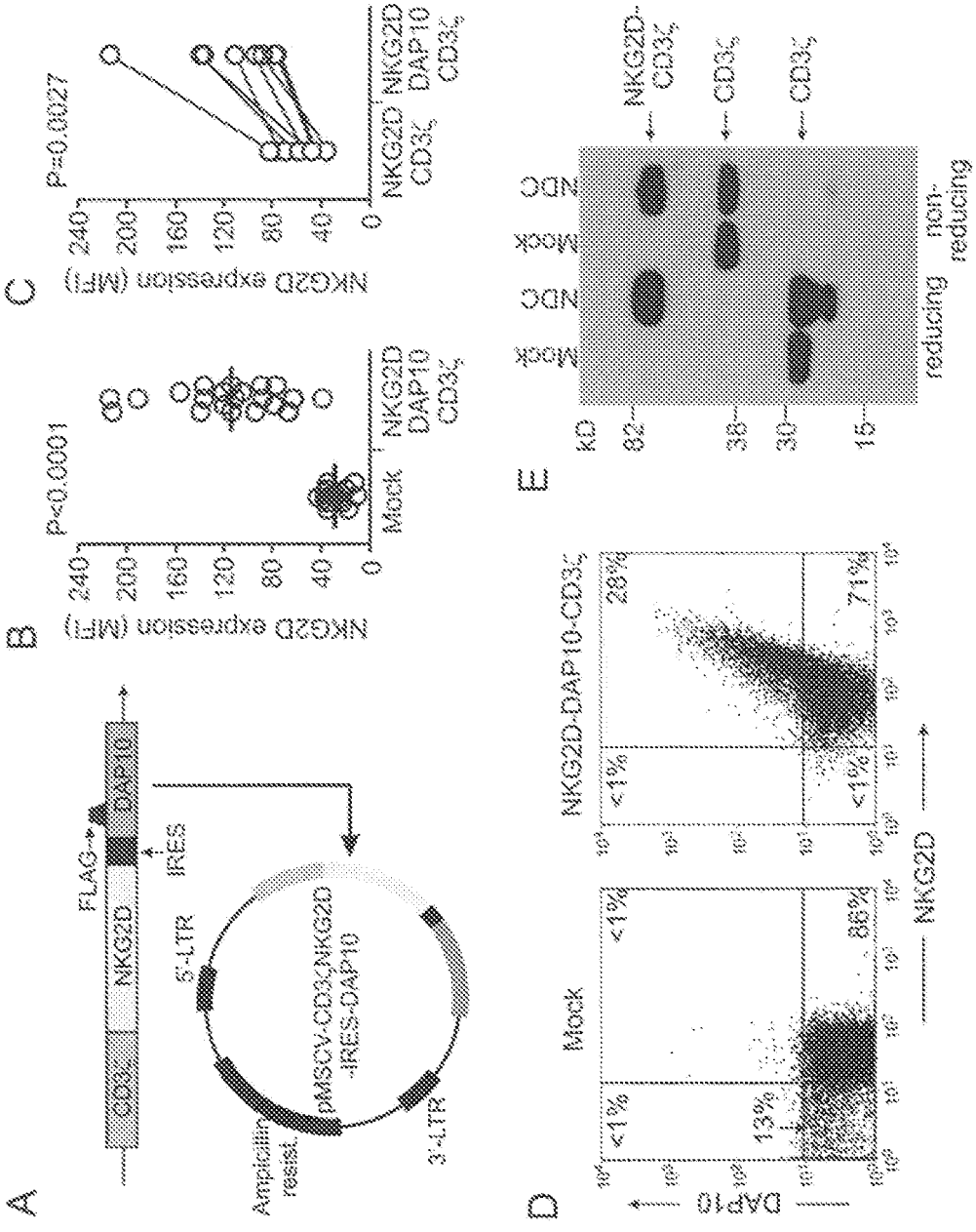

A
FLAG
CD3ζ
NKG2D
DAP10
IRES
5'-LTR
pMSCV-CD3ζNKG2D
-IRES-DAP10
Ampicillin
resist.
3'-LTR
B
P<0.0001
NKG2D expression (MFI)
240
200
160
120
80
40
0
Mock
NKG2D
DAP10
CD3ζ
C
P=0.0027
NKG2D expression (MFI)
240
200
160
120
80
40
0
NKG2D
CD3ζ
DAP10
CD3ζ
D
Mock
<1%
<1%
13%
86%
NKG2D-DAP10-CD3ζ
<1%
28%
<1%
71%
DAP10
NKG2D
E
kD
82
38
30
15
Mock
NDC
Mock
NDC
NKG2D-
CD3ζ
CD3ζ
CD3ζ
reducing
non-
reducing

