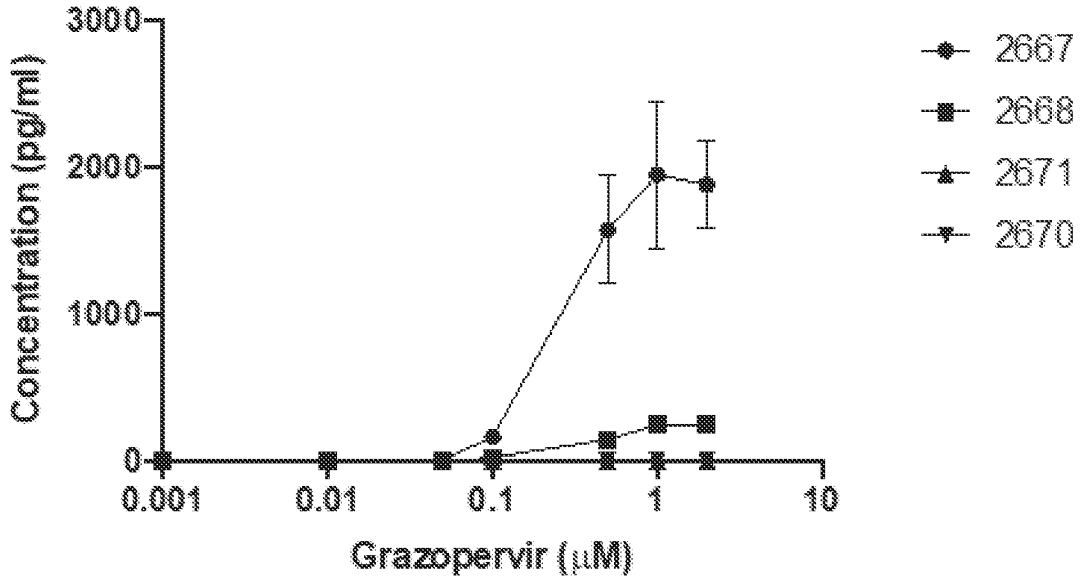


FIG. 39

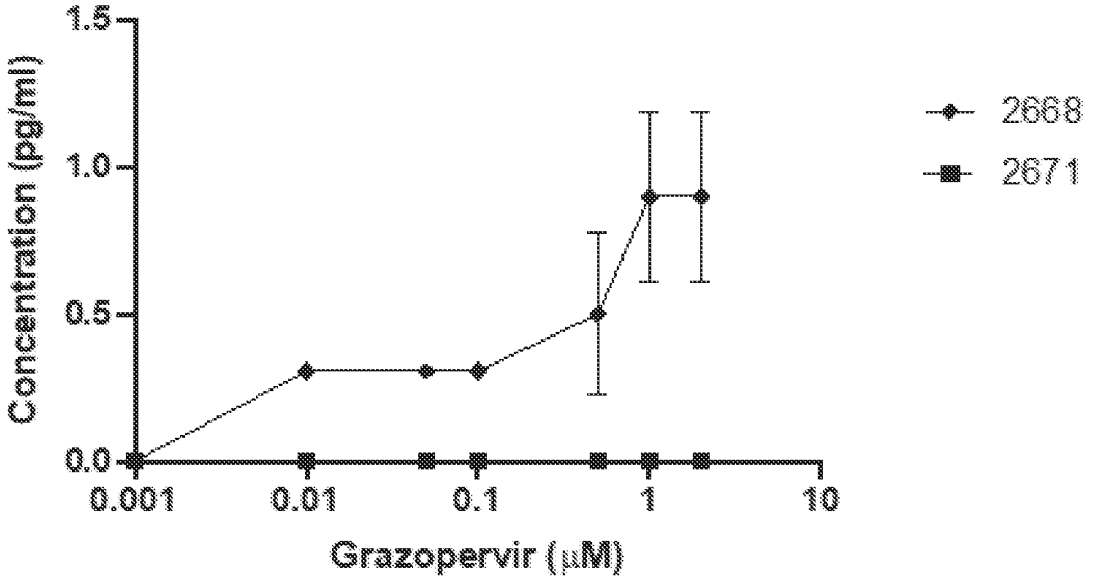

1.5
1.0
0.5
0.0
Concentration (pg/ml)
0.001
0.01
0.1
1
10
Grazopervir (μM)
2668
2671

