FIG. 1

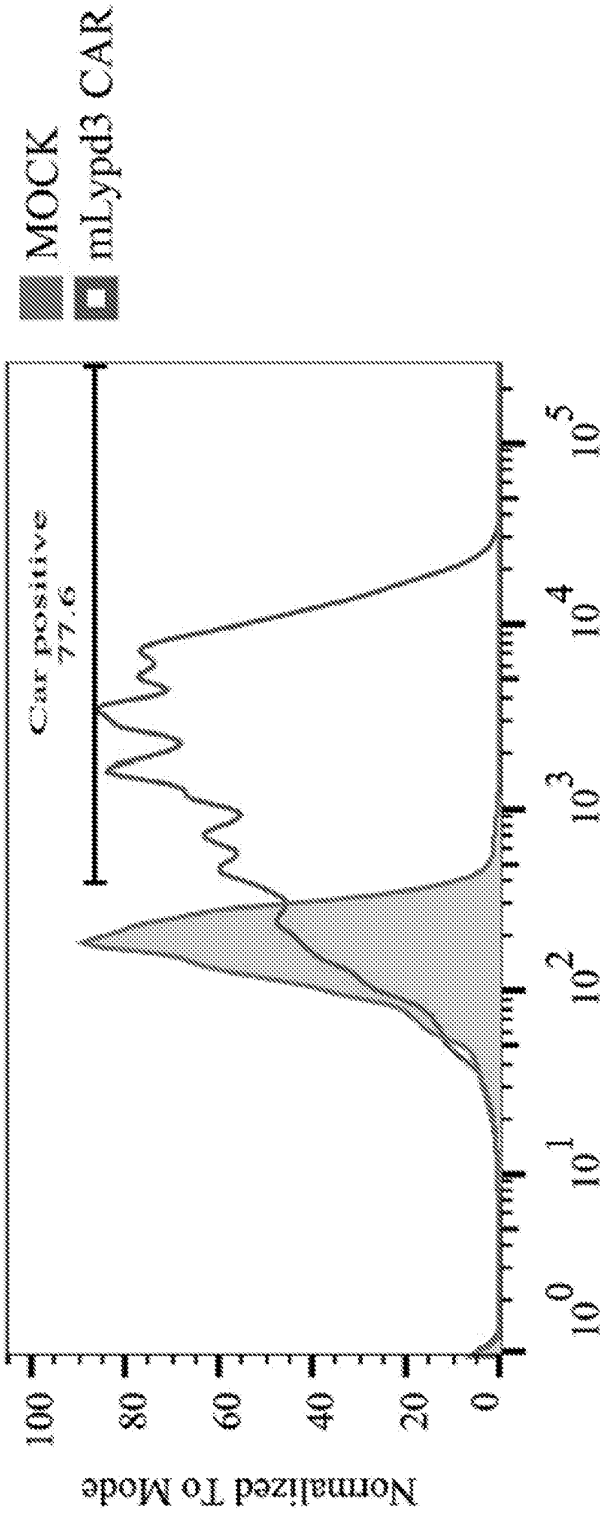

MOCK
mLypd3 CAR
Car positive
77.6
Normalized To Mode
100
80
60
40
20
0
10^0
10^1
10^2
10^3
10^4
10^5