FIG. 1

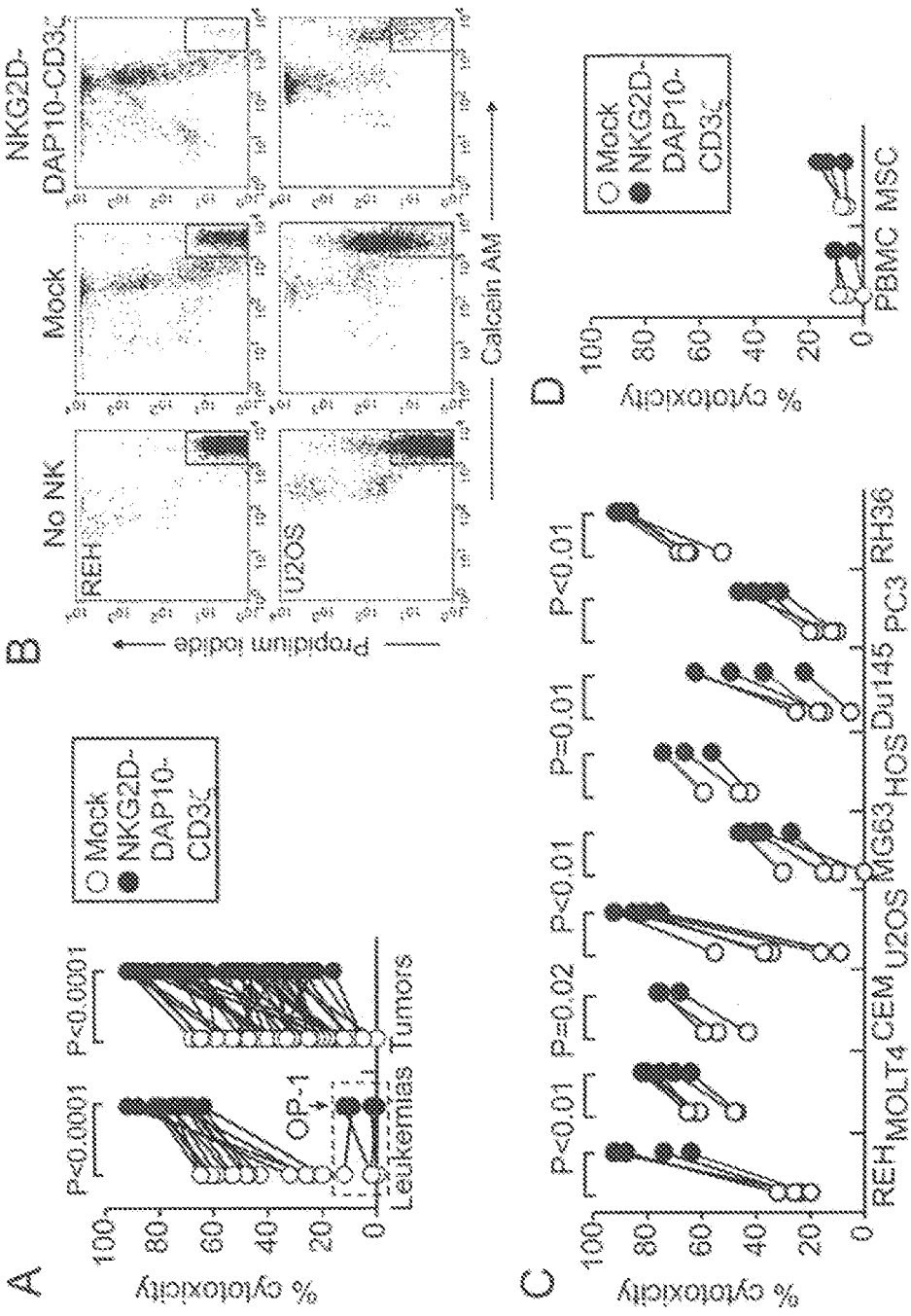

A
% cytotoxicity
P<0.0001
P<0.0001
OP-1
Leukemias
Tumors
○ Mock
● NKG2D-DAP10-CD3ζ
B
No NK
Mock
NKG2D-DAP10-CD3ζ
REH
U2OS
Propidium Iodide
Calcein AM
C
% cytotoxicity
P<0.01
P=0.02
P<0.01
P=0.01
P<0.01
REH
MOLT4
CEM
U2OS
MG63
HOS
Du145
PC3
RH36
○ Mock ● NKG2D-DAP10-CD3ζ
D
% cytotoxicity
○ Mock
● NKG2D-DAP10-CD3ζ
PBMC
MSC