FIG. 40

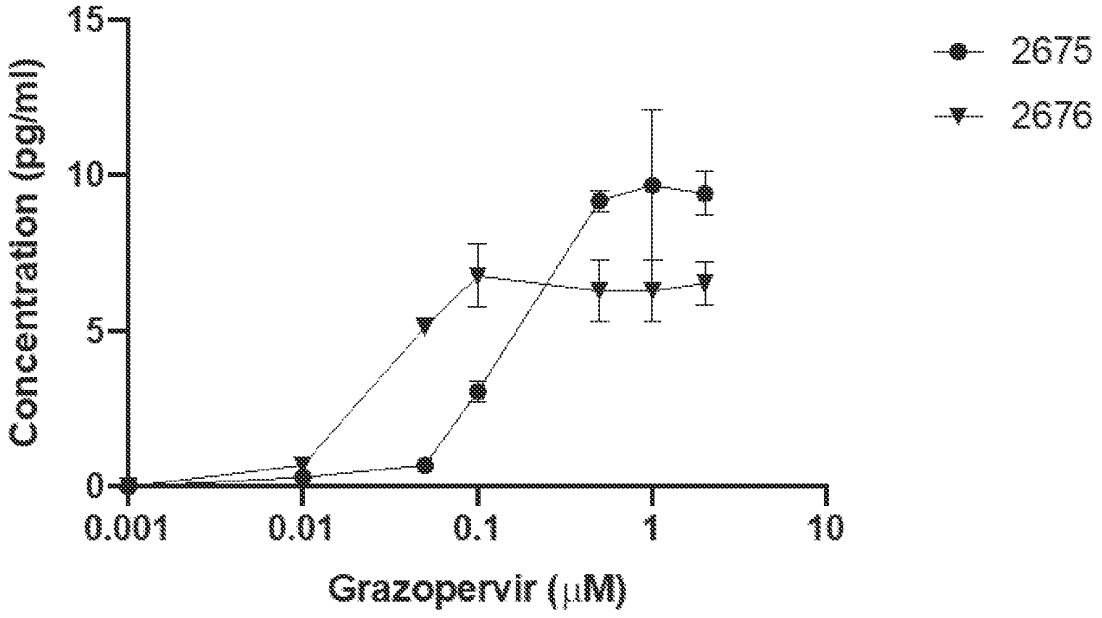

15
10
5
0
Concentration (pg/ml)
0.001
0.01
0.1
1
10
Grazopervir (μM)
2675
2676

FIG. 41

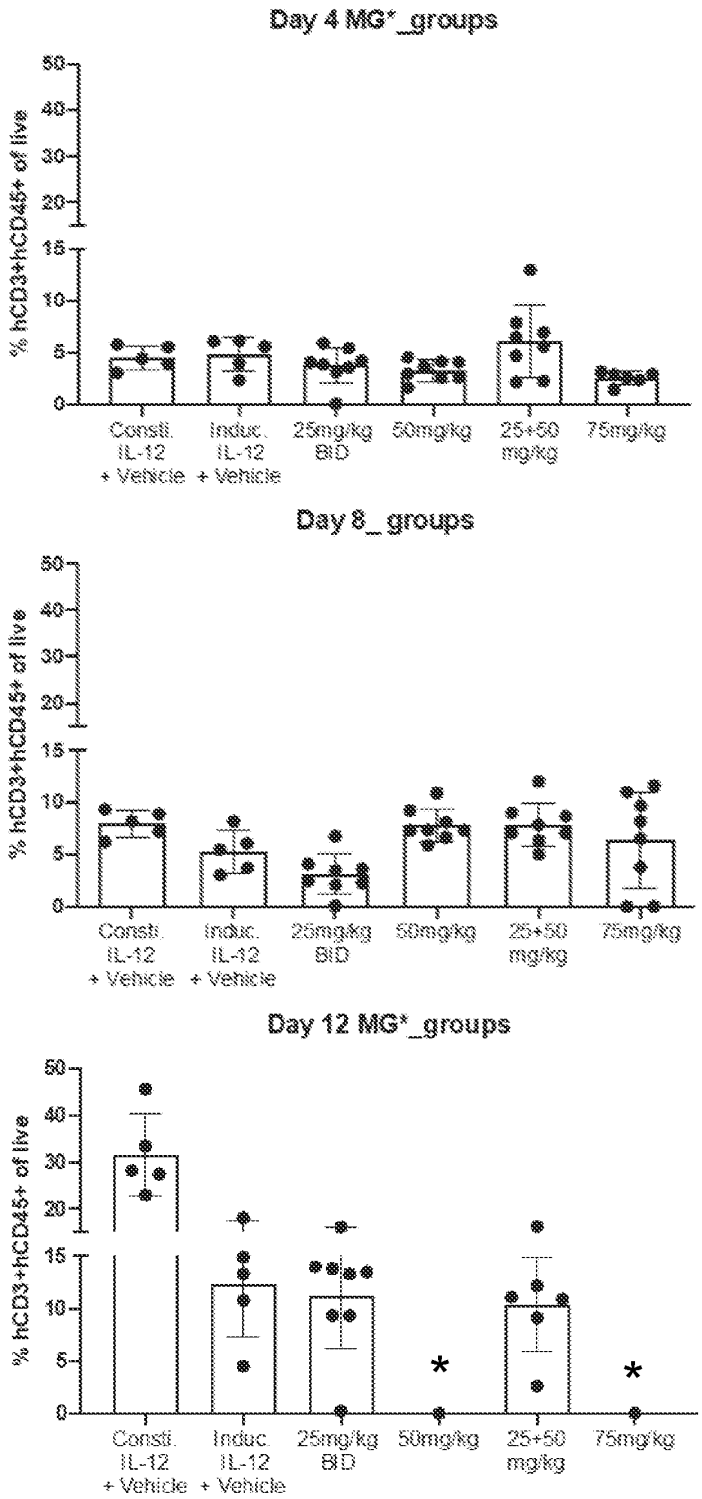
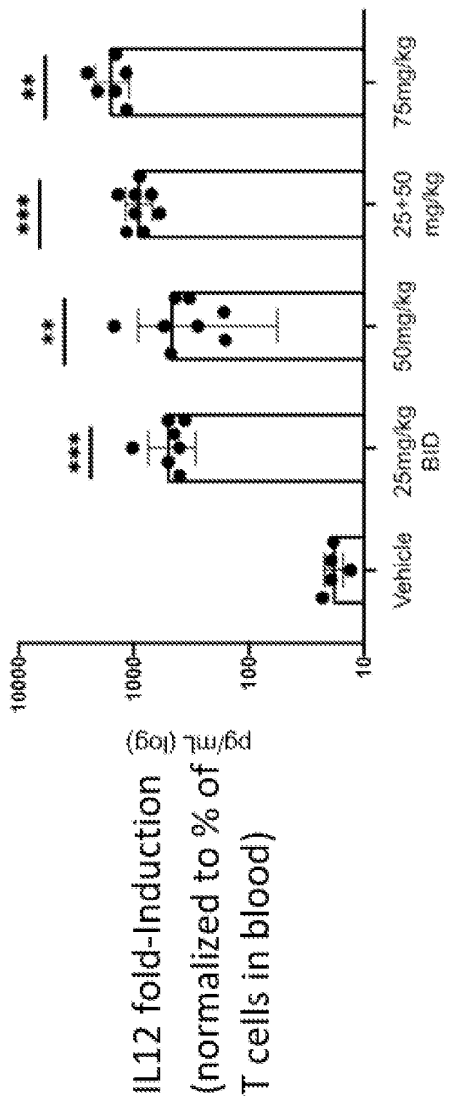

