FIG. 1

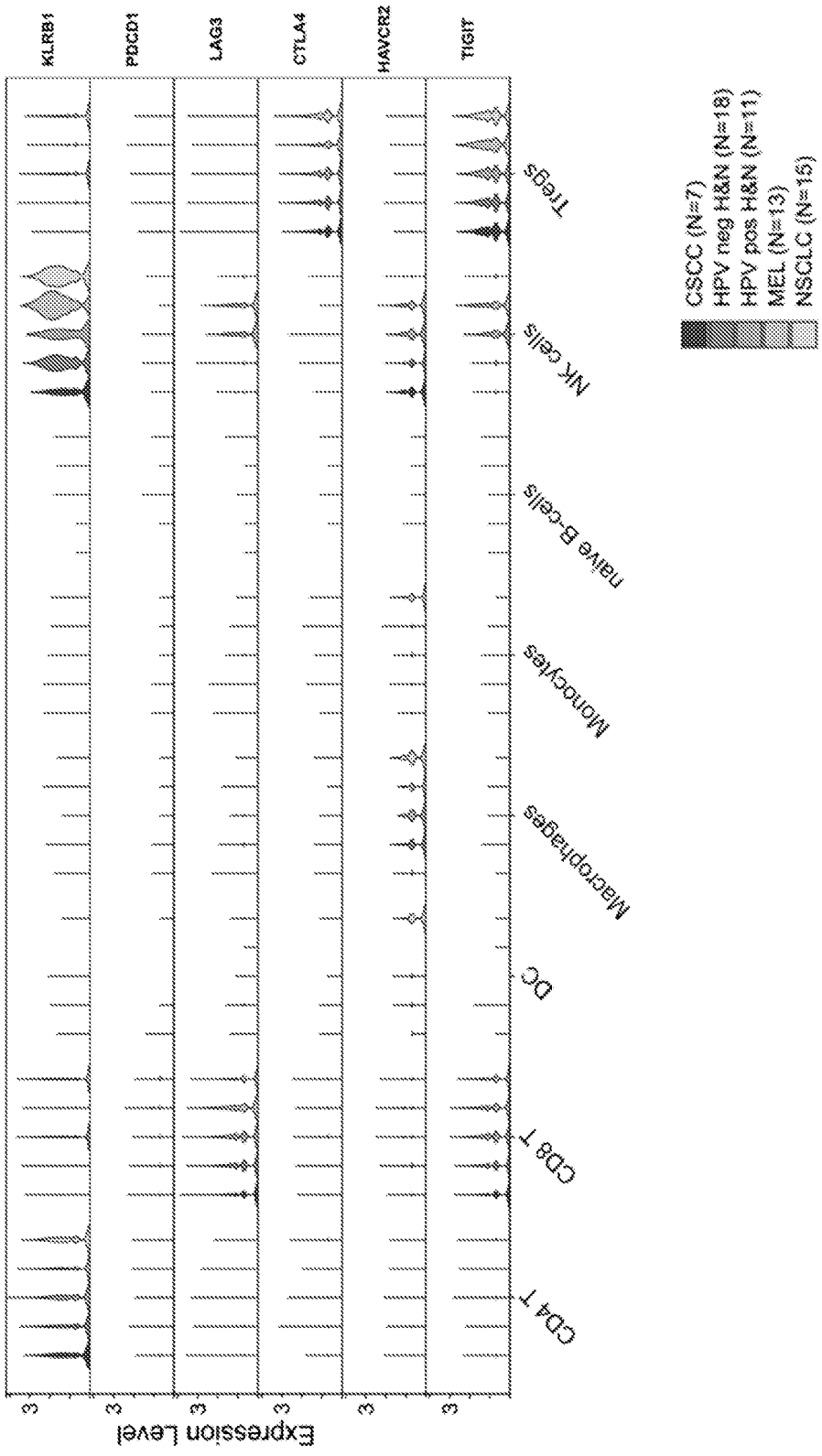

KLRB1
PDCD1
LAG3
CTLA4
HAVCR2
TIGIT
Tregs
NK cells
Naive B-cells
Monocytes
Macrophages
DC
CD8 T
CD4 T
Expression Level
CSCC (N=7)
HPV neg H&N (N=18)
HPV pos H&N (N=11)
MEL (N=13)
NSCLC (N=15)

FIG. 2

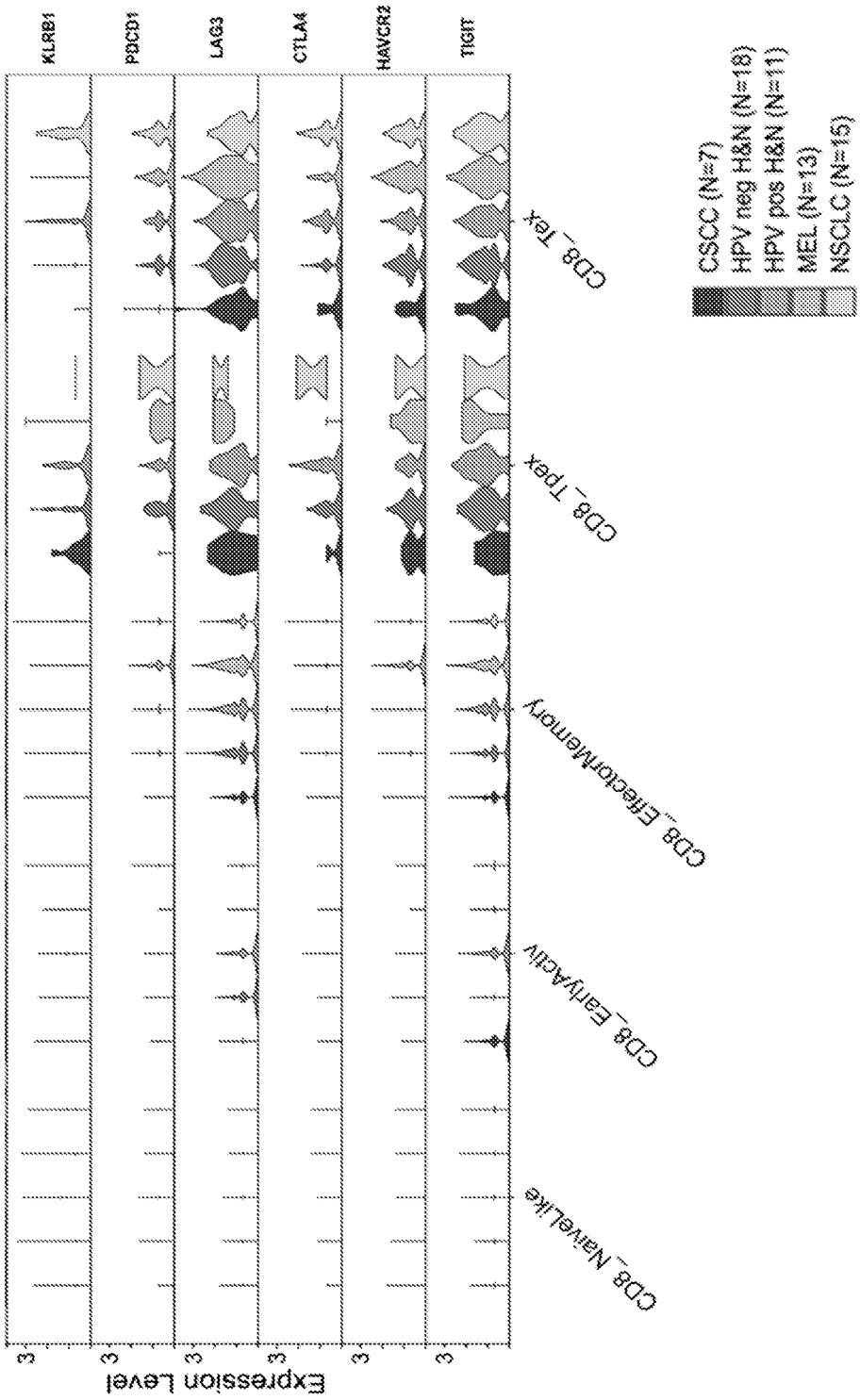

KLRB1
PDCD1
LAG3
CTLA4
HAVCR2
TIGIT
CD8_Tex
CD8_Tpex
CD8_EffectorMemory
CD8_EarlyActiv
CD8_NaiveLike
Expression Level
CSCC (N=7)
HPV neg H&N (N=18)
HPV pos H&N (N=11)
MEL (N=13)
NSCLC (N=15)