FIG. 2

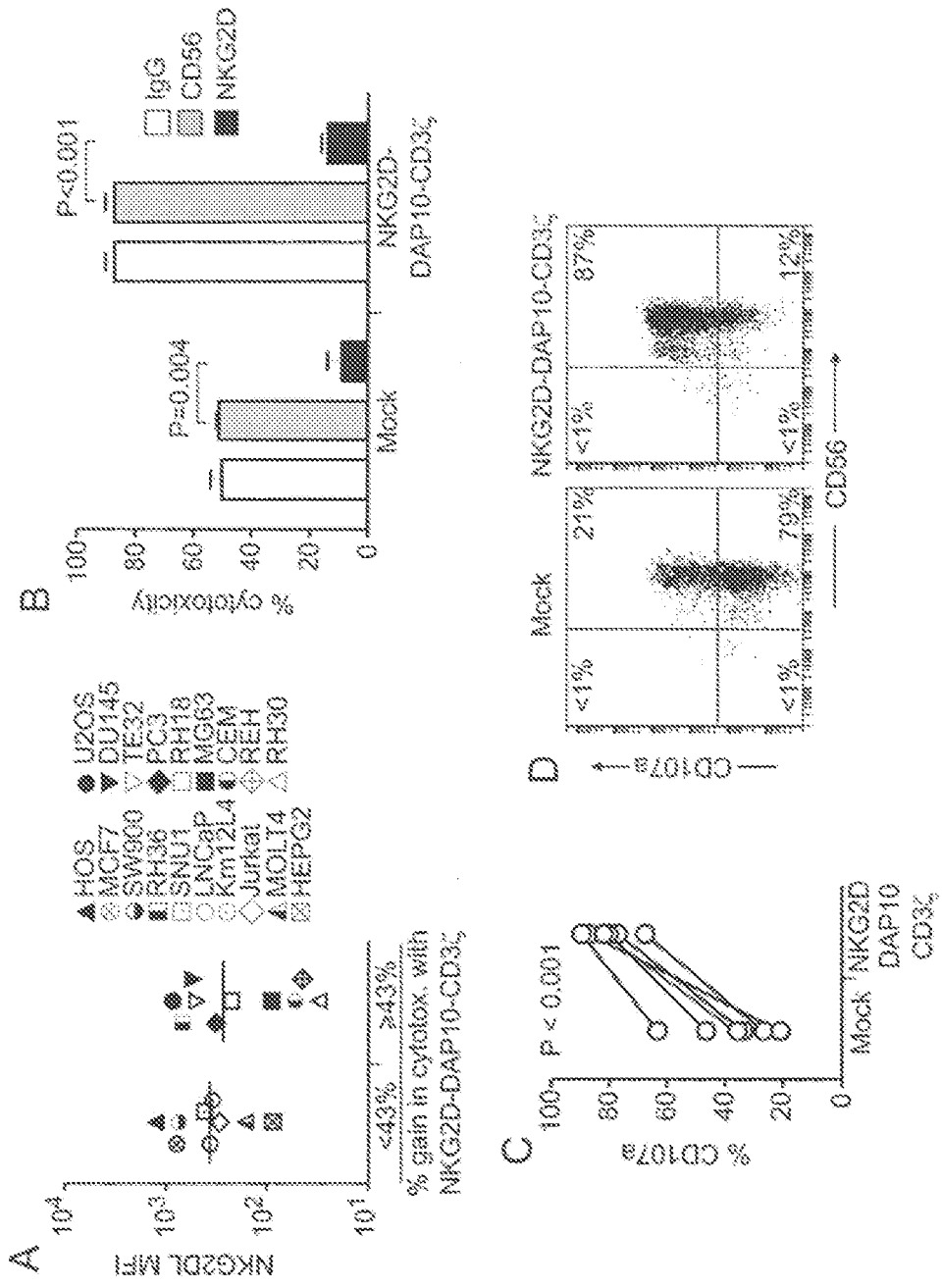

A
NKG2DL MFI
HOS
MCF7
SW900
RH36
SNU1
LNCaP
Km12L4
Jurkat
MOLT4
HEPG2
U2OS
DU145
TE32
PC3
RH18
MG63
CEM
REH
RH30
<43%
≥43%
% gain in cytotox. with NKG2D-DAP10-CD3ζ
B
% cytotoxicity
P=0.004
P<0.001
Mock
NKG2D-DAP10-CD3ζ
IgG
CD56
NKG2D
C
% CD107a
P < 0.001
Mock
NKG2D DAP10 CD3ζ
D
Mock
NKG2D-DAP10-CD3ζ
<1%
21%
79%
87%
12%
CD107a
CD56