Day 4 MG*_groups
% hCD3+hCD45+ of live
0
5
10
15
20
30
40
50
Consti. IL-12 + Vehicle
Induc. IL-12 + Vehicle
25mg/kg BID
50mg/kg
25+50 mg/kg
75mg/kg
Day 8_groups
% hCD3+hCD45+ of live
0
5
10
15
20
30
40
50
Consti. IL-12 + Vehicle
Induc. IL-12 + Vehicle
25mg/kg BID
50mg/kg
25+50 mg/kg
75mg/kg
Day 12 MG*_groups
% hCD3+hCD45+ of live
0
5
10
15
20
30
40
50
*
*
Consti. IL-12 + Vehicle
Induc. IL-12 + Vehicle
25mg/kg BID
50mg/kg
25+50 mg/kg
75mg/kg

FIG. 42



Fold Induction	1	~122	~147	~187	~705
Absolute IL12 (pg/ml)	18.6	521	485	939	1642

* Unpaired t test with Welch's correction (relative to vehicle control)

FIG. 43

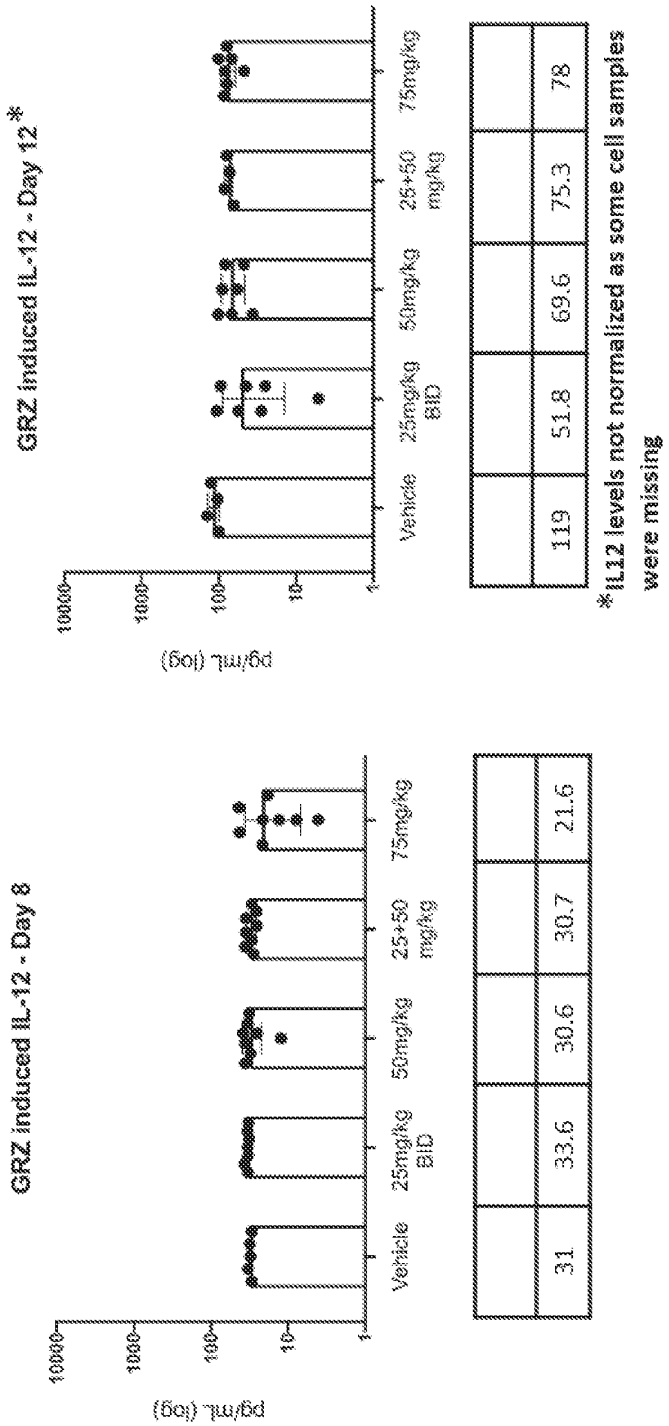

GRZ induced IL-12 - Day 12*
pg/mL (log)
10000
1000
100
10
1
Vehicle
25mg/kg BID
50mg/kg
25+50 mg/kg
75mg/kg
119
51.8
69.6
75.3
78
*IL12 levels not normalized as some cell samples were missing
GRZ induced IL-12 - Day 8
pg/mL (log)
10000
1000
100
10
1
Vehicle
25mg/kg BID
50mg/kg
25+50 mg/kg
75mg/kg
31
33.6
30.6
30.7
21.6

