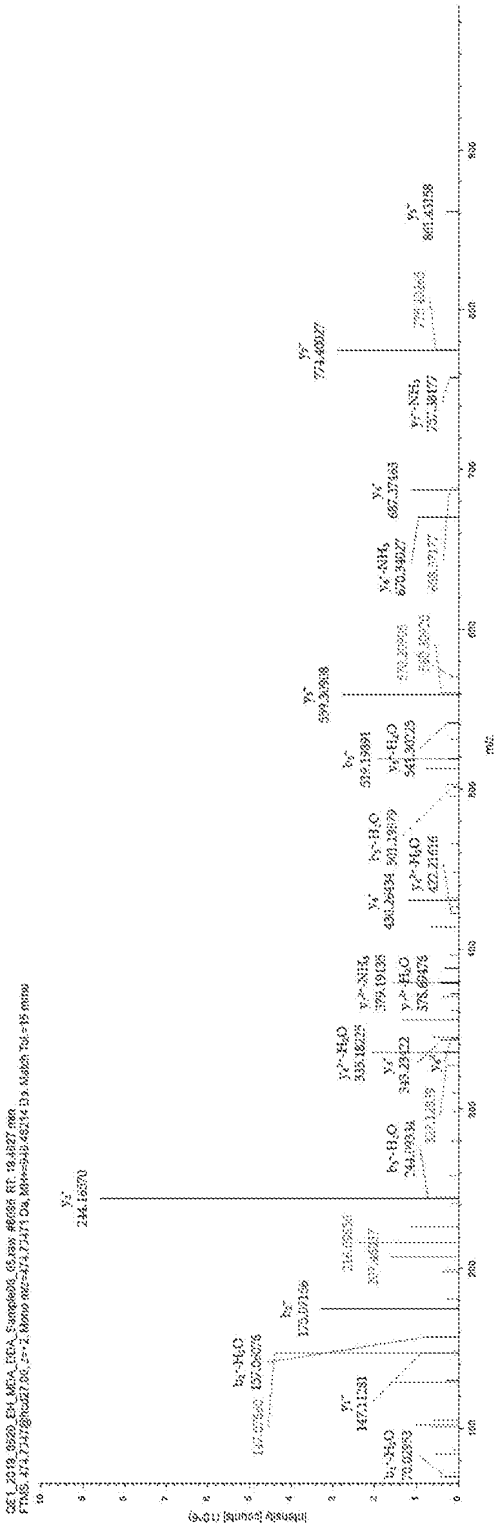


FIG. 1

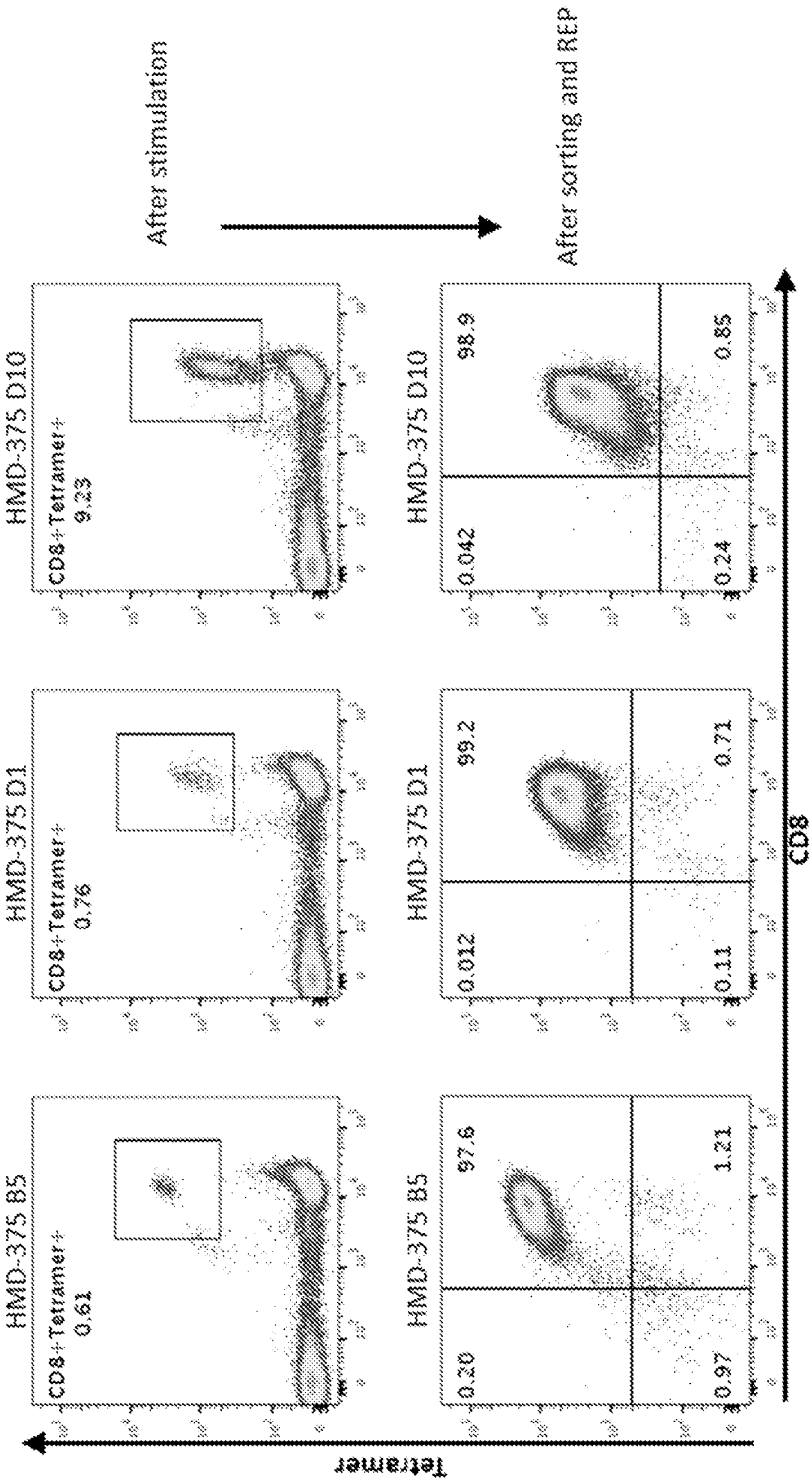

After stimulation
After sorting and REP
HMD-375 B5
CD8+Tetramer+
0.61
HMD-375 D1
CD8+Tetramer+
0.76
HMD-375 D10
CD8+Tetramer+
9.23
HMD-375 B5
0.20
97.6
0.97
1.21
HMD-375 D1
0.012
99.2
0.11
0.71
HMD-375 D10
0.042
98.9
0.24
0.85
Tetramer
CD8

FIG. 2

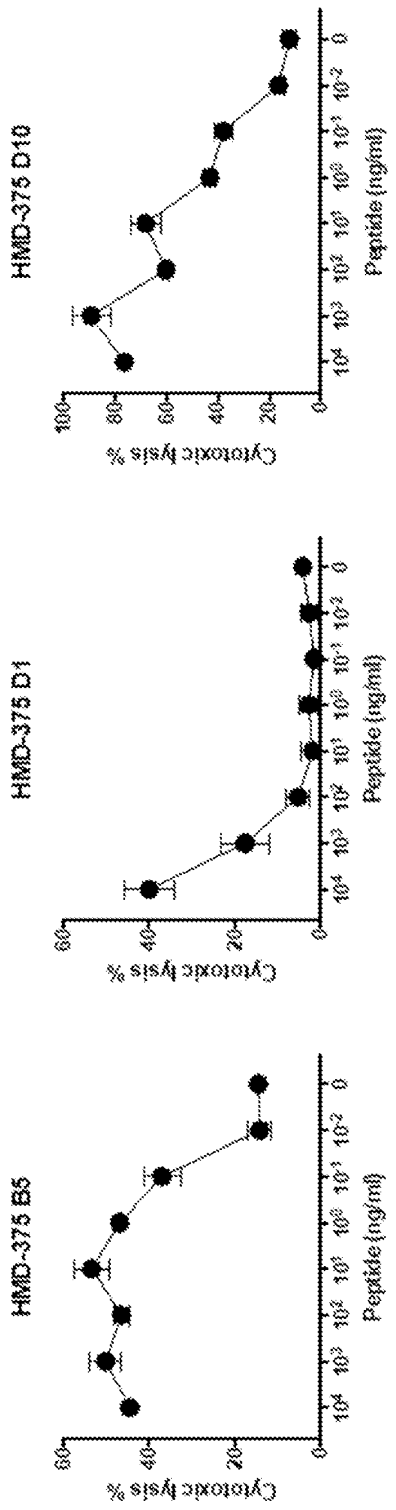

HMD-375 B5
HMD-375 D1
HMD-375 D10
Cytotoxic lysis %
Peptide (ng/ml)