FIG. 3

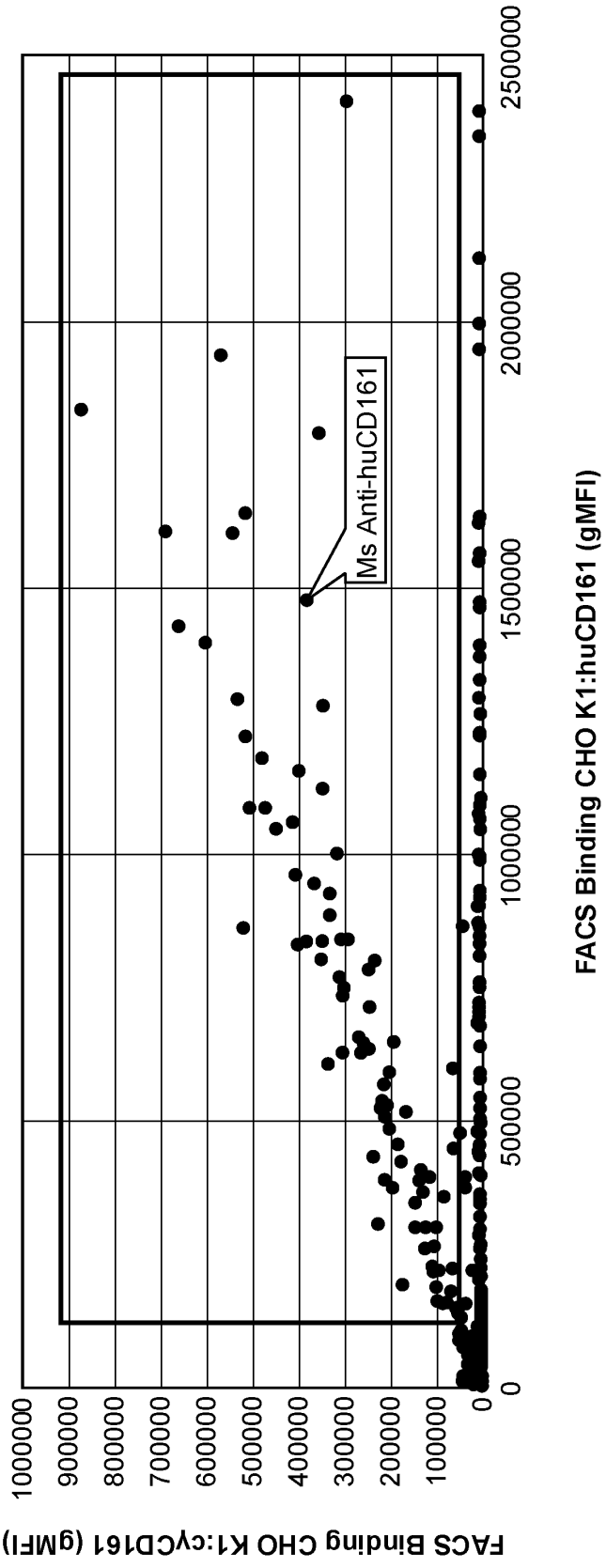

FACS Binding CHO K1:huCD161 (gMFI)
0
500000
1000000
1500000
2000000
2500000
Ms Anti-huCD161
FACS Binding CHO K1:cynCD161 (gMFI)
0
100000
200000
300000
400000
500000
600000
700000
800000
900000
1000000

FIG. 4

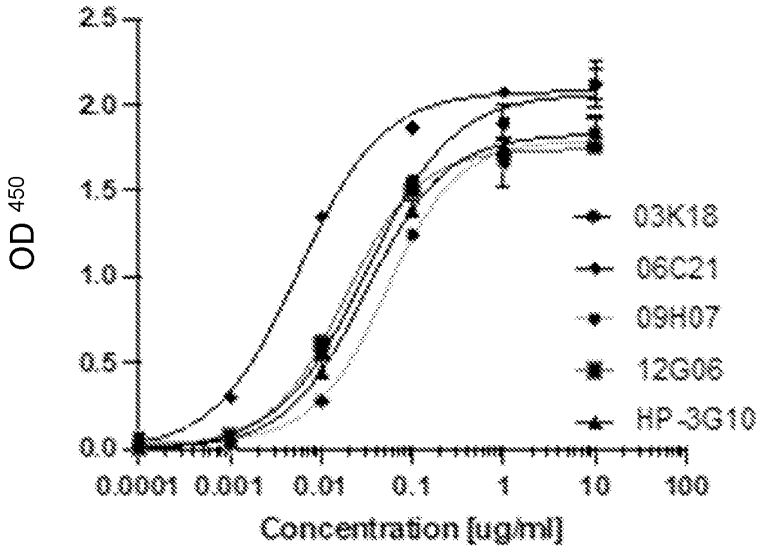

OD 450
2.5
2.0
1.5
1.0
0.5
0.0
0.0001
0.001
0.01
0.1
1
10
100
Concentration [ug/ml]
03K18
06C21
09H07
12G06
HP-3G10