FIG. 3

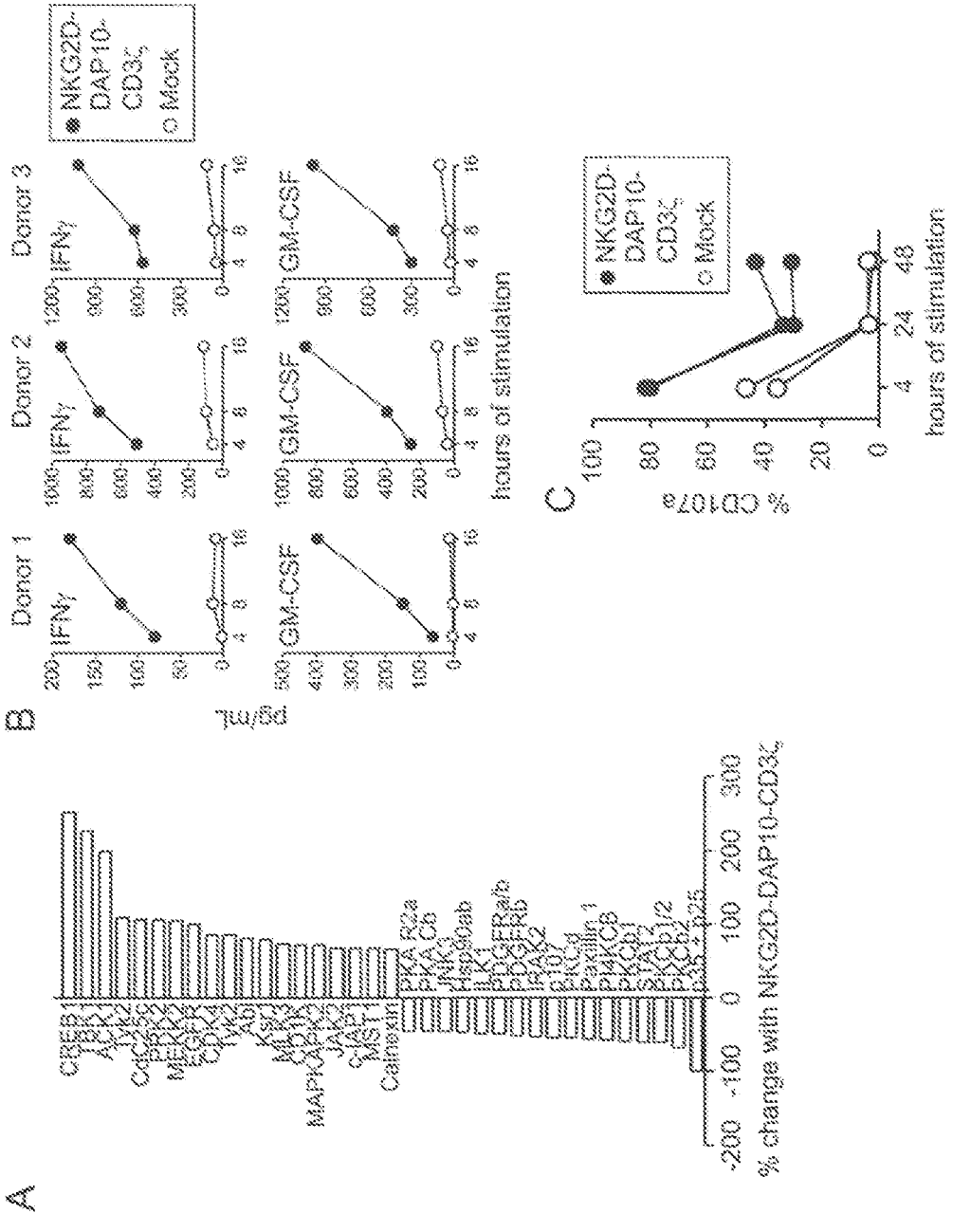

A
CREB1
TBK1
ATR
Jak2
CaMKK2
PRKX
MEK6
MEK5
PDK1
Lyn
Akt3
Ksr1
MLK3
CDK9
MAPKAPK5
JAK3
STAT1
MST1
Calmodulin
PKA R2a
PKA C
JNK3
Hsp90ab
HCK
PDGFRa/b
PDGFRb
FRAP2
PKC-d
PKC-a
Paxillin
PI4KCB
PKCb1
STAT2
PKCb1/2
PKCb2
AB1-425
-200 -100 0 100 200 300
% change with NKG2D-DAP10-CD3ζ
B
Donor 1
Donor 2
Donor 3
IFNγ
GM-CSF
pg/mL
hours of stimulation
NKG2D-DAP10-CD3ζ
Mock
C
% CD107a
hours of stimulation
NKG2D-DAP10-CD3ζ
Mock