FIG. 3

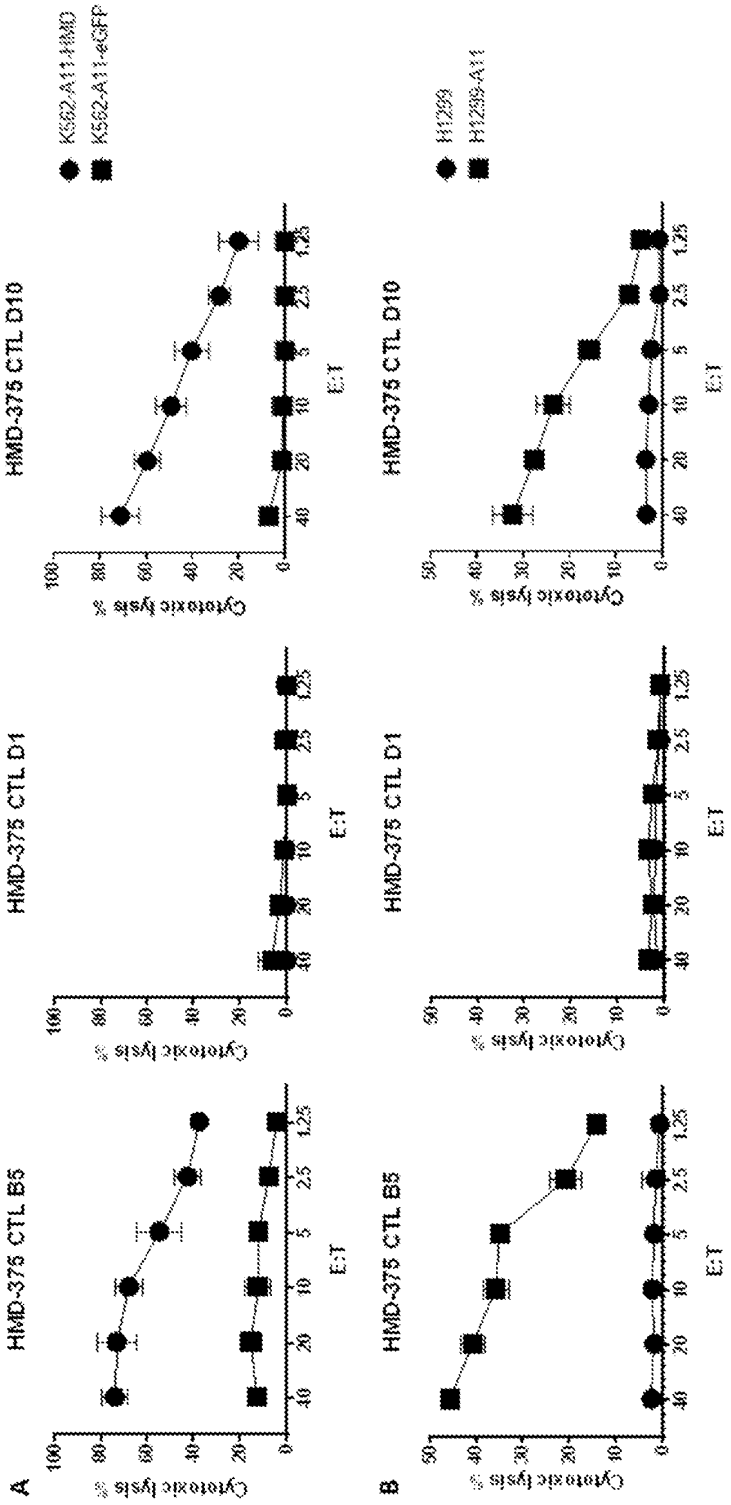

A
B
HMD-375 CTL B5
HMD-375 CTL D1
HMD-375 CTL D10
K562-A11-HMD
K562-A11-eGFP
H1299
H1299-A11
Cytotoxic lysis %
E:T

FIG. 4A-B

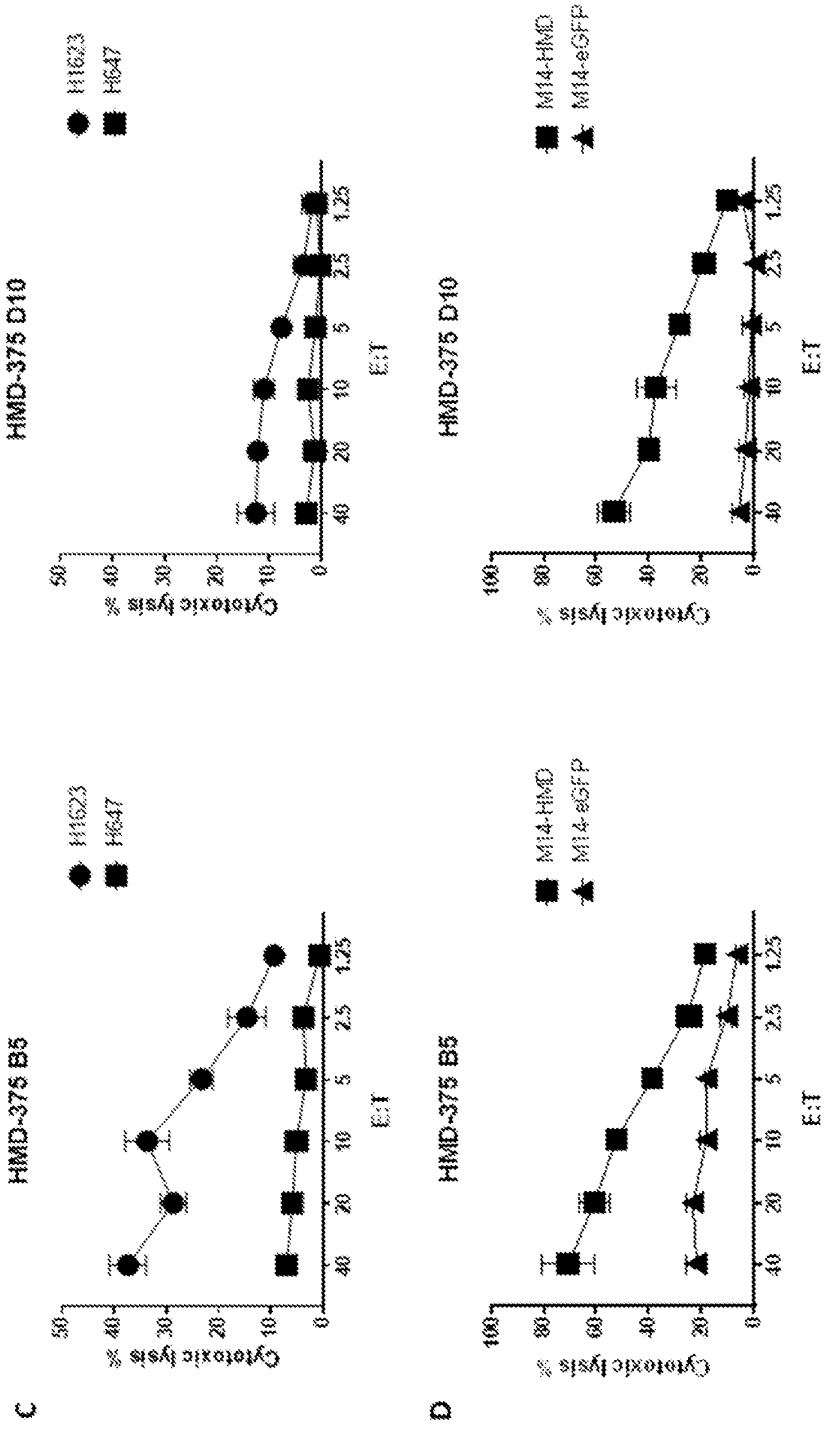

C
HMD-375 B5
H1623
H647
Cytotoxic lysis %
E:T
D
HMD-375 B5
M14-HMD
M14-eGFP
Cytotoxic lysis %
E:T
HMD-375 D10
H1623
H647
Cytotoxic lysis %
E:T
HMD-375 D10
M14-HMD
M14-eGFP
Cytotoxic lysis %
E:T