FIG. 5A

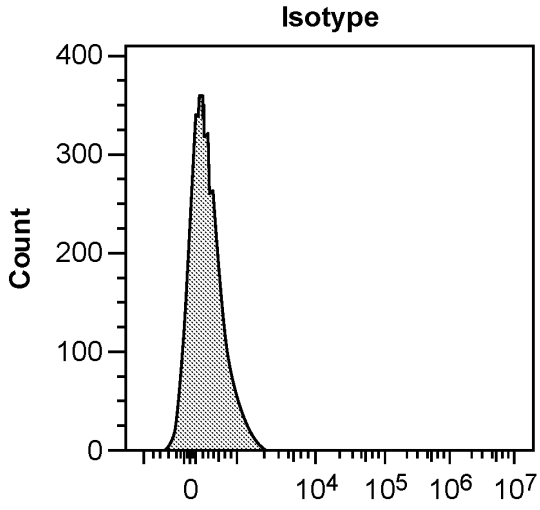


FIG. 5B

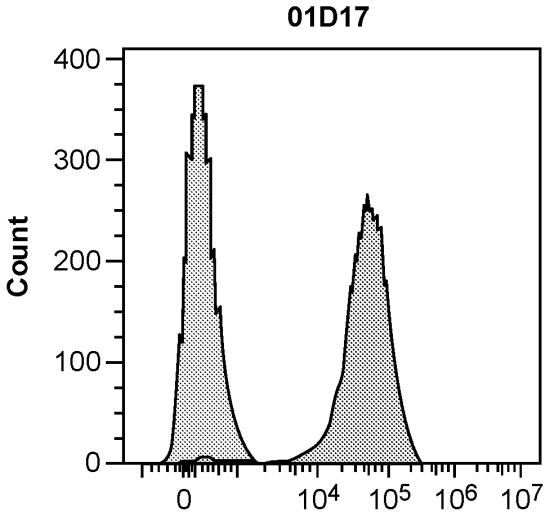


FIG. 5C

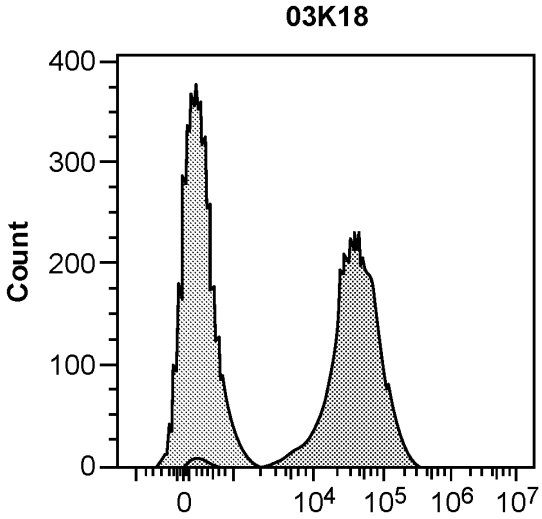


FIG. 5D

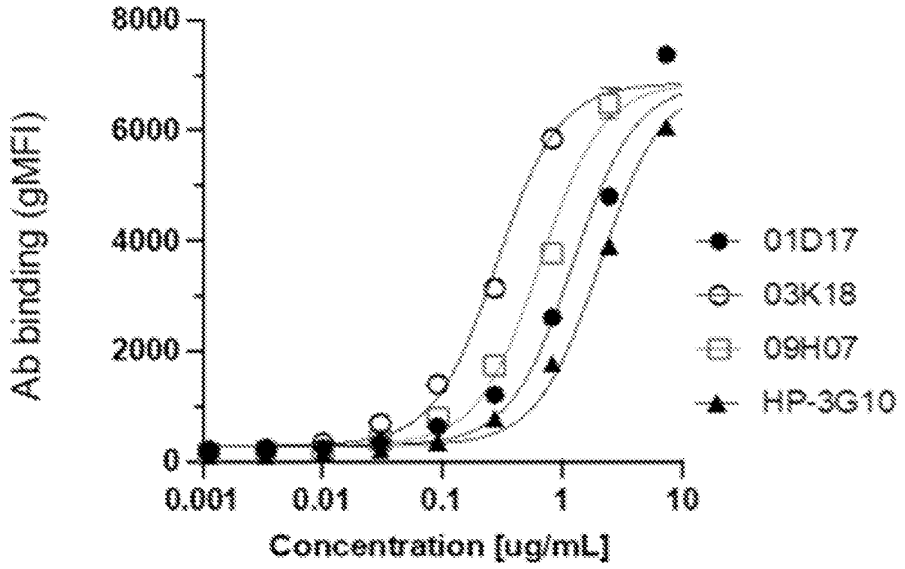

8000
6000
4000
2000
0
Ab binding (gMFI)
0.001
0.01
0.1
1
10
Concentration [ug/mL]
01D17
03K18
09H07
HP-3G10