FIG. 4

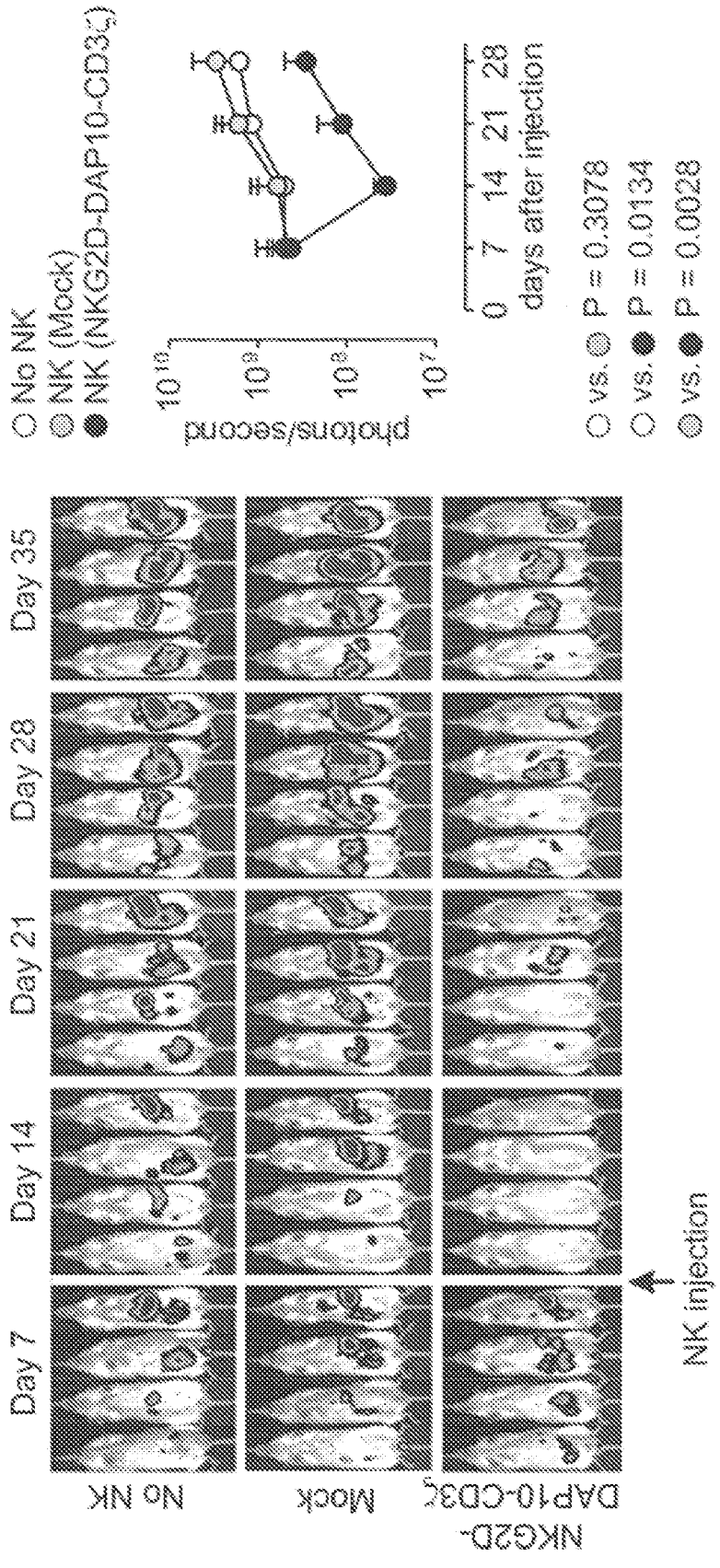

No NK
NK (Mock)
NK (NKG2D-DAP10-CD3ζ)
photone/second
10^{10}
10^{9}
10^{8}
10^{7}
0 7 14 21 28
days after injection
vs. P = 0.3078
vs. P = 0.0134
vs. P = 0.0028
Day 7
Day 14
Day 21
Day 28
Day 35
No NK
Mock