FIG. 4C-D

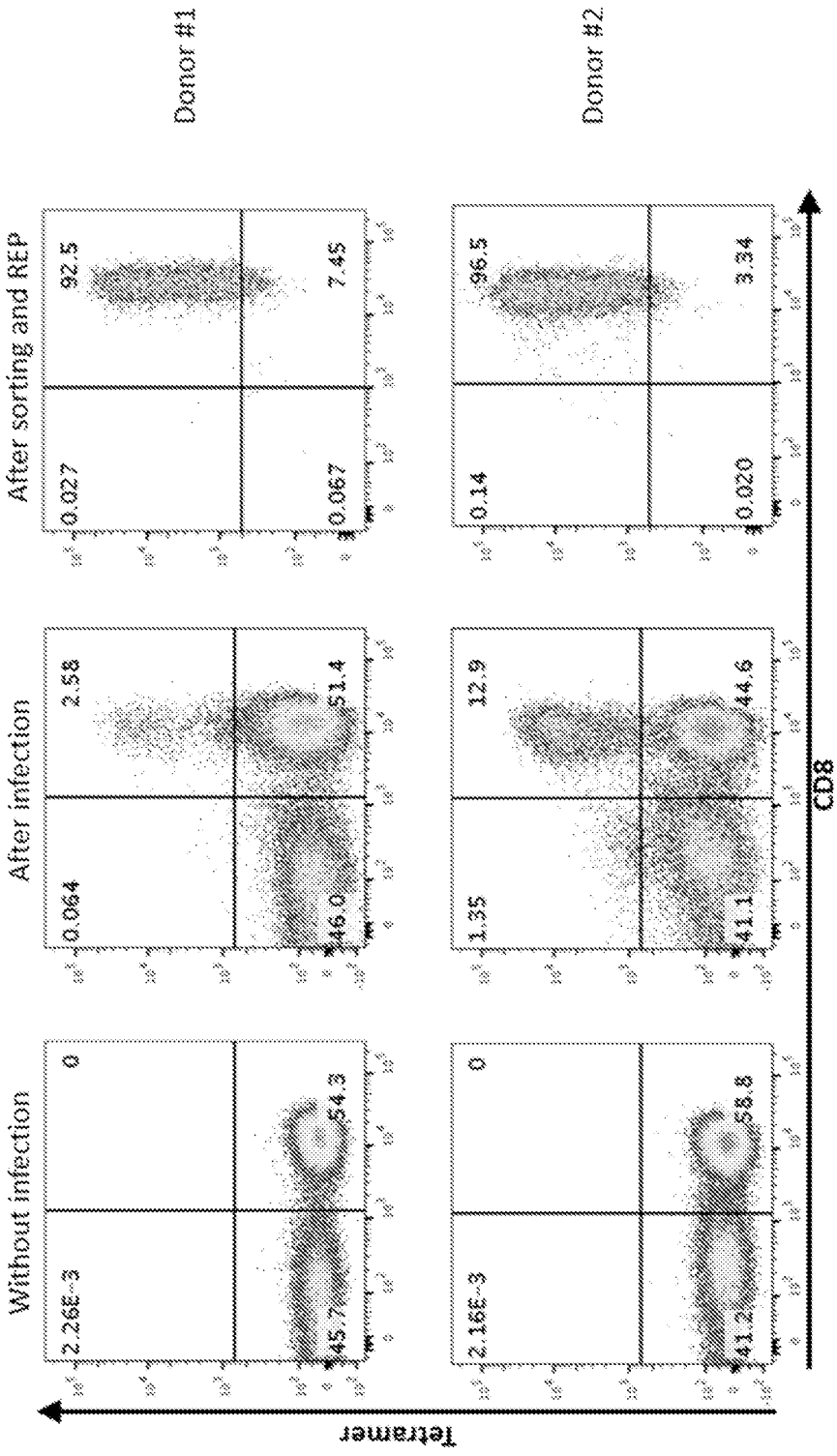

Donor #1
Donor #2
After sorting and REP
After infection
Without infection
0
2.26E-3
45.7
54.3
0.064
46.0
2.58
51.4
0.027
0.067
92.5
7.45
0
2.16E-3
41.2
58.8
1.35
41.1
12.9
44.6
0.14
0.020
96.5
3.34
Tetramer
CD8

FIG. 5

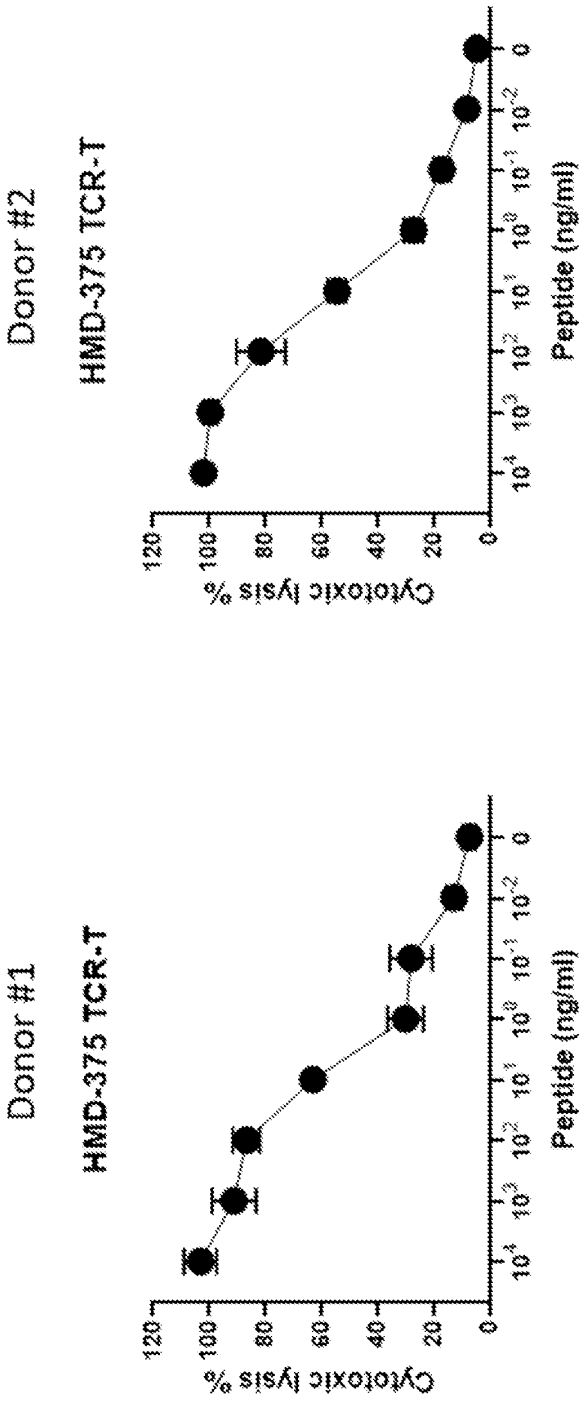

Donor #2
HMD-375 TCR-T
Cytotoxic lysis %
Peptide (ng/ml)
Donor #1
HMD-375 TCR-T
Cytotoxic lysis %
Peptide (ng/ml)

FIG. 6

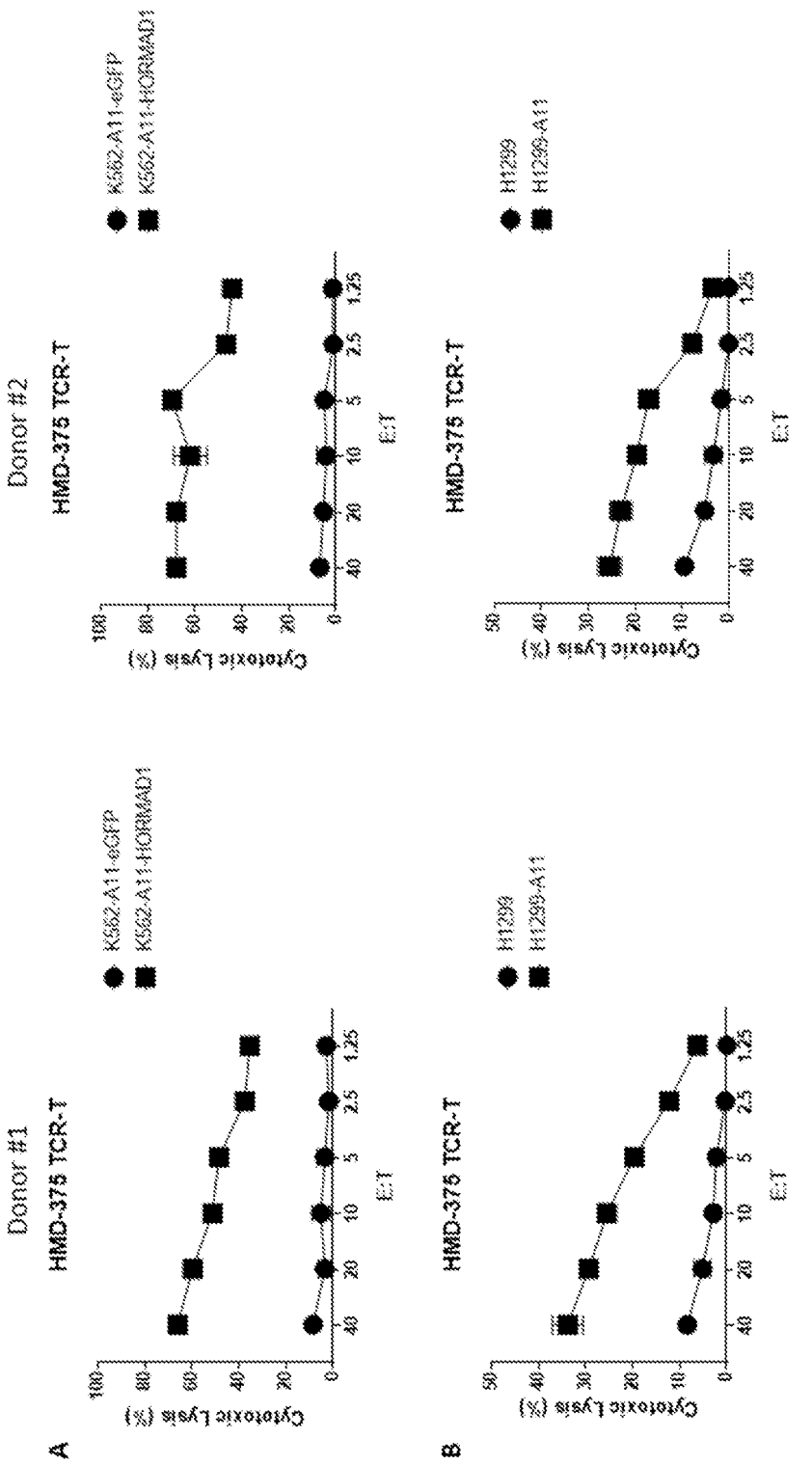

A
Donor #1
HMD-375 TCR-T
K562-A11-eGFP
K562-A11-HORMAD1
Cytotoxic Lysis (%)
E:T
Donor #2
HMD-375 TCR-T
K562-A11-eGFP
K562-A11-HORMAD1
Cytotoxic Lysis (%)
E:T
B
HMD-375 TCR-T
H1299
H1299-A11
Cytotoxic Lysis (%)
E:T
HMD-375 TCR-T
H1299
H1299-A11
Cytotoxic Lysis (%)
E:T