FIG. 44

	MON	TUE	WED	THU	FRI	SAT	SUN
					-2 Randomization	-1	0
Week 1: ON GRZ dose	1 Pre-dose	2 T cells injection Dose 1	3 Dose 2	4 Dose 3 Bleed 1	5	6	7
Week 2: OFF "rest"	8	9	10 IL-2 dose	11 Bleed 2 IL-2 dose	12 IL-2 dose	13 IL-2 dose	14 IL-2 dose
Week 3: ON GRZ dose	15 Pre-dose_b	16 Dose 1_b IL-2 dose	17 Dose 2_b IL-2 dose	18 Dose 3_b Bleed 3 IL-2 dose	19	20	21
	22	23	24	25 Bleed 4	26	27	28
	29 Bleed 5 End Of Study						

FIG. 45

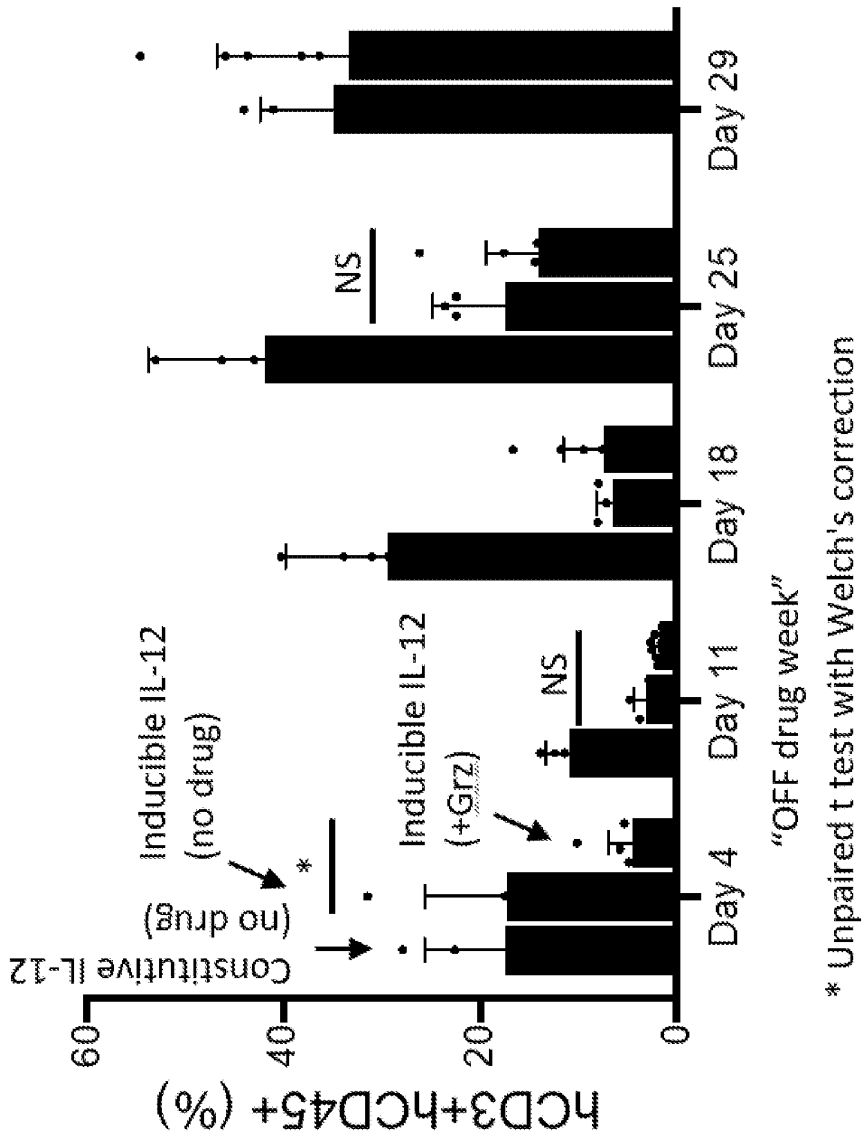
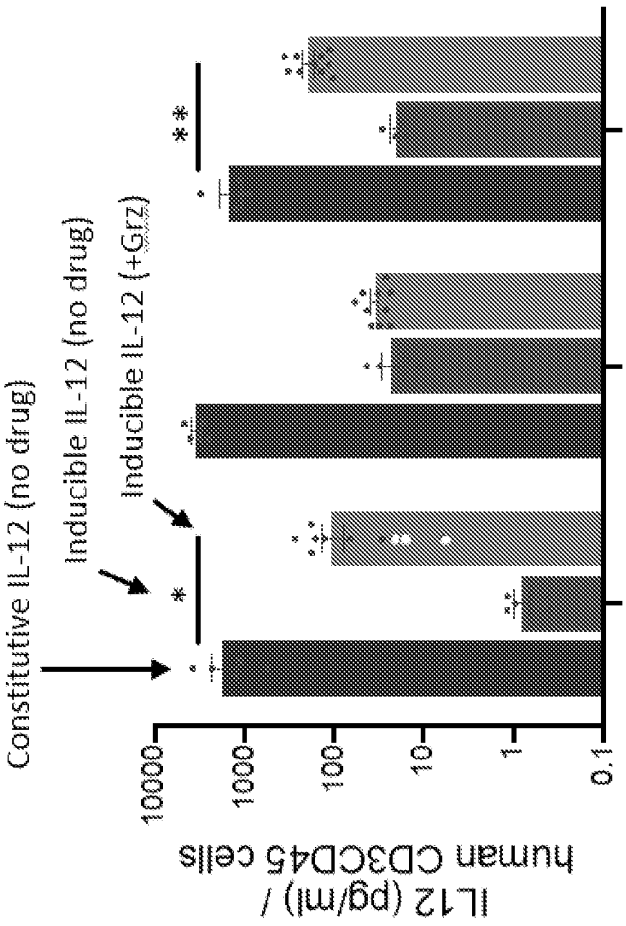

hCD3+hCD45+ (%)
60
40
20
0
Constitutive IL-12
(no drug)
Inducible IL-12
(no drug)
*
Inducible IL-12
(+Grz)
NS
NS
Day 4
Day 11
Day 18
Day 25
Day 29
"OFF drug week"
* Unpaired t test with Welch's correction