NKG2D-DAP10-CD3ζ
NK injection

FIG. 5

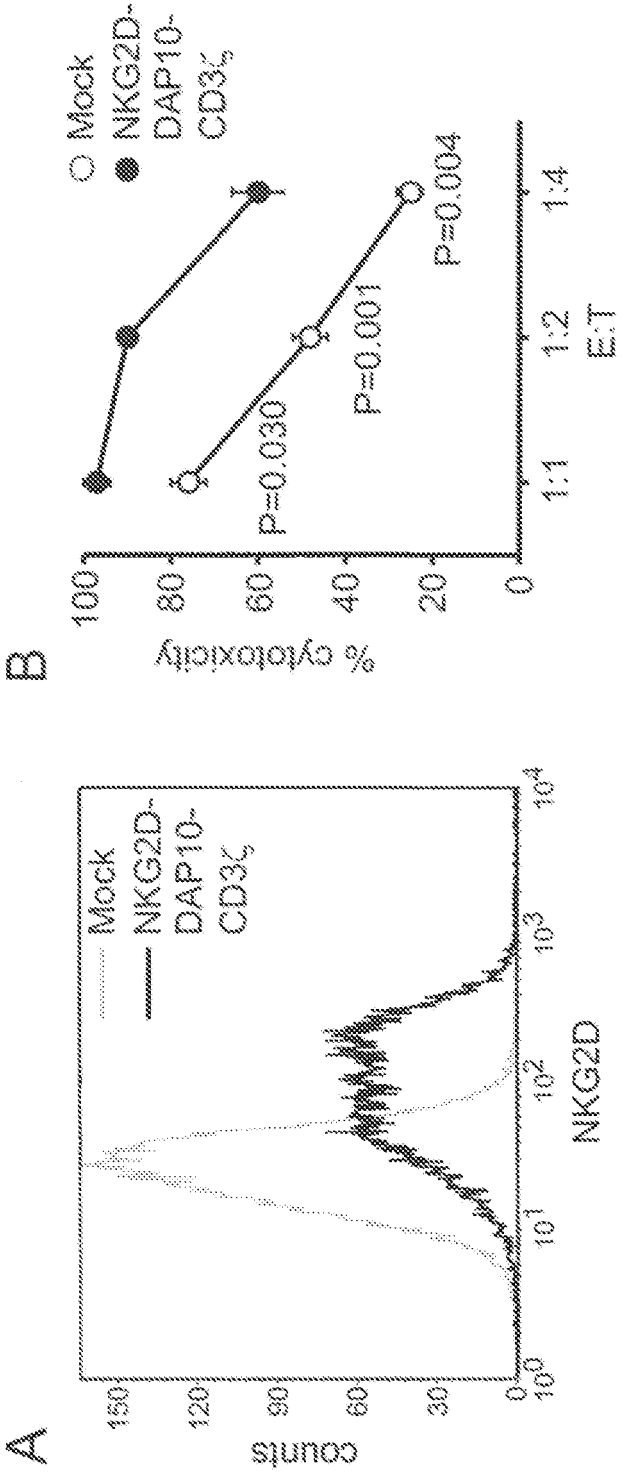

A
counts
150
120
90
60
30
0
Mock
NKG2D-DAP10-CD3ζ
10^0
10^1
10^2
10^3
10^4
NKG2D
B
% cytotoxicity
100
80
60
40
20
0
Mock
NKG2D-DAP10-CD3ζ
P=0.030
P=0.001
P=0.004
1:1
1:2
1:4
E:T