FIG. 7A-B

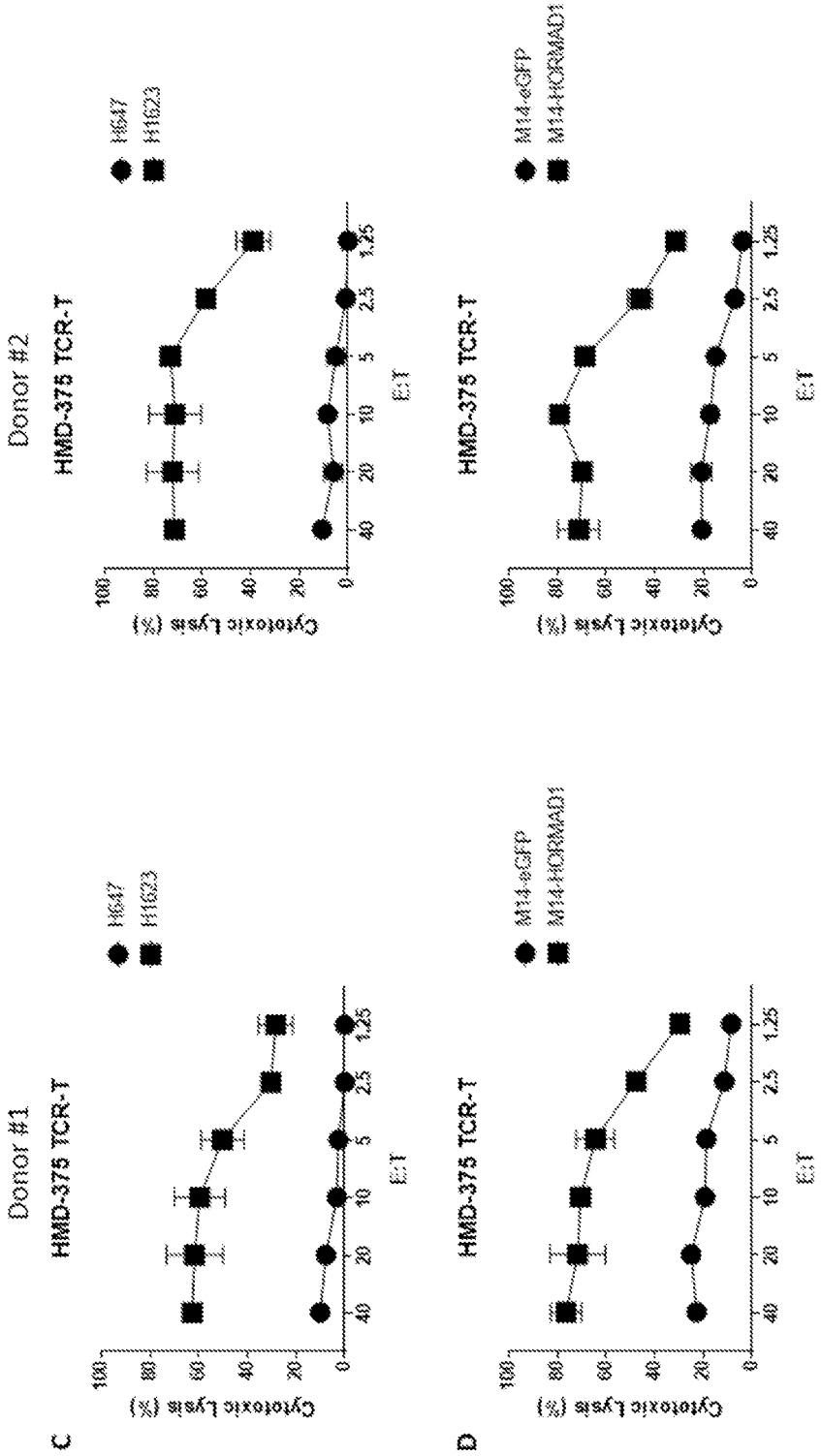

C
Donor #1
HMD-375 TCR-T
H647
H1623
Cytotoxic Lysis (%)
E:T
D
HMD-375 TCR-T
M14-eGFP
M14-HOXMAD1
Cytotoxic Lysis (%)
E:T
Donor #2
HMD-375 TCR-T
H647
H1623
Cytotoxic Lysis (%)
E:T
HMD-375 TCR-T
M14-eGFP
M14-HOXMAD1
Cytotoxic Lysis (%)
E:T

FIG. 7C-D

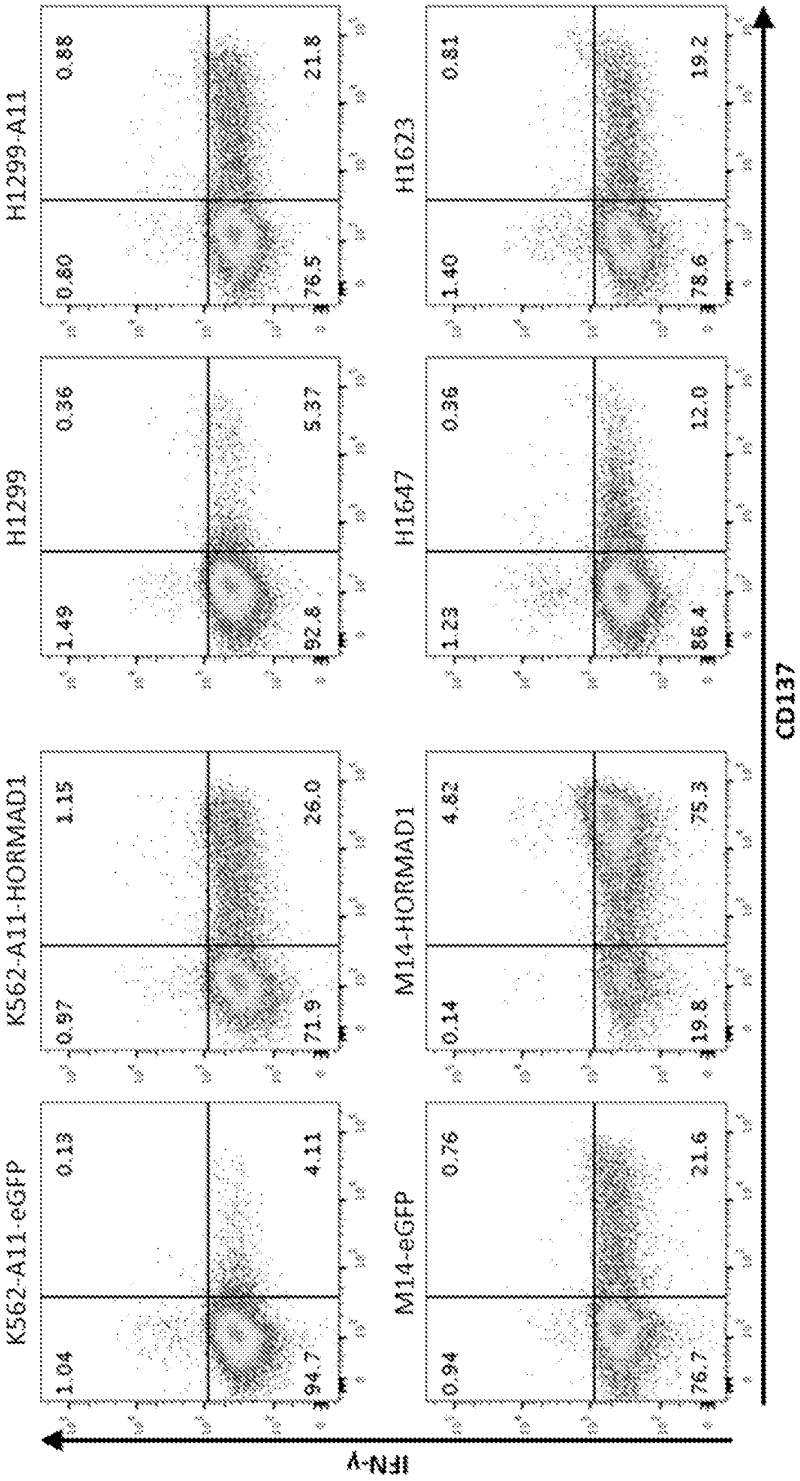

K562-A11-eGFP
K562-A11-HORMAD1
H1299
H1299-A11
M14-eGFP
M14-HORMAD1
H1647
H1623
1.04
0.13
94.7
4.11
0.97
1.15
71.9
26.0
1.49
0.36
92.8
5.37
0.80
0.88
76.5
21.8
0.94
0.76
76.7
21.6
0.14
4.82
19.8
75.3
1.23
0.36
86.4
12.0
1.40
0.81
78.6
19.2
IFN-γ
CD137