FIG. 46



Fold Induction	-	1	176[1]	-	1	1	-	1	~9.6
Absolute [IL12] (pg/ml)	1800	12.5	467.8	3439	62	60	1479	137	1316

* Unpaired t test with Welch's correction
1 - removing 3 animals that received half GRZ dose on day 3 due to potential tox (white dots in the graph)

FIG. 47

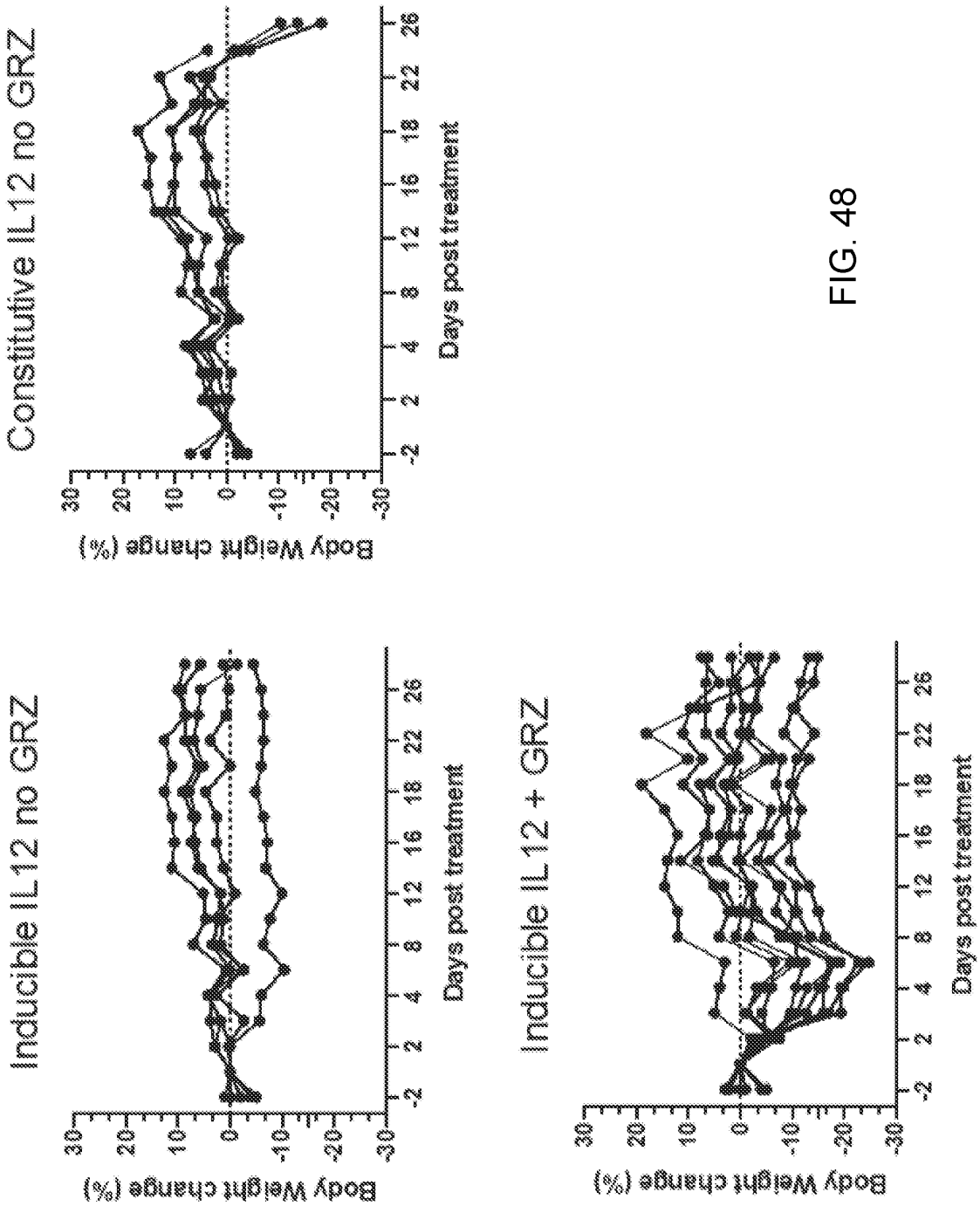

Constitutive IL12 no GRZ
Inducible IL12 no GRZ
Inducible IL12 + GRZ
Body Weight change (%)
Days post treatment
30
20
10
0
-10
-20
-30
-2
2
4
8
12
16
18
22
26

FIG. 48

FIG. 49

SB#	Description
1106	GPC3 CAR
1682	SFFV mKate
2096	5x NFAT BS minAdePro mKate
2803	6x NFAT BS min IL2Pro mKate
2875	CCL3Pro YBTATA mKate
2876	CCL4_2Pro YBTATA mKate
2877	CCL4_1Pro YBTATA mKate
2878	IFNg_1Pro YBTATA mKate
2881	IL13_1Pro YBTATA mKate
2882	CCL1_1Pro YBTATA mKate
2883	MT2A_1Pro YBTATA mKate
2884	MT2A_2Pro YBTATA mKate
2885	GNLY_1Pro YBTATA mKate
2886	GNZMB_1Pro YBTATA mKate