FIG. 2

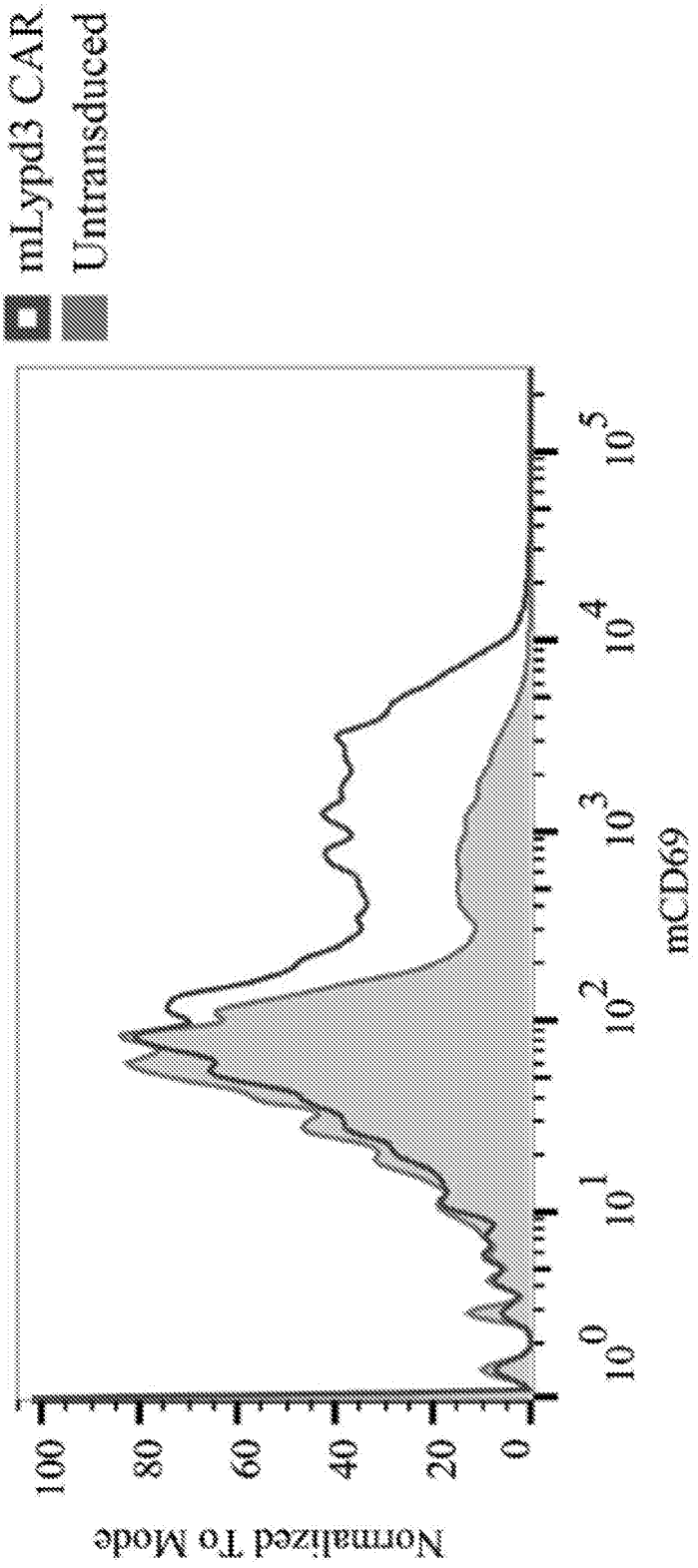

mLypd3 CAR
Untransduced
Normalized To Mode
100
80
60
40
20
0
10^0
10^1
10^2
10^3
10^4
10^5
mCD69