FIG. 8A

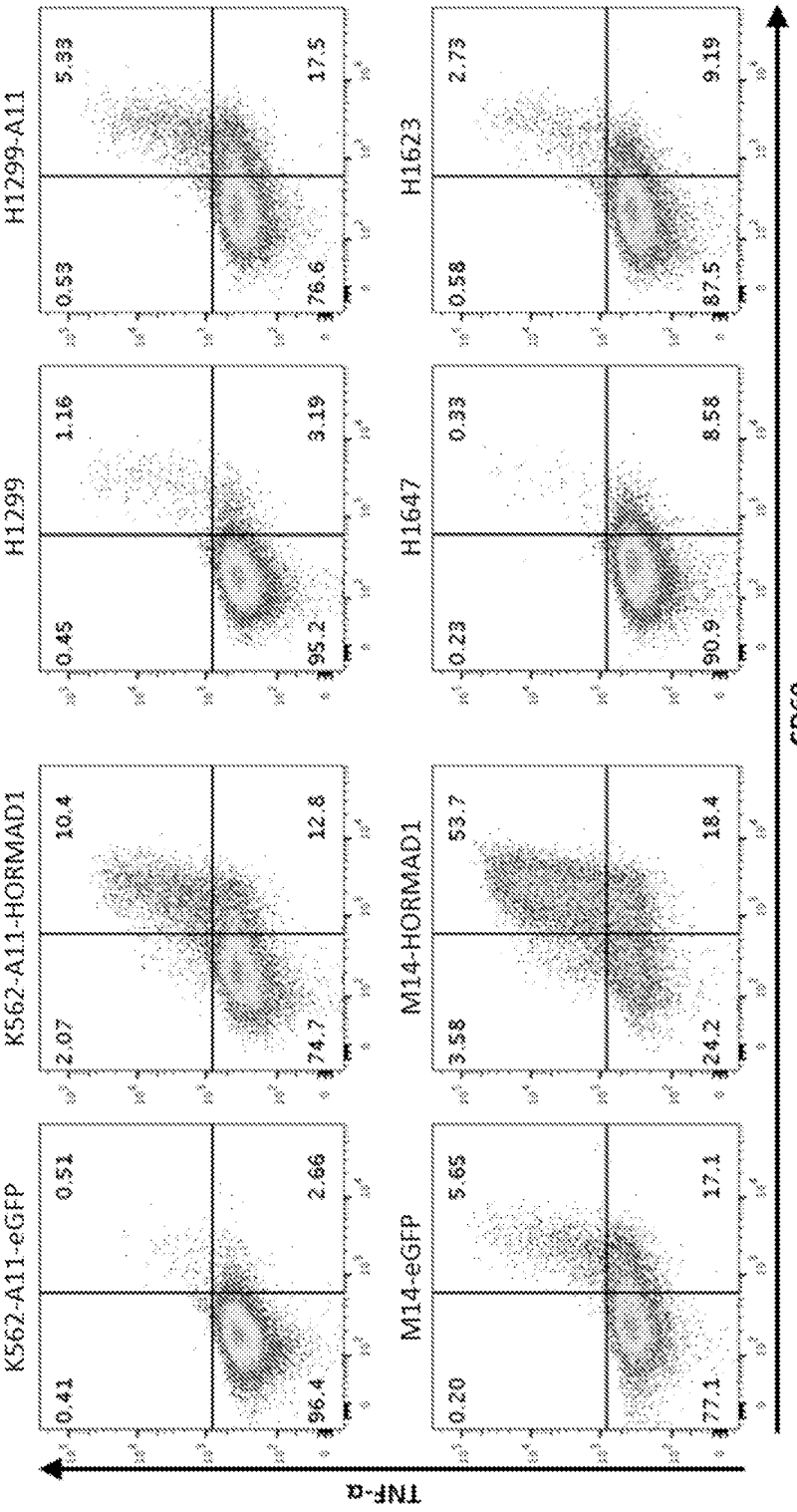

K562-A11-eGFP
K562-A11-HORMAD1
H1299
H1299-A11
M14-eGFP
M14-HORMAD1
H1647
H1623
0.41
0.51
96.4
2.66
2.07
10.4
74.7
12.8
0.45
1.16
95.2
3.19
0.53
5.33
76.6
17.5
0.20
5.65
77.1
17.1
3.58
53.7
24.2
18.4
0.23
0.33
90.9
8.58
0.58
2.73
87.5
9.19
TNF-α
CD69

FIG. 8B

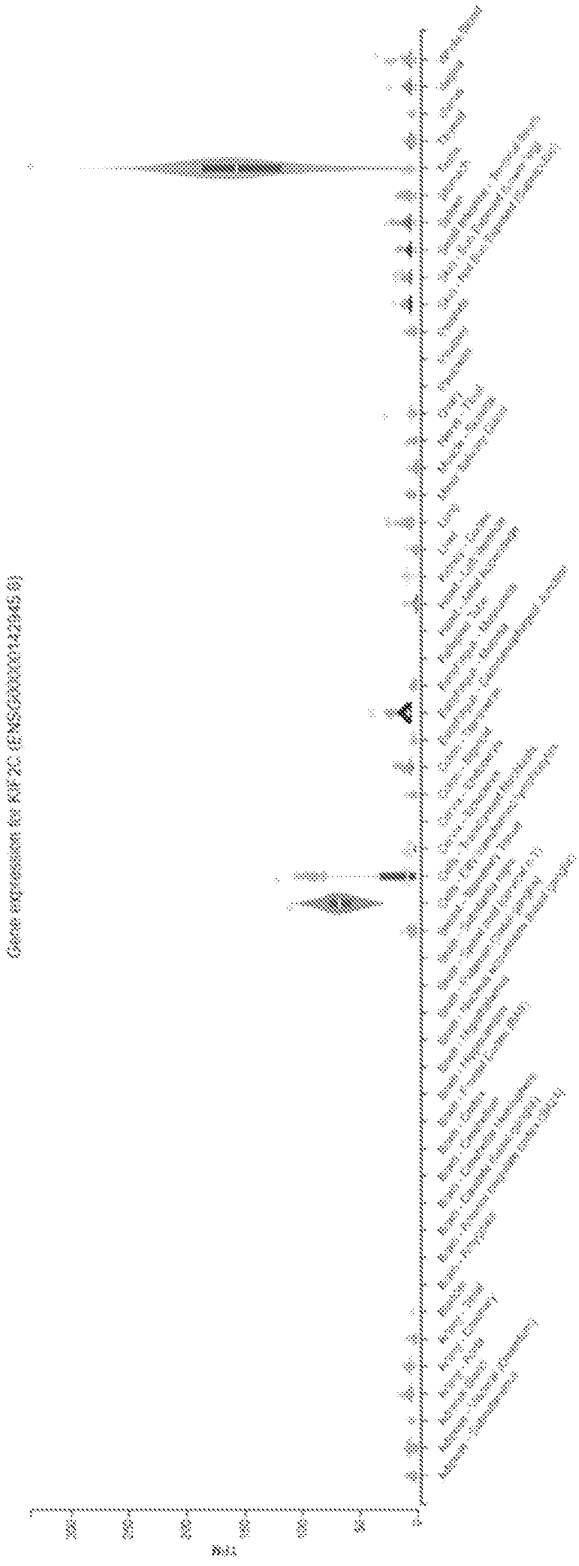

Gene expression for KIF20A (ENSG00000112984.6)
TPM
Adrenal Gland
Bladder
Blood
Bone Marrow
Brain
Breast
Cervix
Colon
Esophagus
Fallopian Tube
Heart
Kidney
Liver
Lung
Muscle
Nerve
Ovary
Pancreas
Pituitary
Prostate
Salivary Gland
Skin
Small Intestine
Spleen
Stomach
Testis
Thyroid
Uterus
Vagina
Adipose - Subcutaneous
Adipose - Visceral (Omentum)
Adrenal Gland
Artery - Aorta
Artery - Coronary
Artery - Tibial
Bladder
Brain - Amygdala
Brain - Anterior cingulate cortex (BA24)
Brain - Caudate (basal ganglia)
Brain - Cerebellar Hemisphere
Brain - Cerebellum
Brain - Cortex
Brain - Frontal Cortex (BA9)
Brain - Hippocampus
Brain - Hypothalamus
Brain - Nucleus accumbens (basal ganglia)
Brain - Putamen (basal ganglia)
Brain - Spinal cord (cervical c-1)
Brain - Substantia nigra
Breast - Mammary Tissue
Cells - EBV-transformed lymphocytes
Cells - Transformed fibroblasts
Cervix - Ectocervix
Cervix - Endocervix
Colon - Sigmoid
Colon - Transverse
Esophagus - Gastroesophageal Junction
Esophagus - Mucosa
Esophagus - Muscularis
Fallopian Tube
Heart - Atrial Appendage
Heart - Left Ventricle
Kidney - Cortex
Kidney - Medulla
Liver
Lung
Minor Salivary Gland
Muscle - Skeletal
Nerve - Tibial
Ovary
Pancreas
Pituitary
Prostate
Skin - Not Sun Exposed (Suprapubic)
Skin - Sun Exposed (Lower leg)
Small Intestine - Terminal Ileum
Spleen
Stomach
Testis
Thyroid
Uterus
Vagina
Whole Blood
0
200
400
600
800
1000