FIG. 6

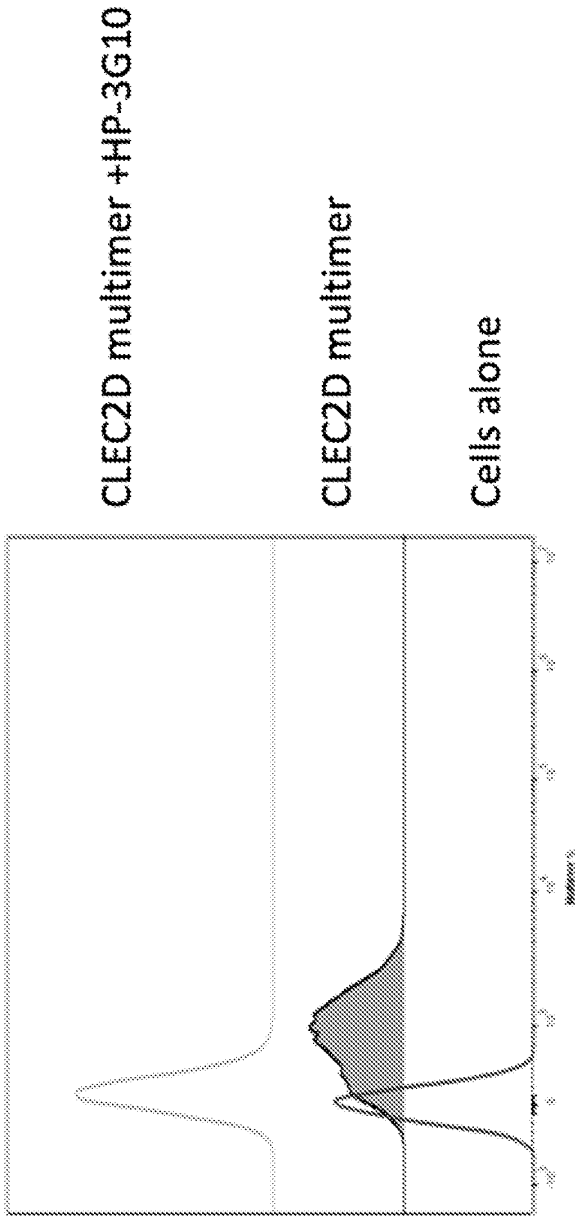


FIG. 7

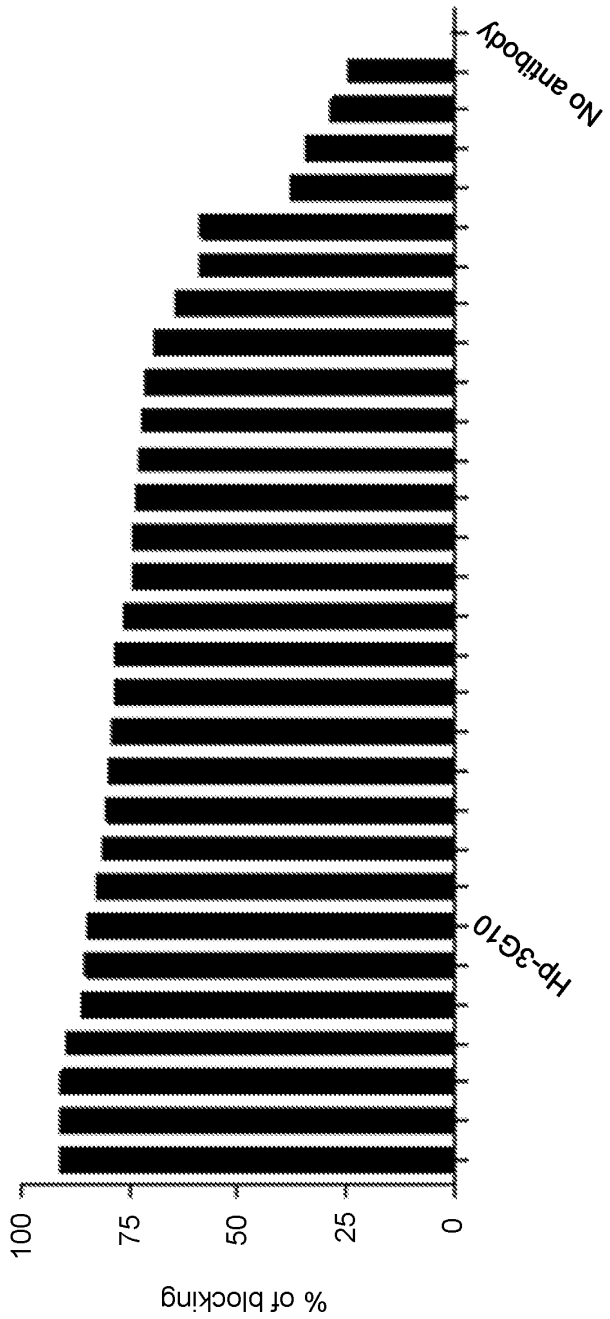


FIG. 8

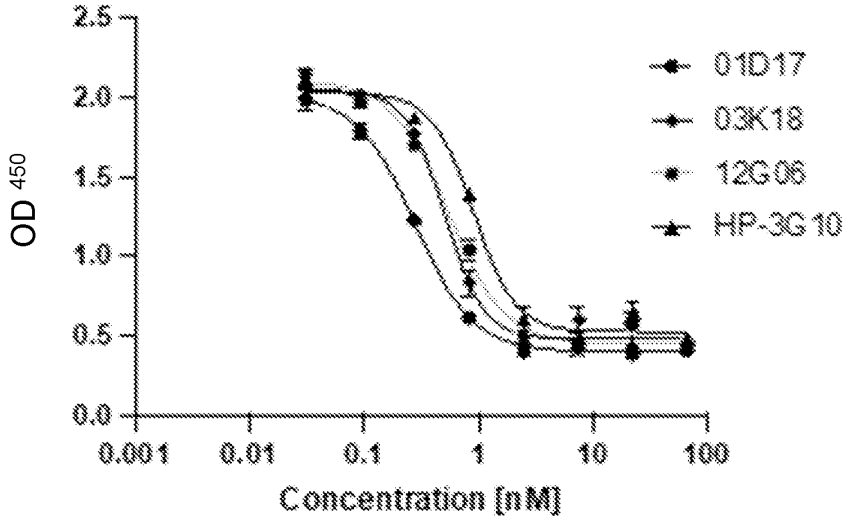

2.5
2.0
1.5
1.0
0.5
0.0
OD 450
0.001
0.01
0.1
1
10
100
Concentration [nM]
01D17
03K18
12G06
HP-3G10