SB#	Description
2935	CCL3_1 trimmed Pro mKate
2936	CCL4_1 trimmed Pro mKate
2937	IFNg_1 trimmed Pro mKate
2938	IL5_1 trimmed Pro mKate
2939	CSF2_1 trimmed Pro mKate
2940	IL13_1 trimmed Pro mKate
2941	CCL1_1 trimmed Pro mKate
2942	MT2A_1 trimmed Pro mKate
2943	GNLY_1 trimmed Pro mKate
2944	GZMB_1 trimmed Pro mKate

FIG. 50

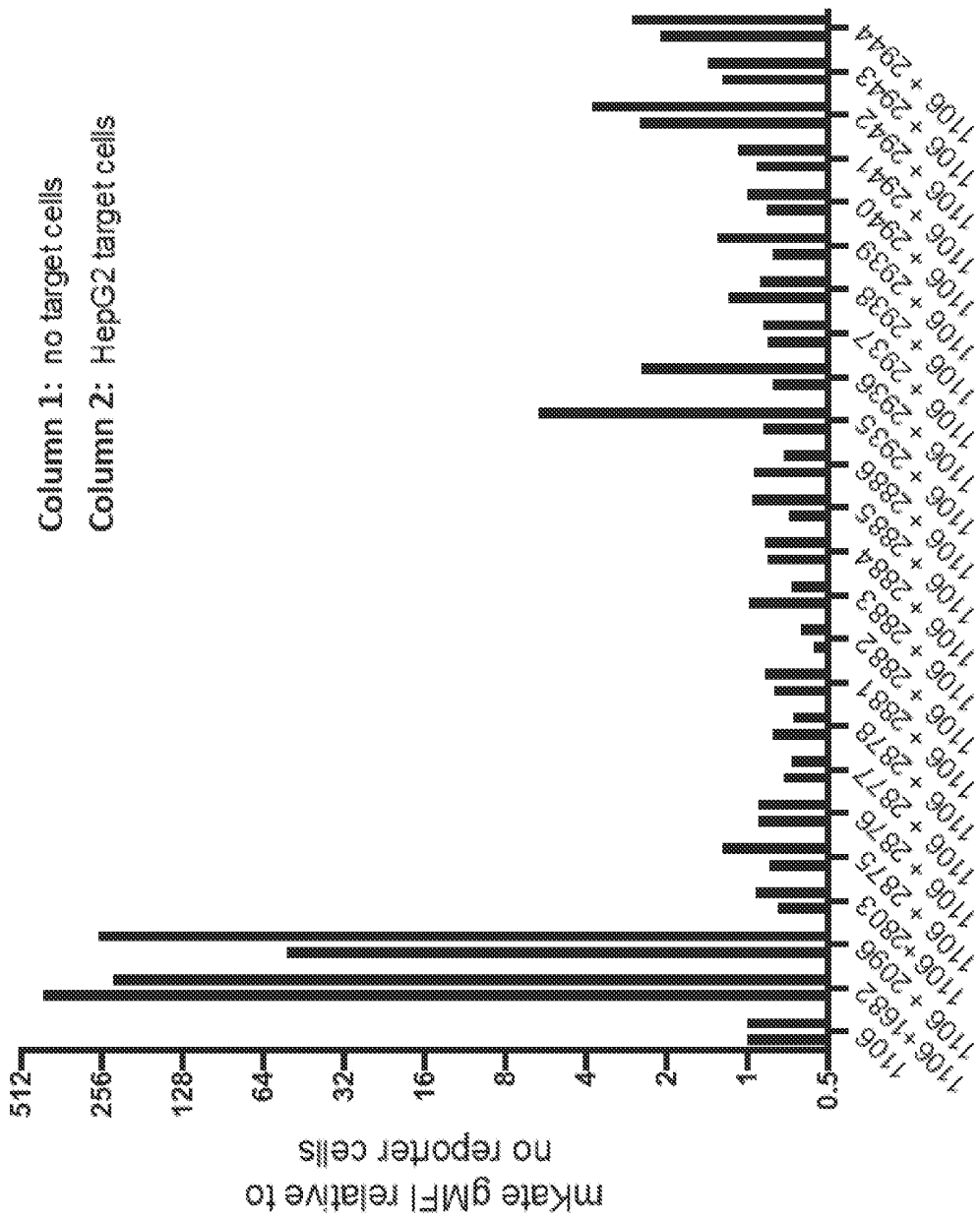

Column 1: no target cells
Column 2: HepG2 target cells
mKate gMFI relative to
no reporter cells
512
256
128
64
32
16
8
4
2
1
0.5
1106
1106 + 1682
1106 + 2099
1106 + 2603
1106 + 2875
1106 + 2877
1106 + 2878
1106 + 2881
1106 + 2882
1106 + 2883
1106 + 2884
1106 + 2885
1106 + 2886
1106 + 2935
1106 + 2936
1106 + 2937
1106 + 2938
1106 + 2939
1106 + 2940
1106 + 2941
1106 + 2942
1106 + 2943
1106 + 2944