FIG. 9

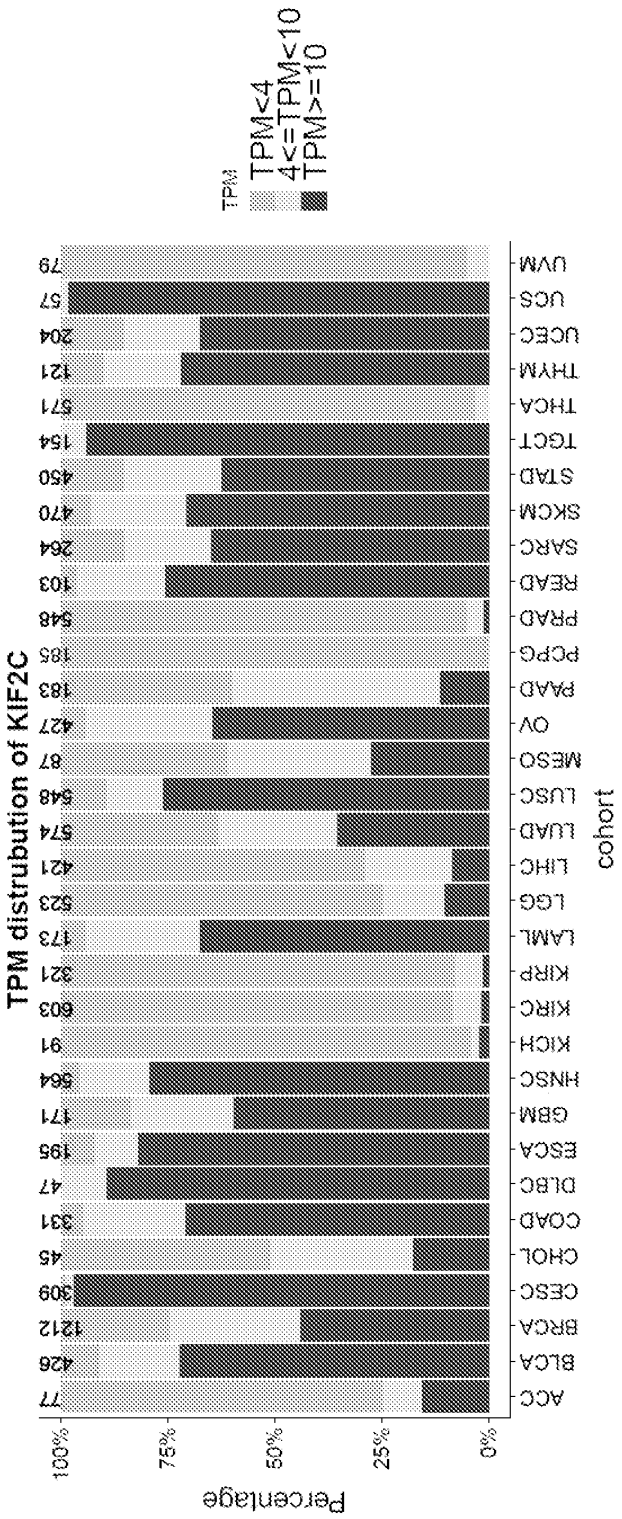

TPM distribution of KIF2C
Percentage
100%
75%
50%
25%
0%
cohort
TPM
TPM<4
4<=TPM<10
TPM>=10
ACC 77
BLCA 426
BRCA 1212
CESC 309
CHOL 45
COAD 331
DLBC 47
ESCA 195
GBM 171
HNSC 564
KICH 91
KIRC 603
KIRP 321
LAML 173
LGG 523
LIHC 421
LUAD 574
LUSC 548
MESO 87
OV 427
PAAD 183
PCPG 185
PRAD 548
READ 103
SARC 264
SKCM 470
STAD 450
TGCT 154
THCA 571
THYM 121
UCEC 204
UCS 57
UVM 79