FIG. 3

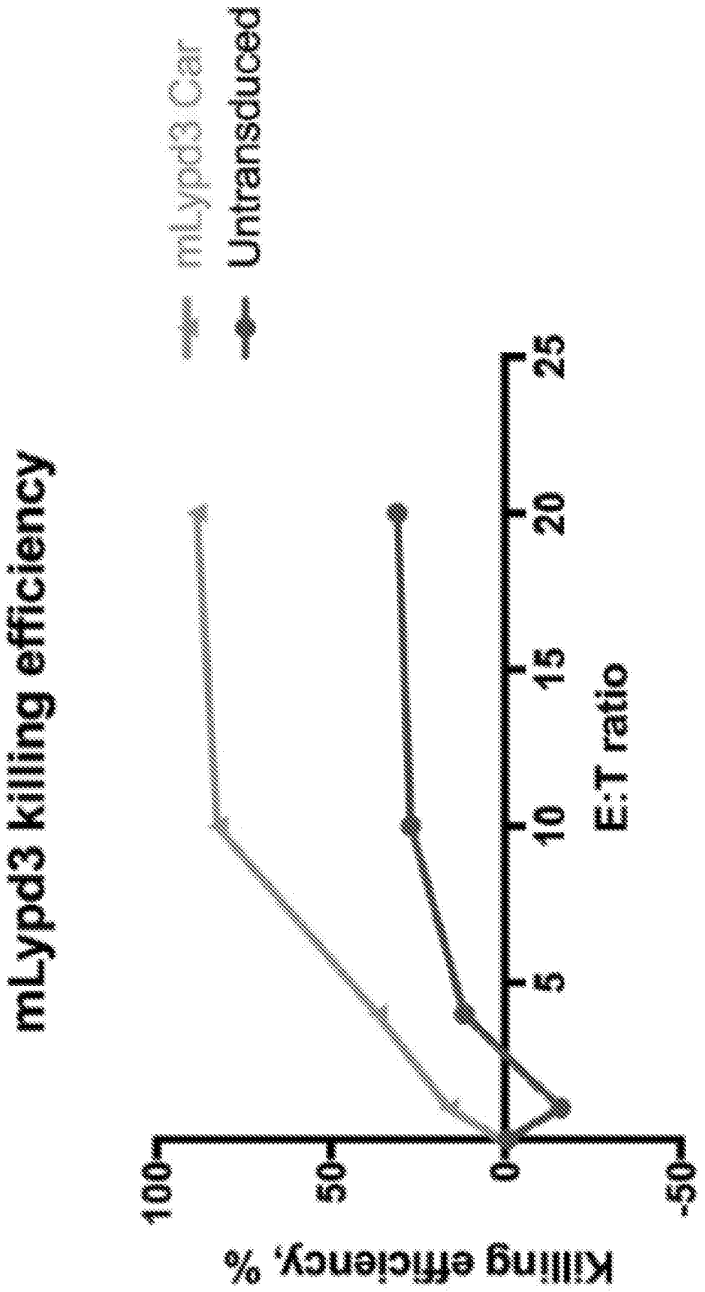

mLypd3 killing efficiency
mLypd3 Car
Untransduced
Killing efficiency, %
100
50
0
-50
5
10
15
20
25
E:T ratio