FIG. 9

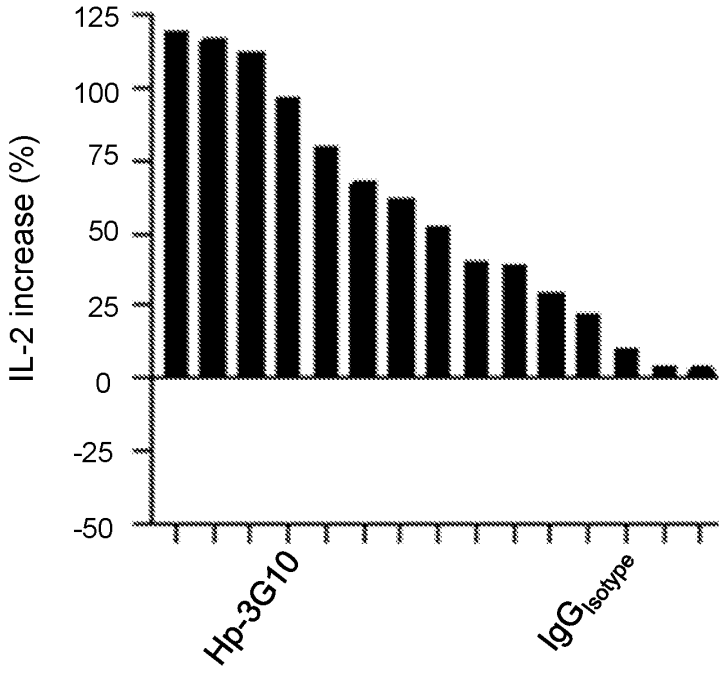


FIG. 10

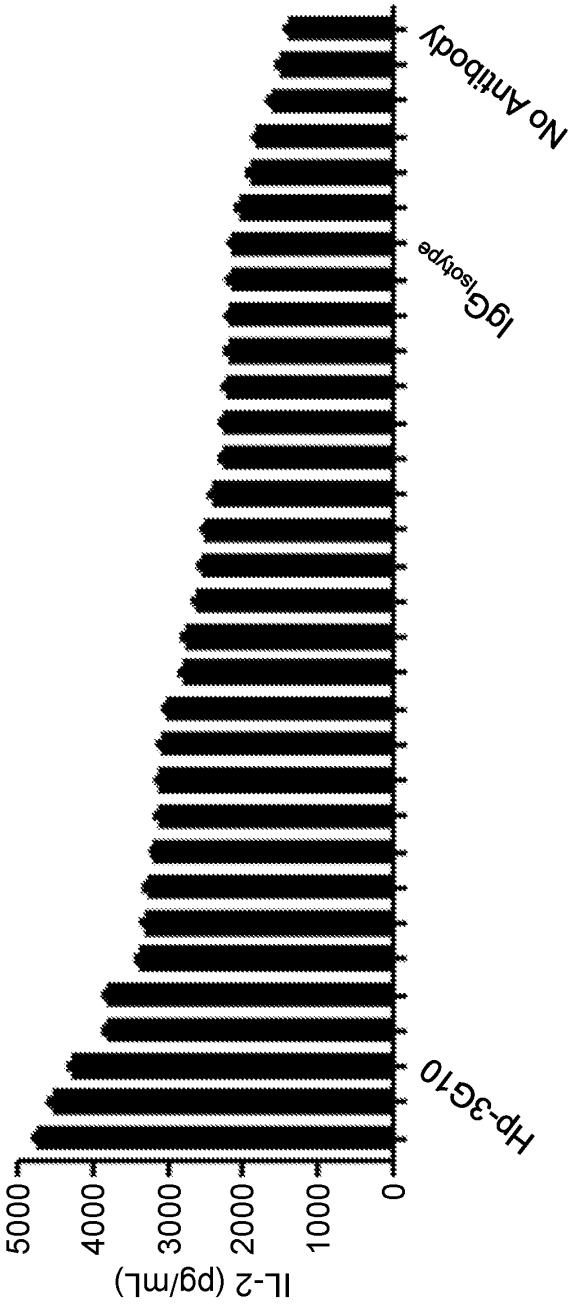

IL-2 (pg/mL)
5000
4000
3000
2000
1000
0
Hp-3G10
IgG Isotype
No Antibody

FIG. 11

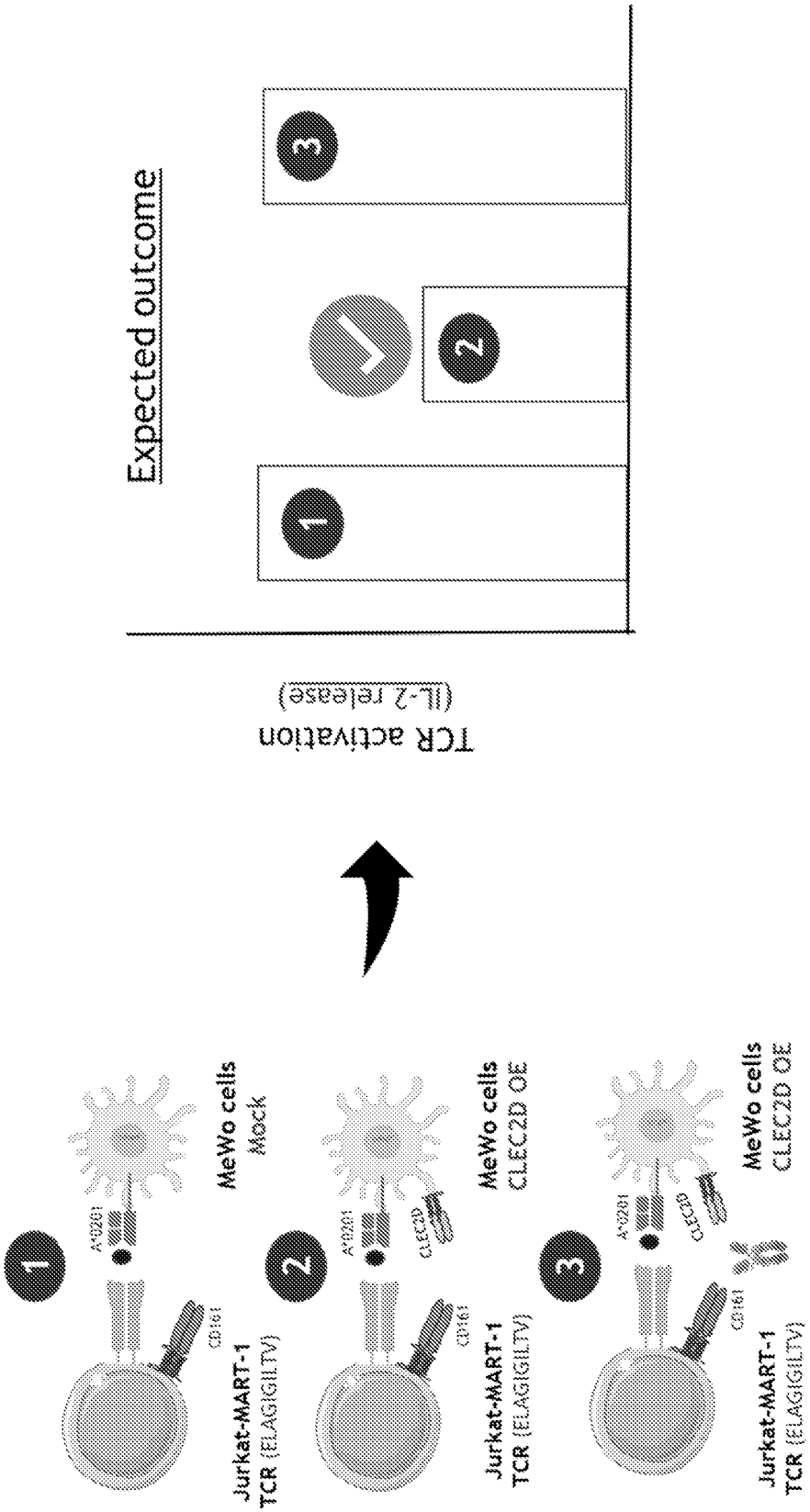
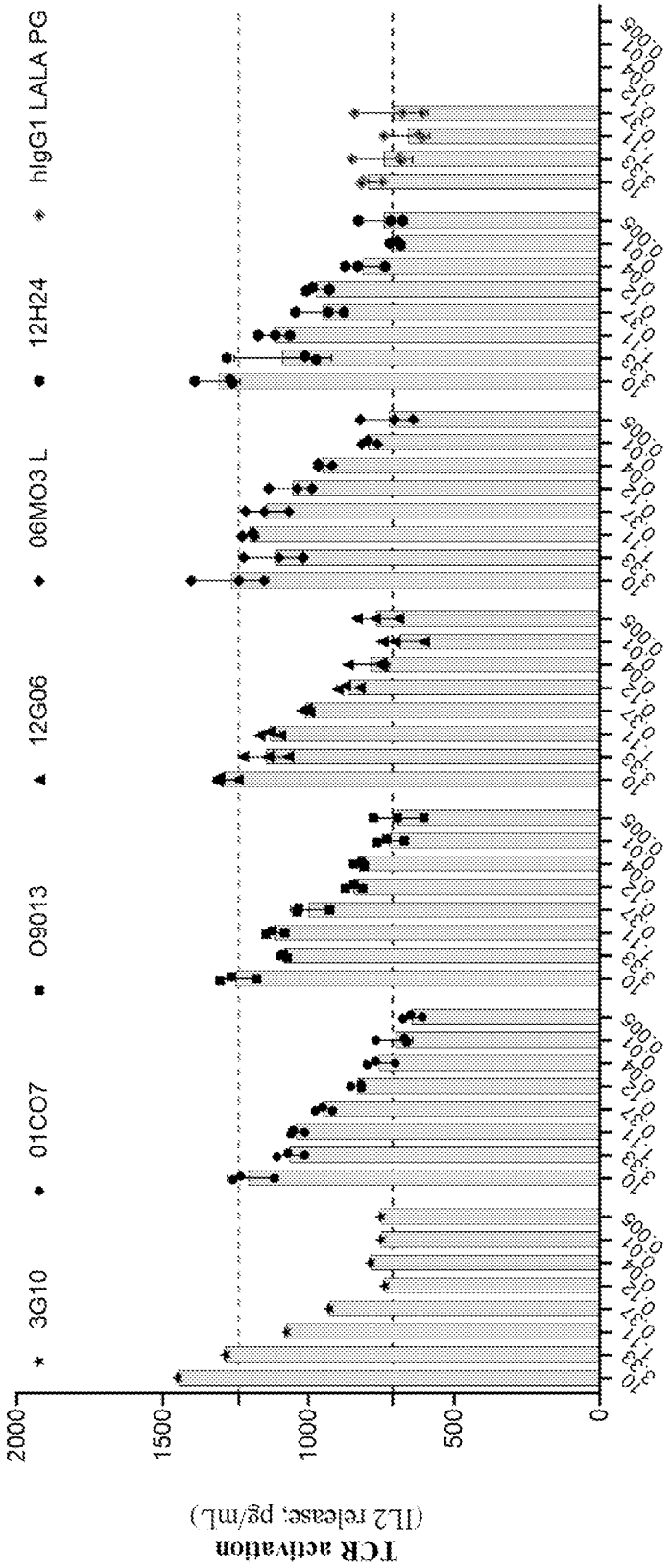

Expected outcome
1
2
3
TCR activation
(IL-2 release)
1
A*0201
CD161
Jurkat-MART-1
TCR (ELAGIGILTV)
MeWo cells
Mock
2
A*0201
CLEC2D
CD161
Jurkat-MART-1
TCR (ELAGIGILTV)
MeWo cells
CLEC2D OE
3
A*0201
CLEC2D
CD161
Jurkat-MART-1
TCR (ELAGIGILTV)
MeWo cells
CLEC2D OE