FIG. 51

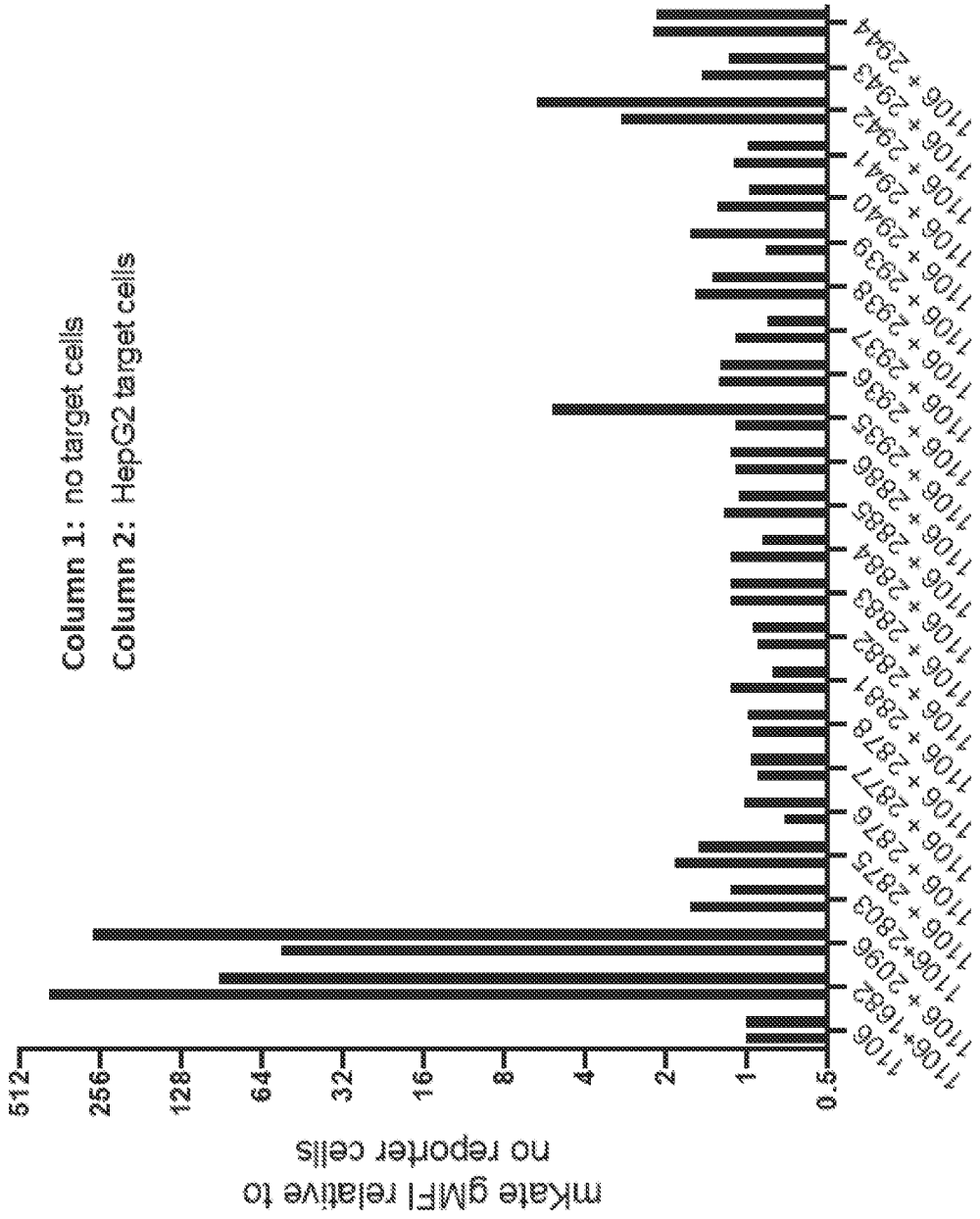

Column 1: no target cells
Column 2: HepG2 target cells
mKate gMFI relative to
no reporter cells
512
256
128
64
32
16
8
4
2
1
0.5
1106
1106+1682
1106 + 2096
1106+2809
1106 + 2875
1106 + 2876
1106 + 2877
1106 + 2879
1106 + 2881
1106 + 2882
1106 + 2883
1106 + 2884
1106 + 2885
1106 + 2886
1106 + 2935
1106 + 2936
1106 + 2937
1106 + 2938
1106 + 2939
1106 + 2940
1106 + 2941
1106 + 2942
1106 + 2943
1106 + 2944