FIG. 6

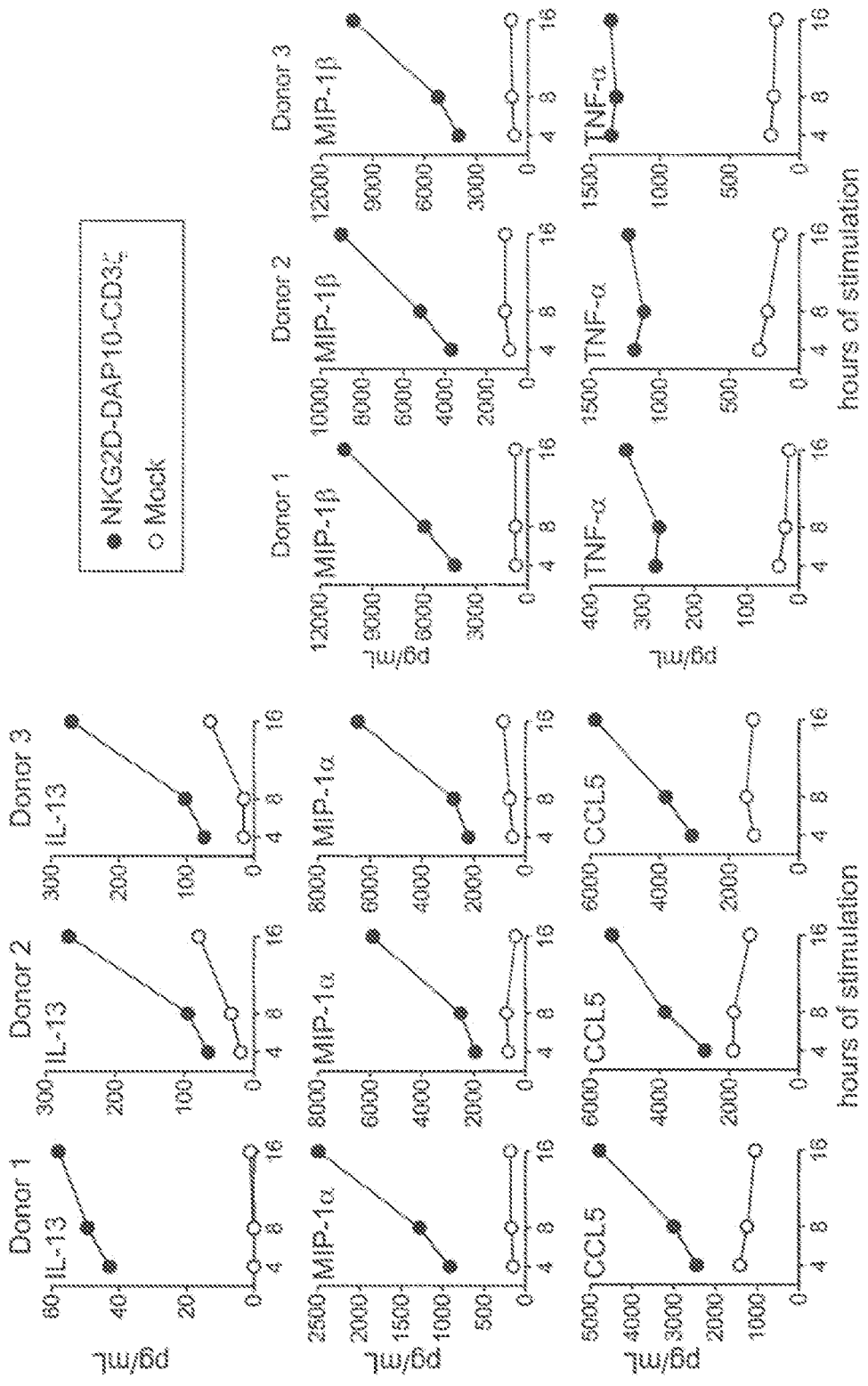

NKG2D-DAP10-CD3ζ
Mock
Donor 1
Donor 2
Donor 3
IL-13
MIP-1α
CCL5
MIP-1β
TNF-α
pg/mL
hours of stimulation

FIG. 7