FIG. 12



1 = Jurkat-MART1 TCR CD161 + Mock MeWo cells

2 = Jurkat-MART1 TCR CD161 + CLEC2D OE MeWo cells

FIG. 13

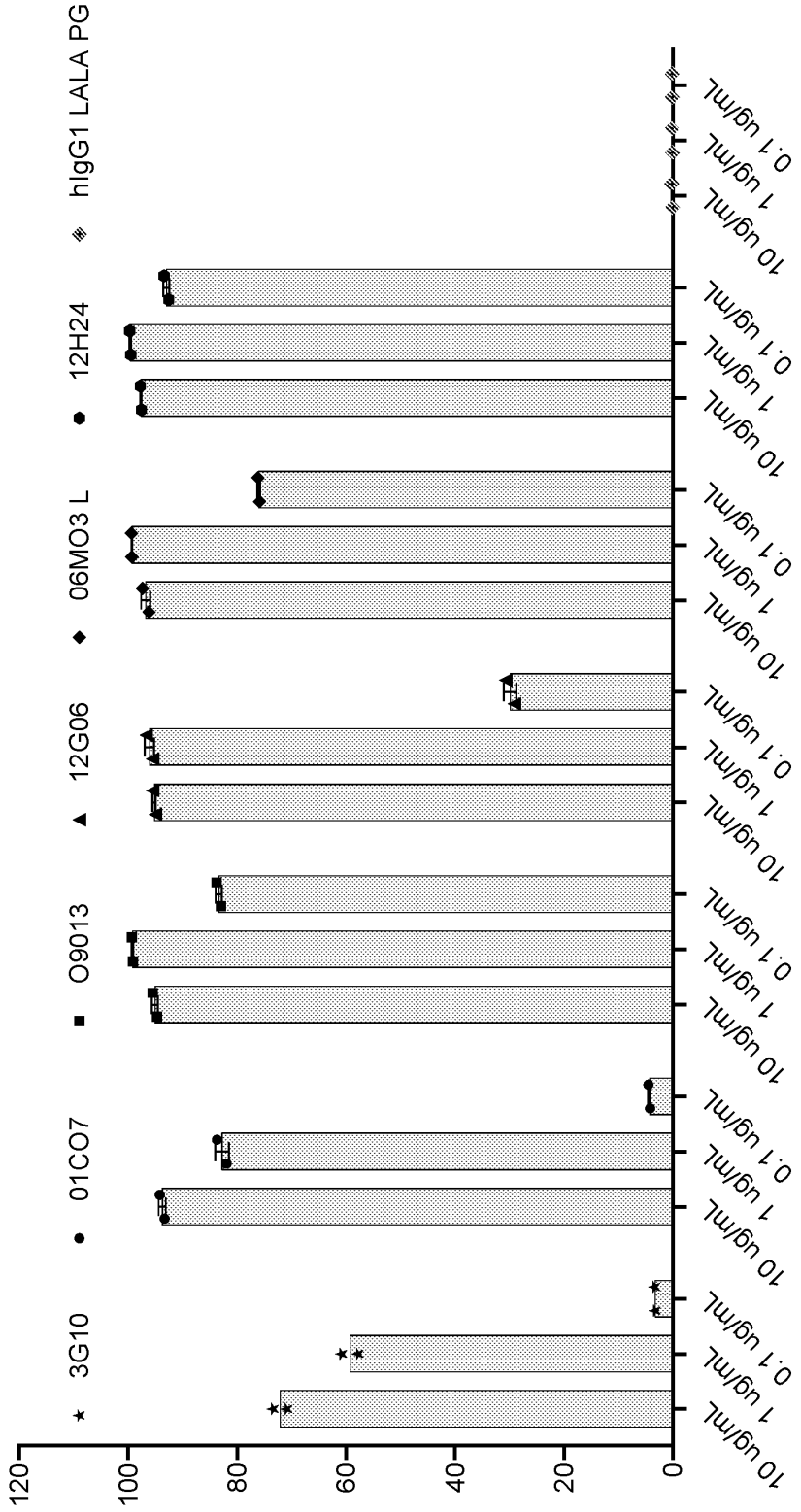

Anti-CD161 mAb binding to TALL-104 (%)
120
100
80
60
40
20
0
3G10
01CO7
O9013
12G06
06MO3 L
12H24
hIgG1 LALA PG
10 ug/mL
1 ug/mL
0.1 ug/mL

FIG. 14A

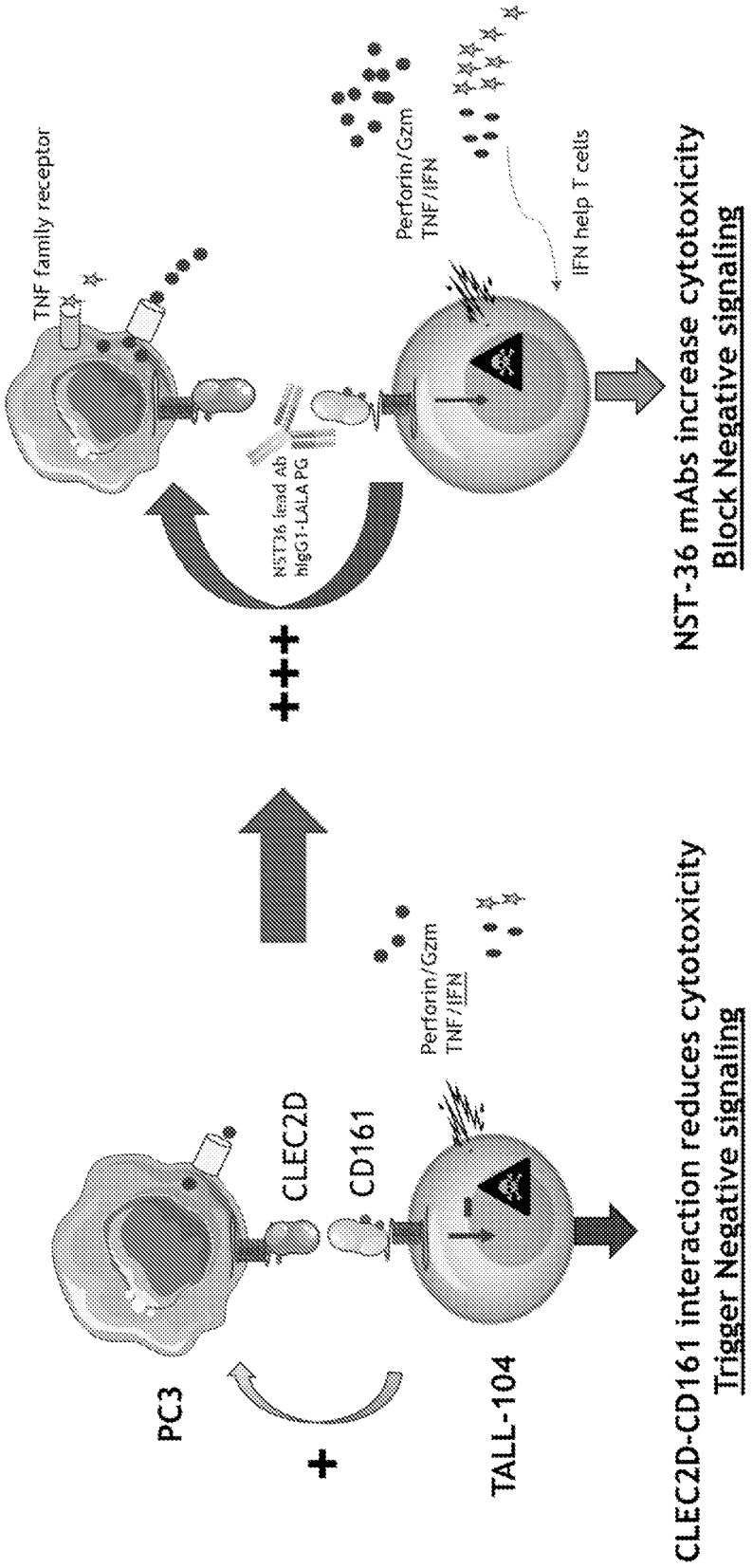

PC3
+
CLEC2D
CD161
TALL-104
Perforin/Gzm
TNF/IFN
CLEC2D-CD161 interaction reduces cytotoxicity
Trigger Negative signaling
+++
TNF family receptor
NST36 lead Ab
hIgG1-LALA PG
Perforin/Gzm
TNF/IFN
IFN help T cells
NST-36 mAbs increase cytotoxicity
Block Negative signaling