FIG. 52

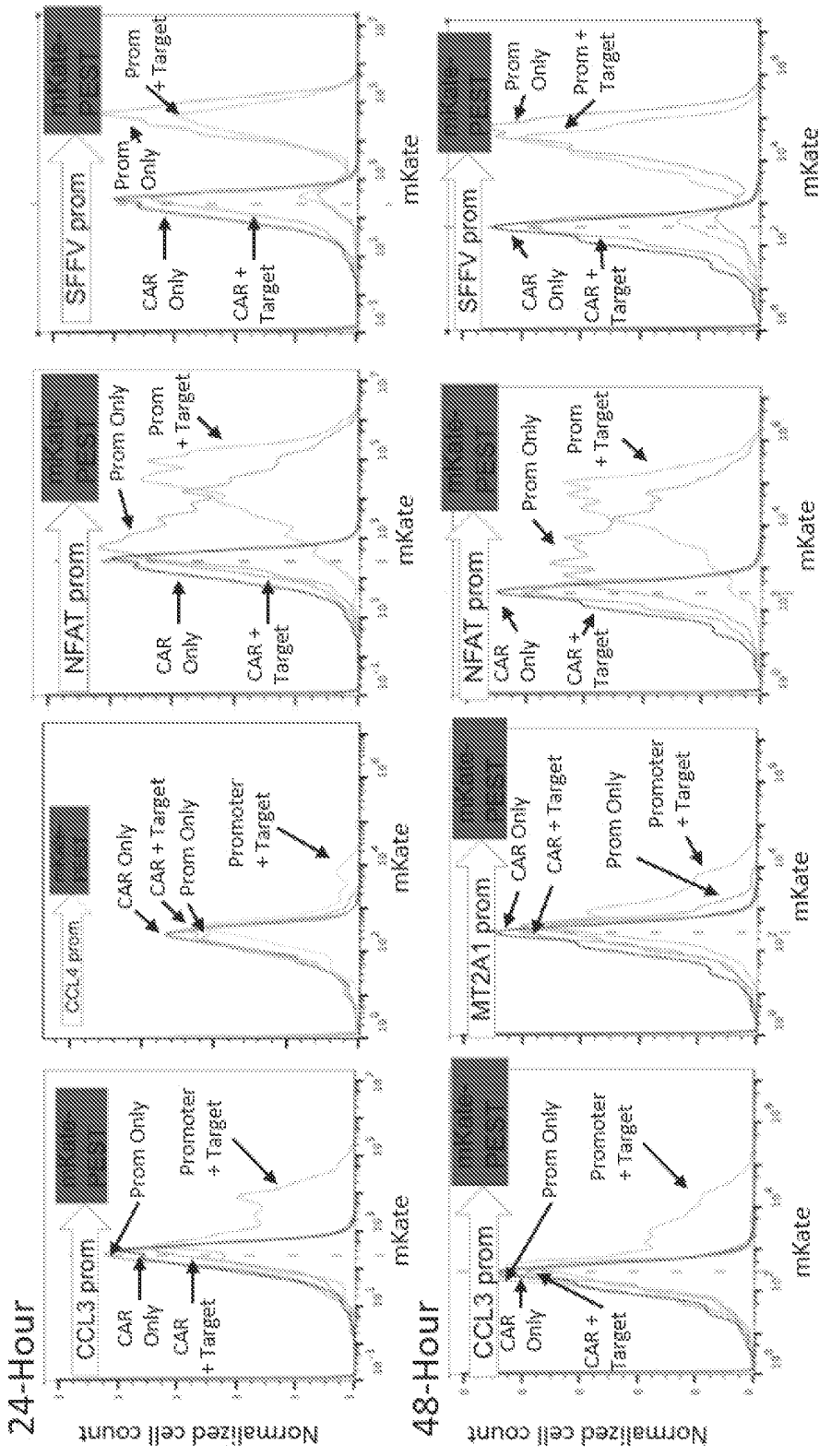

24-Hour
48-Hour
Normalized cell count
CCL3 prom
CCL4 prom
NFAT prom
MT2A1 prom
SFFV prom
CAR Only
CAR + Target
Prom Only
Promoter + Target
Prom + Target
mKate

FIG. 53

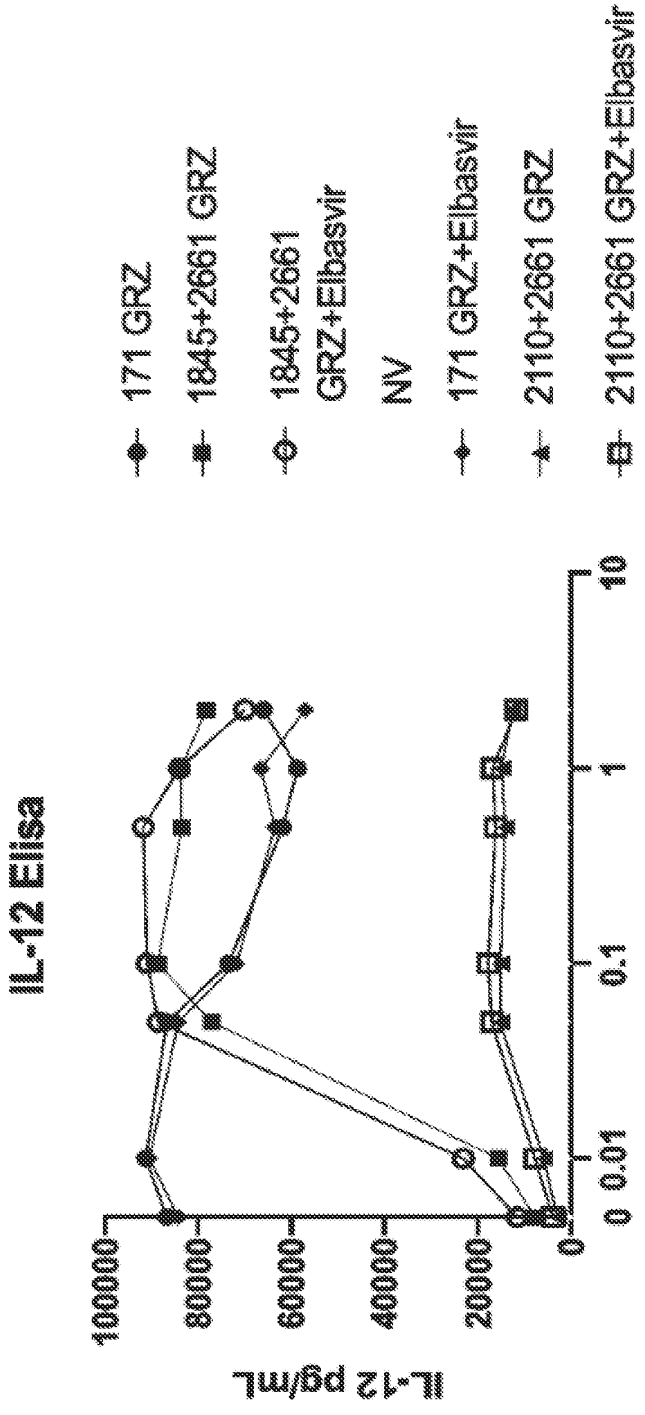

IL-12 Elisa
IL-12 pg/mL
100000
80000
60000
40000
20000
0
0 0.01 0.1 1 10
Concentration of drug (log10) uM
171 GRZ
1845+2661 GRZ
1845+2661 GRZ+Elbasvir
NV
171 GRZ+Elbasvir
2110+2661 GRZ
2110+2661 GRZ+Elbasvir

FIG. 54