FIG. 4A

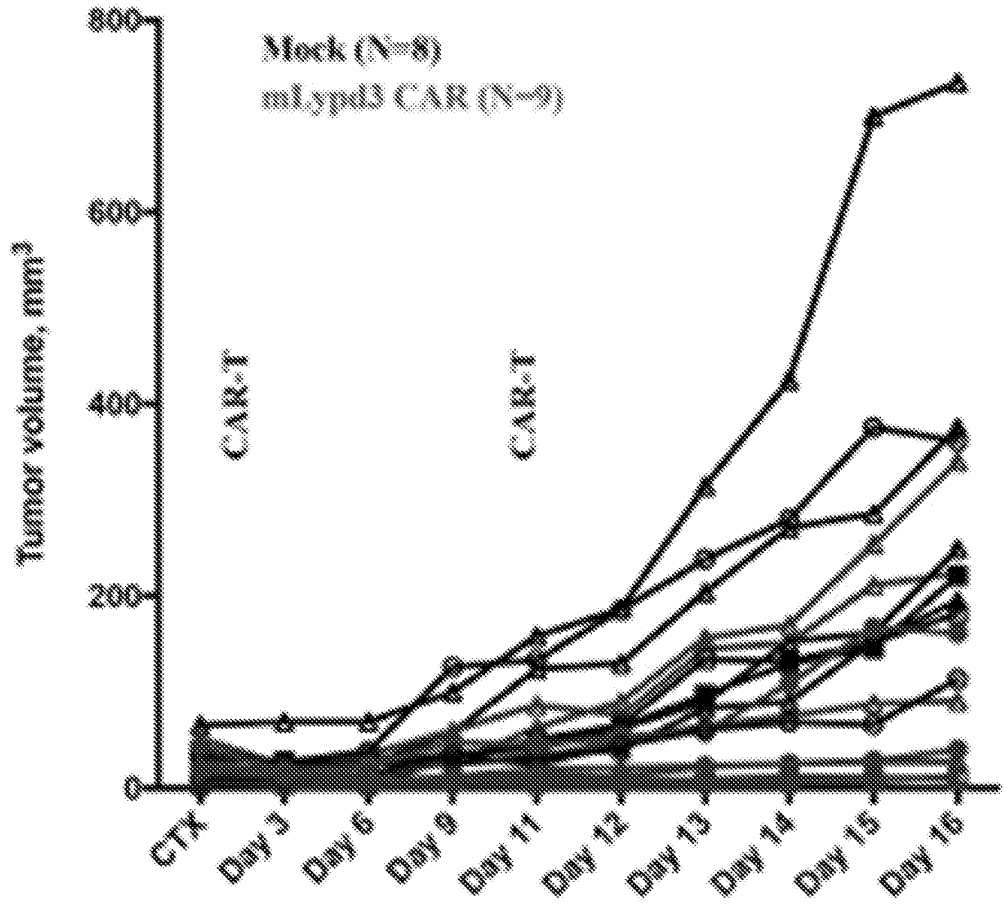

Mock (N=8)
mLypd3 CAR (N=9)
Tumor volume, (mm)3
800
600
400
200
0
CAR-T
CAR-T
CTX
Day 3
Day 6
Day 9
Day 11
Day 12
Day 13
Day 14
Day 15
Day 16