FIG. 10

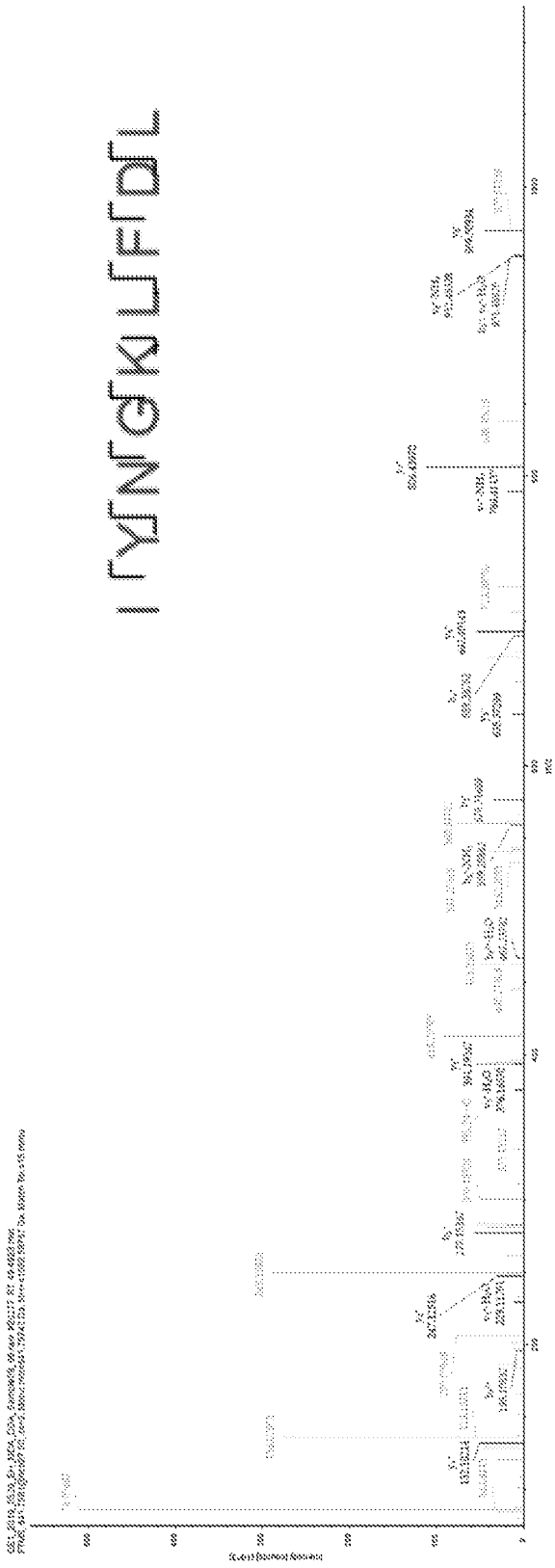


FIG. 11

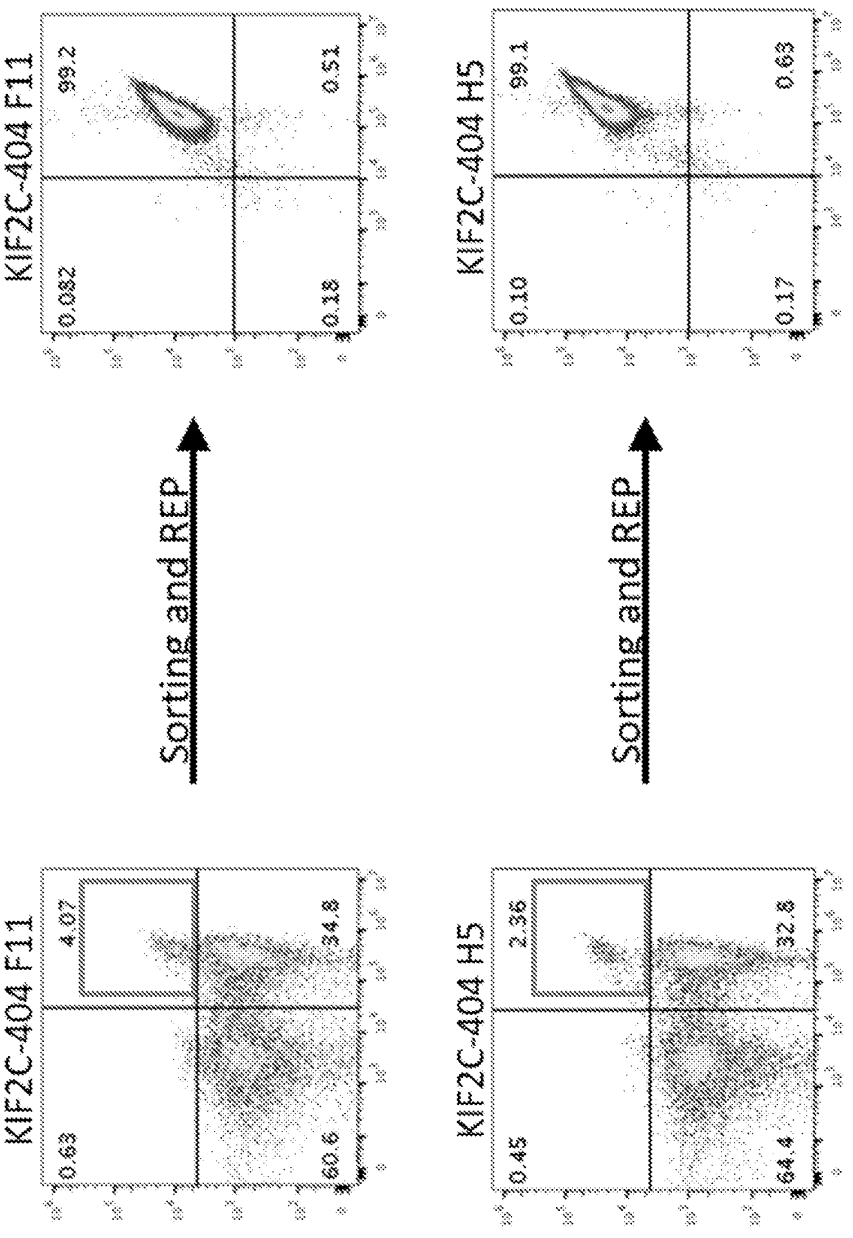

KIF2C-404 F11
0.63
4.07
60.6
34.8
Sorting and REP
KIF2C-404 F11
0.082
99.2
0.18
0.51
KIF2C-404 H5
0.45
2.36
64.4
32.8
Sorting and REP
KIF2C-404 H5
0.10
99.1
0.17
0.63

FIG. 12

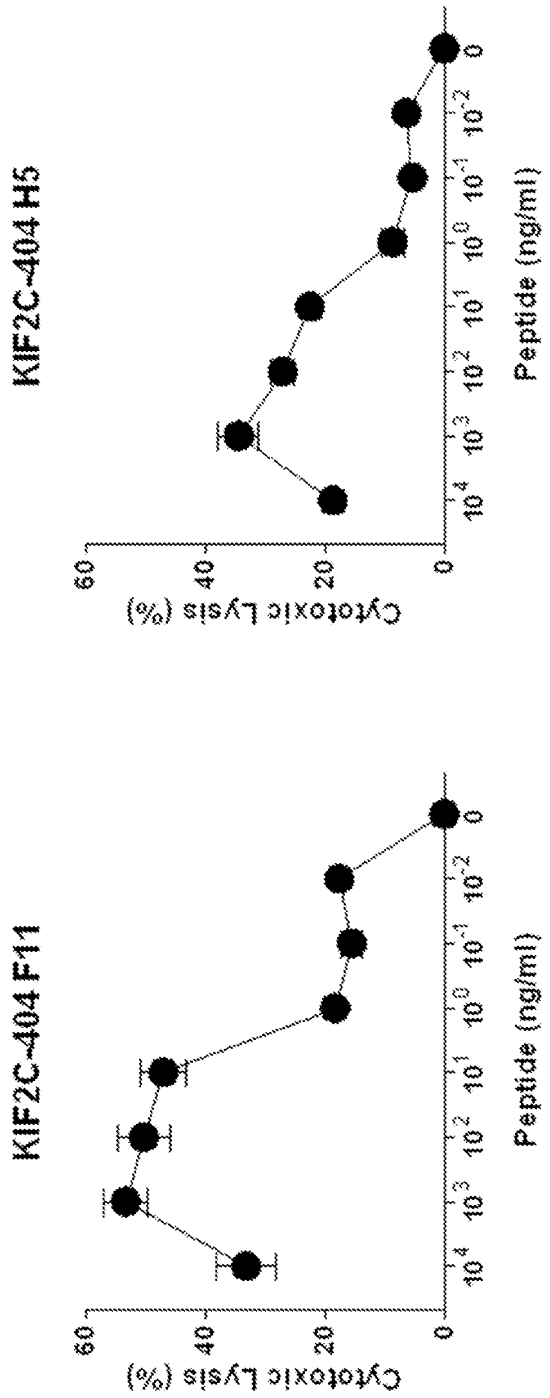

KIF2C-404 H5
Cytotoxic Lysis (%)
0
20
40
60
Peptide (ng/ml)
10^{4} 10^{3} 10^{2} 10^{1} 10^{0} 10^{-1} 10^{-2} 0
KIF2C-404 F11
Cytotoxic Lysis (%)
0
20
40
60
Peptide (ng/ml)
10^{4} 10^{3} 10^{2} 10^{1} 10^{0} 10^{-1} 10^{-2} 0

FIG. 13

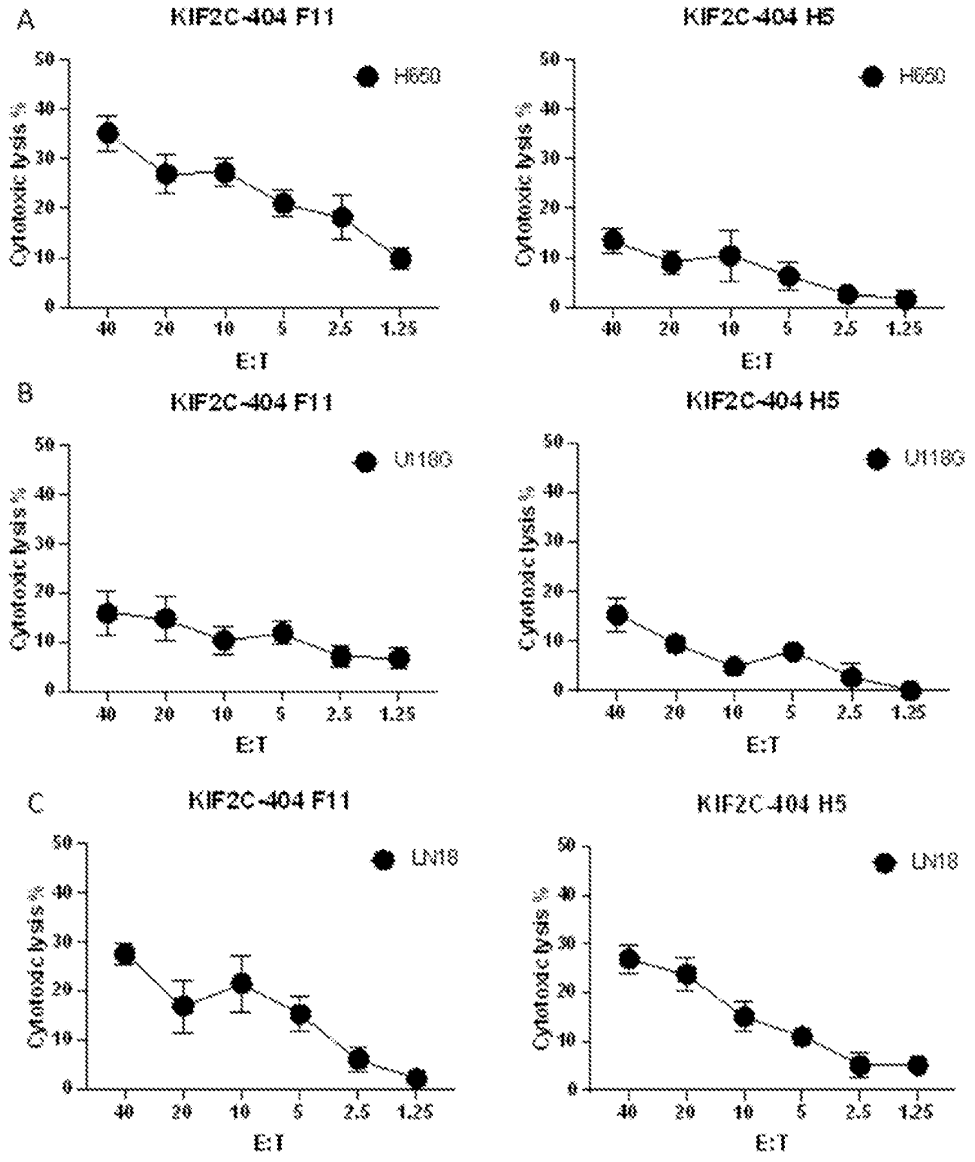

A
KIF2C-404 F11
KIF2C-404 H5
H650
Cytotoxic lysis %
E:T
40
20
10
5
2.5
1.25
B
KIF2C-404 F11
KIF2C-404 H5
UI18G
C
KIF2C-404 F11
KIF2C-404 H5
UN18