FIG. 14B

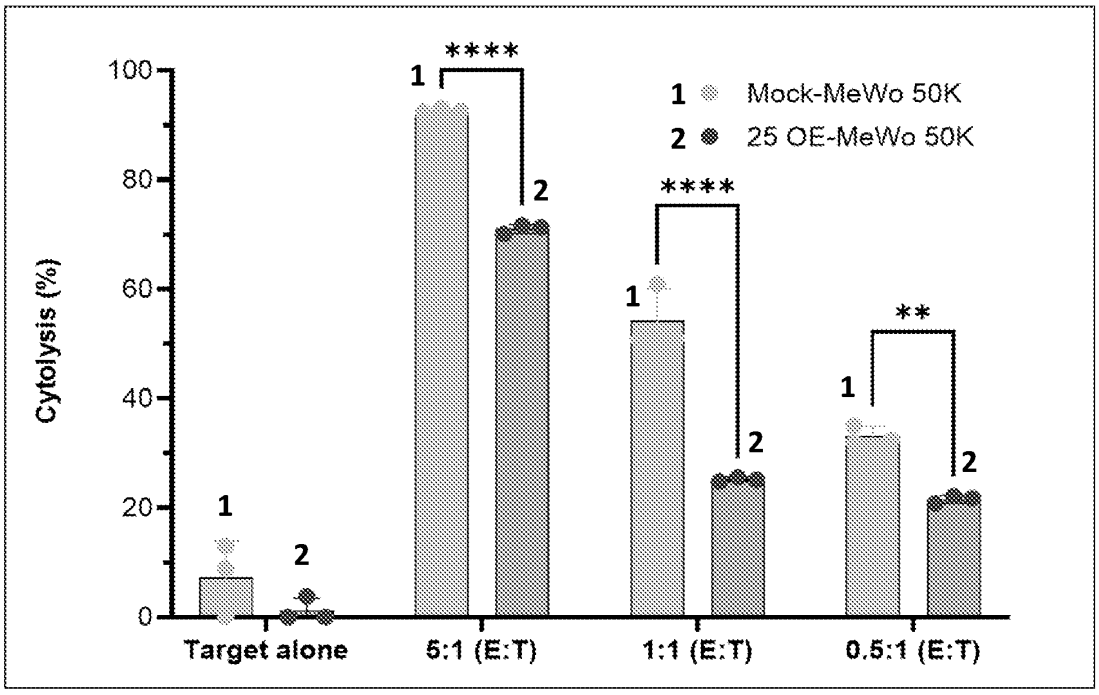
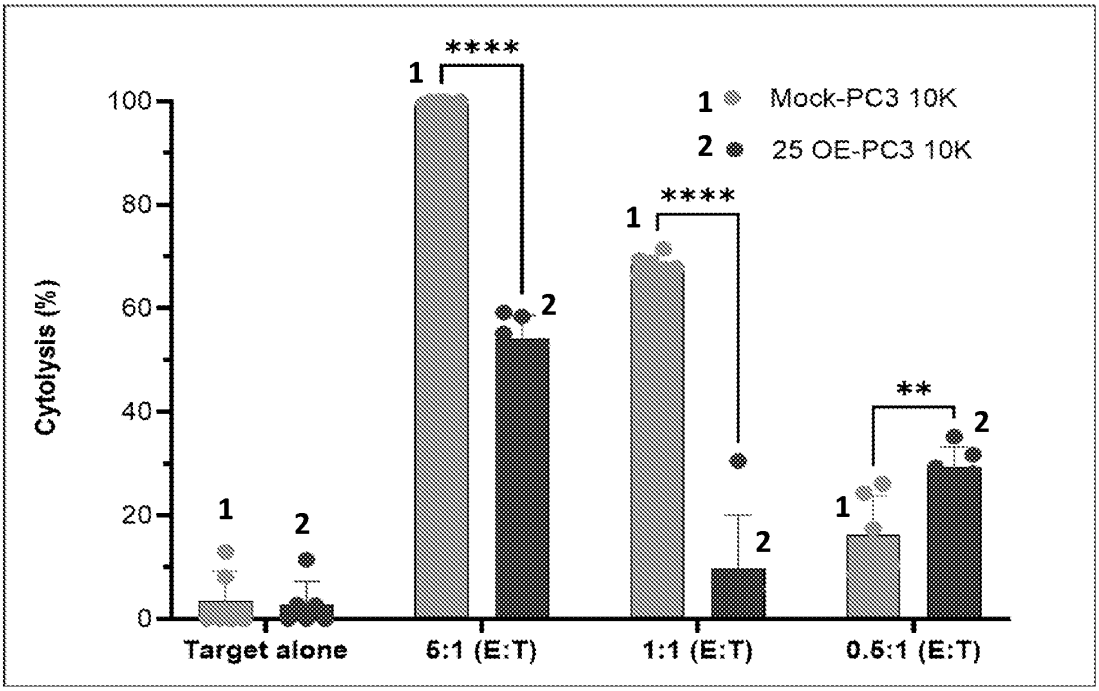