FIG. 4B

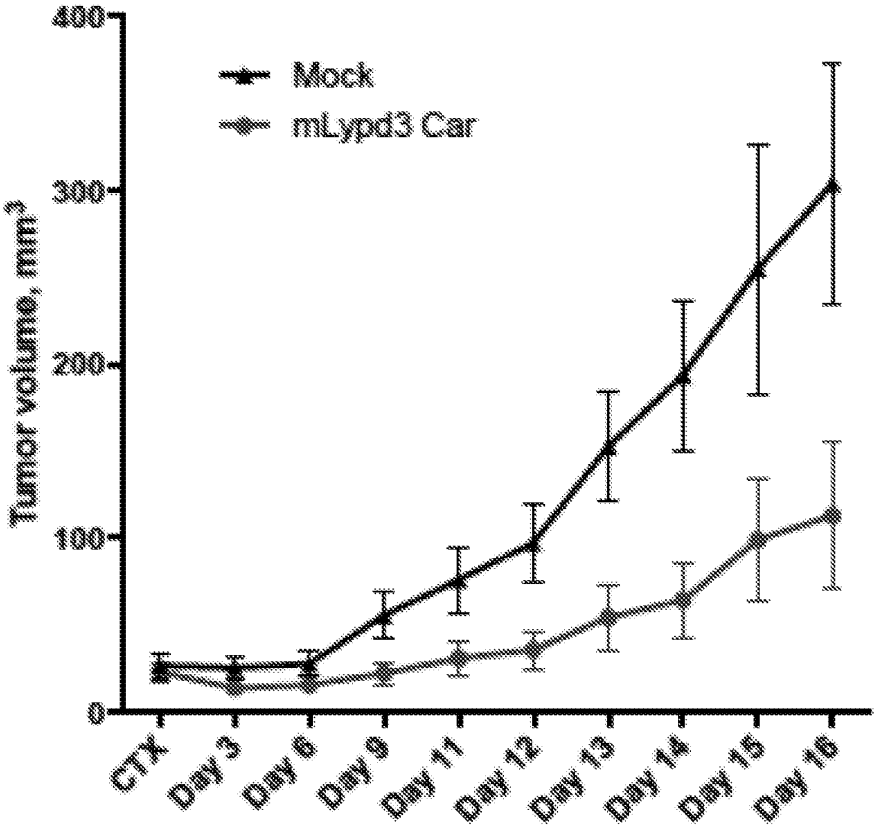

400
300
200
100
0
Tumor volume, mm3
Mock
mLypd3 Car
CTX
Day 3
Day 6
Day 9
Day 11
Day 12
Day 13
Day 14
Day 15
Day 16