FIG. 14A-C

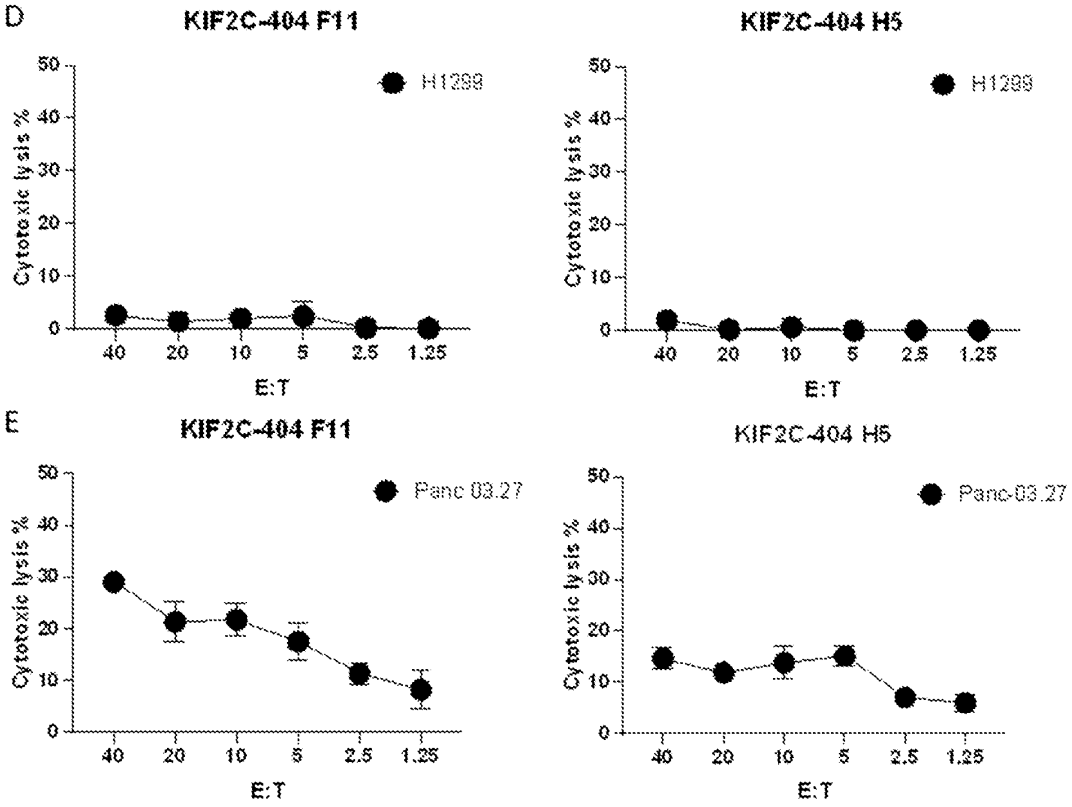

D
KIF2C-404 F11
KIF2C-404 H5
H1299
Cytotoxic lysis %
E:T
40
20
10
5
2.5
1.25
E
KIF2C-404 F11
KIF2C-404 H5
Panc 03.27
Panc-03.27

FIG. 14D-E

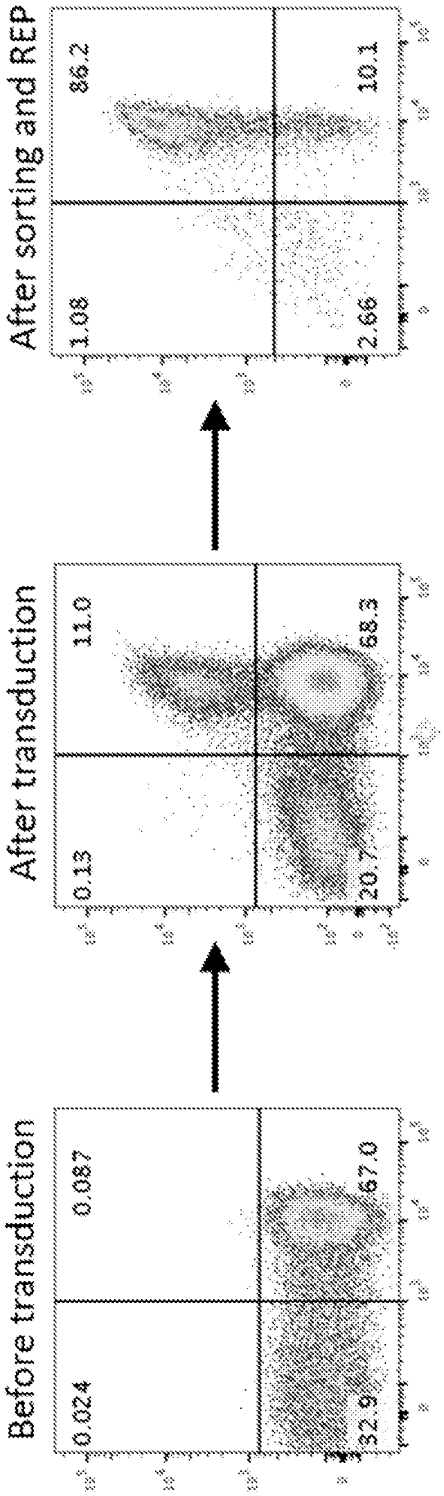

Before transduction
0.024
0.087
32.9
67.0
After transduction
0.13
11.0
20.7
68.3
After sorting and REP
1.08
86.2
2.66
10.1

FIG. 15

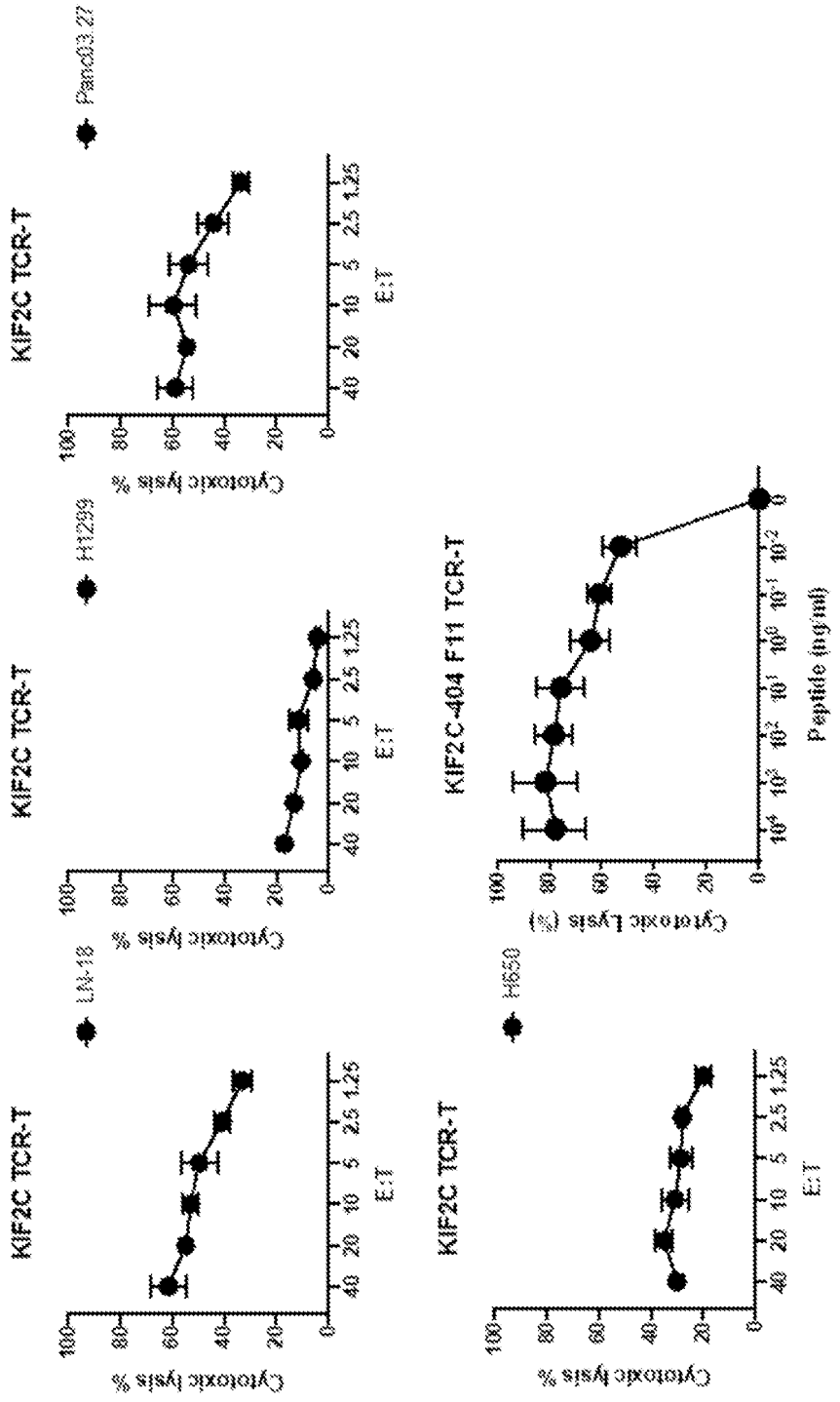

KIF2C TCR-T
Cytotoxic lysis %
E:T
LM-18
H1299
Panc03.27
KIF2C-404 F11 TCR-T
Cytotoxic Lysis (%)
Peptide (ng/ml)
H650

FIG. 16