FIG. 14C



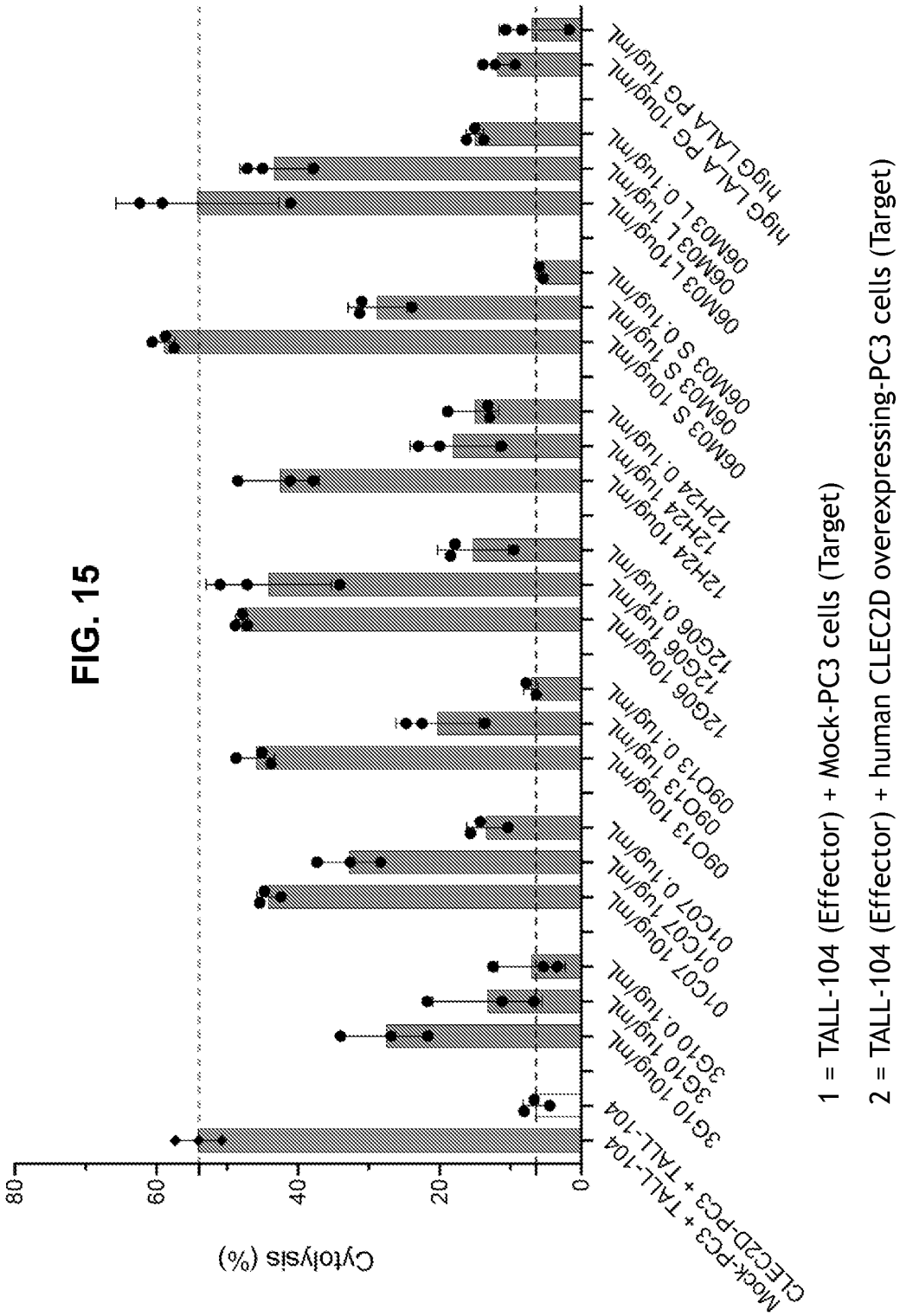

Cytolysis (%)
0
20
40
60
80
Mock-PC3 + TALL-104
CLEC2D-PC3 + TALL-104
3G10 10ug/mL
3G10 1ug/mL
3G10 0.1ug/mL
01C07 10ug/mL
01C07 1ug/mL
01C07 0.1ug/mL
09O13 10ug/mL
09O13 1ug/mL
09O13 0.1ug/mL
12G06 10ug/mL
12G06 1ug/mL
12G06 0.1ug/mL
12H24 10ug/mL
12H24 1ug/mL
12H24 0.1ug/mL
06M03 S 10ug/mL
06M03 S 1ug/mL
06M03 S 0.1ug/mL
06M03 L 10ug/mL
06M03 L 1ug/mL
06M03 L 0.1ug/mL
hIgG LALA PG 10ug/mL
hIgG LALA PG 1ug/mL
1 = TALL-104 (Effector) + Mock-PC3 cells (Target)
2 = TALL-104 (Effector) + human CLEC2D overexpressing-PC3 cells (Target)

FIG. 15

FIG. 16A

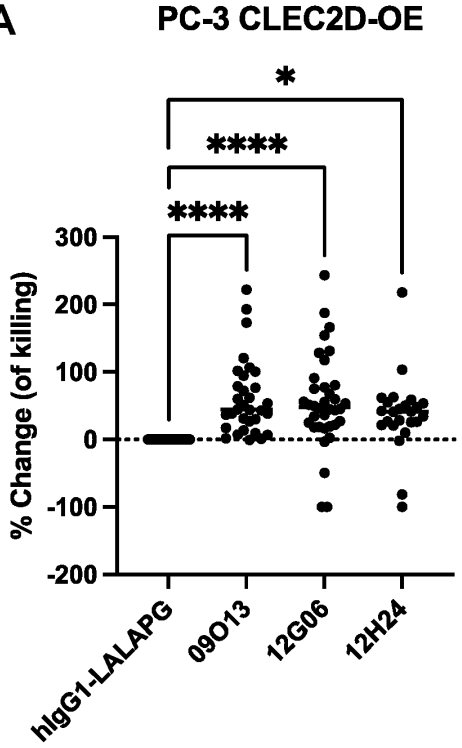


FIG. 16B

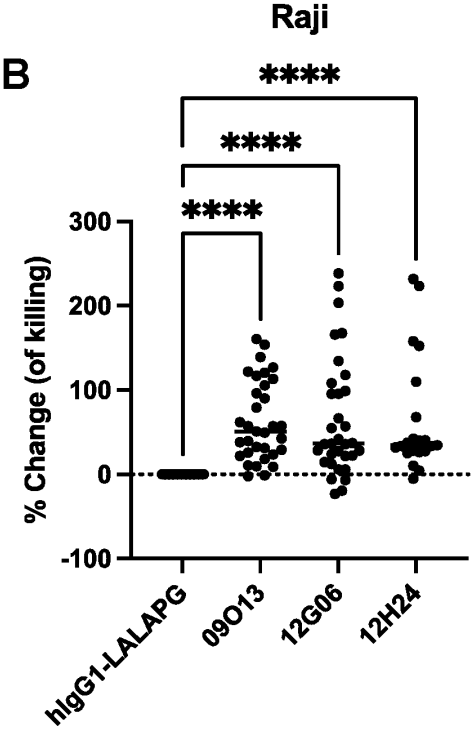


FIG. 17

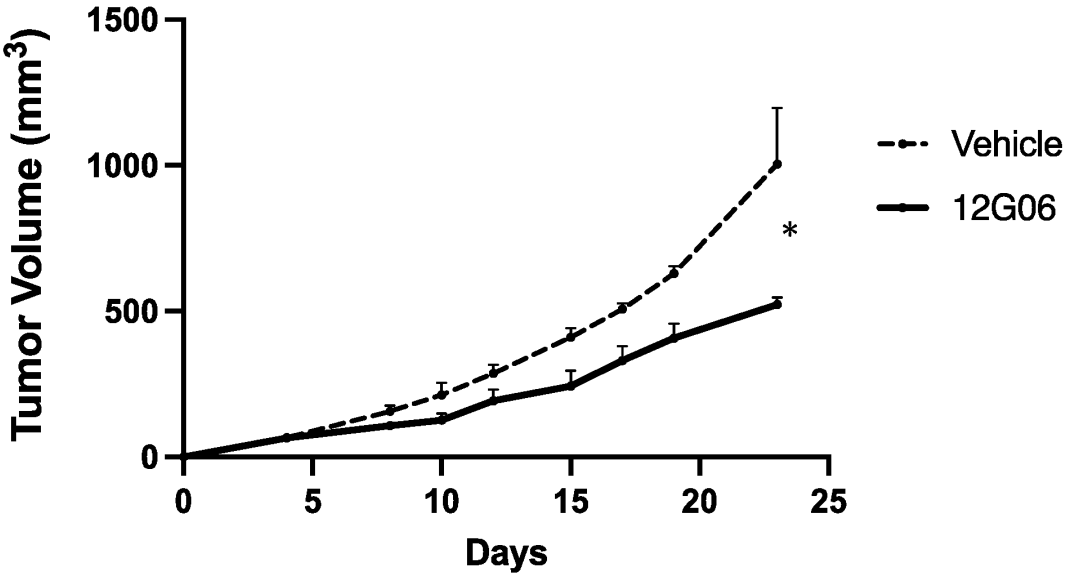

Tumor Volume (mm3)
1500
1000
500
0
0
5
10
15
20
25
Days
*
Vehicle
12G06

FIG. 18