FIG. 4C

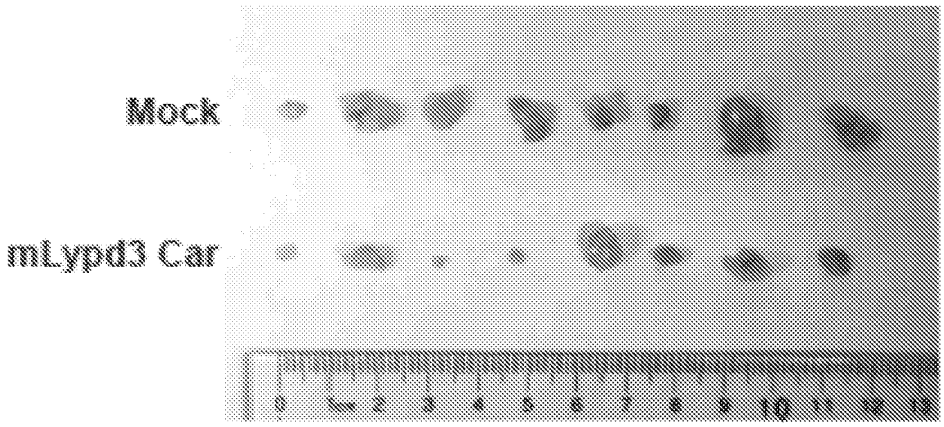


FIG. 4D

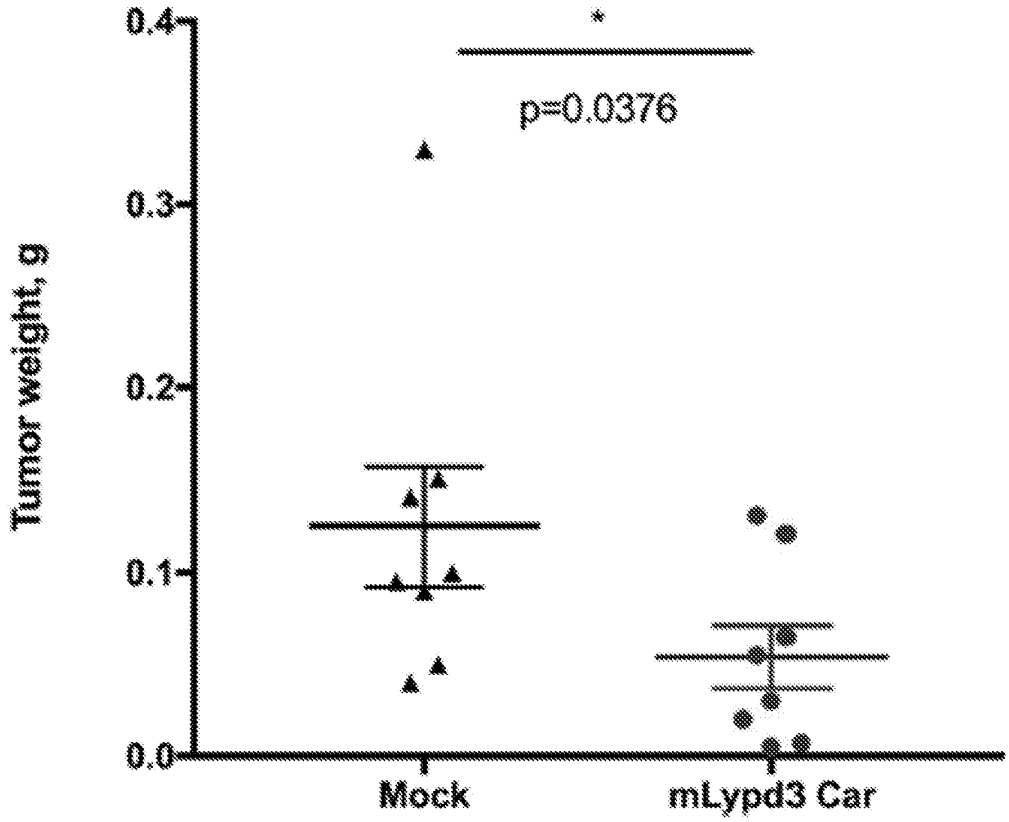


FIG. 5

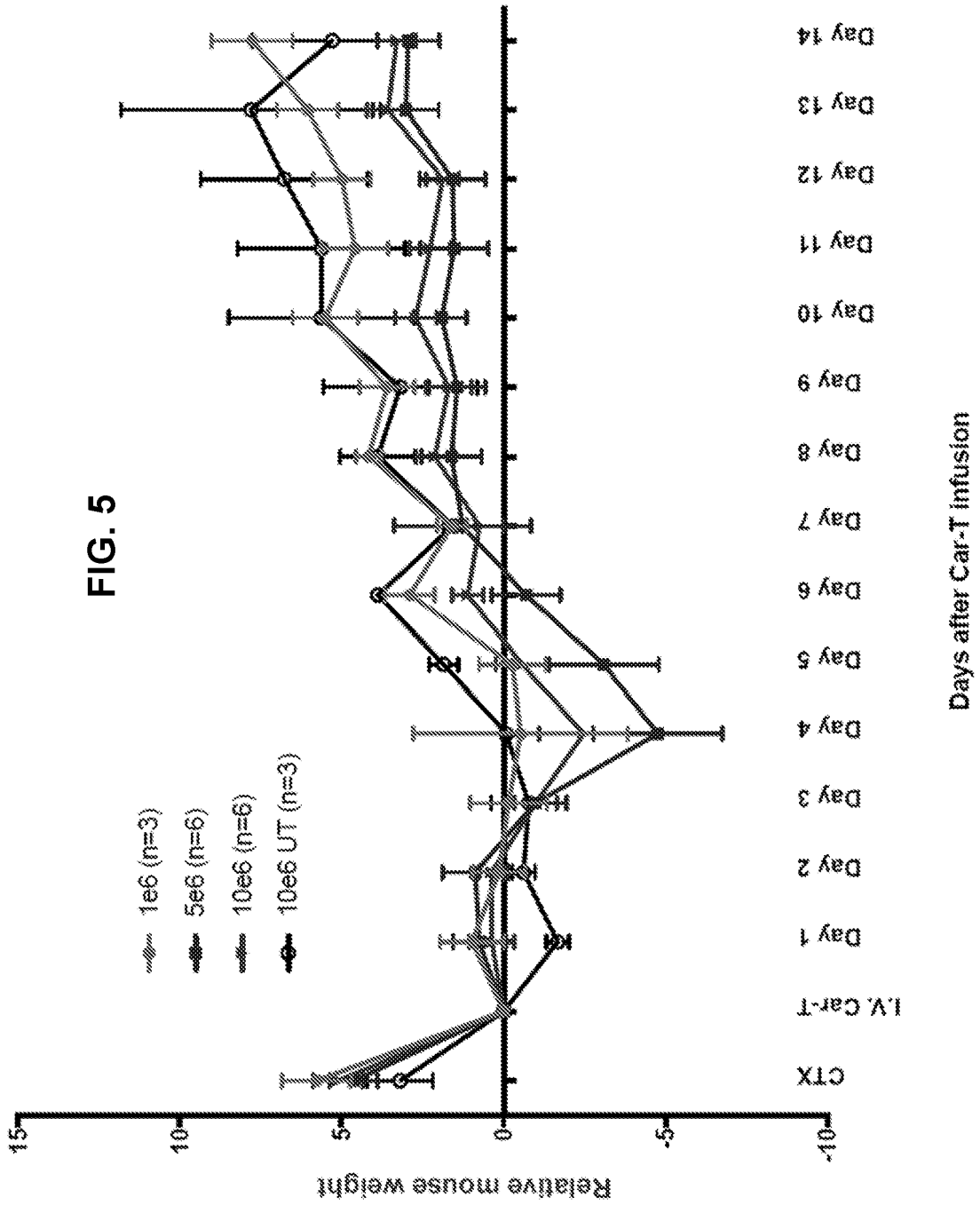

Relative mouse weight
15
10
5
0
-5
-10
CTX
I.V. Car-T
Day 1
Day 2
Day 3
Day 4
Day 5
Day 6
Day 7
Day 8
Day 9
Day 10
Day 11
Day 12
Day 13
Day 14
Days after Car-T infusion
1e6 (n=3)
5e6 (n=6)
10e6 (n=6)
10e6 UT (n=3)

FIG. 6A

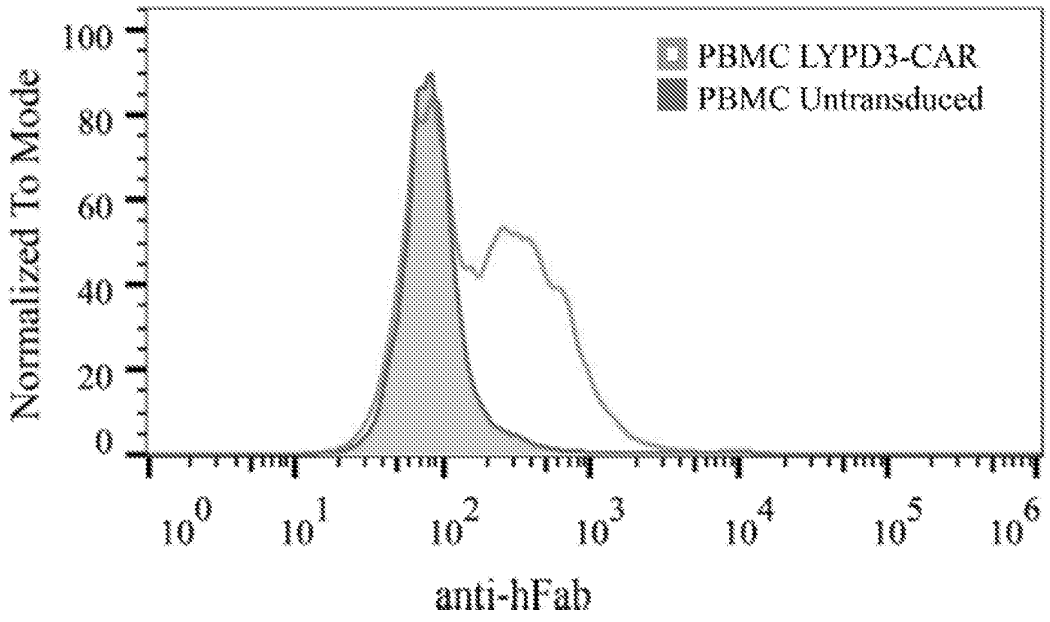

PBMC LYPD3-CAR
PBMC Untransduced
Normalized To Mode
100
80
60
40
20
0
10^0
10^1
10^2
10^3
10^4
10^5
10^6
anti-hFab

FIG. 6B

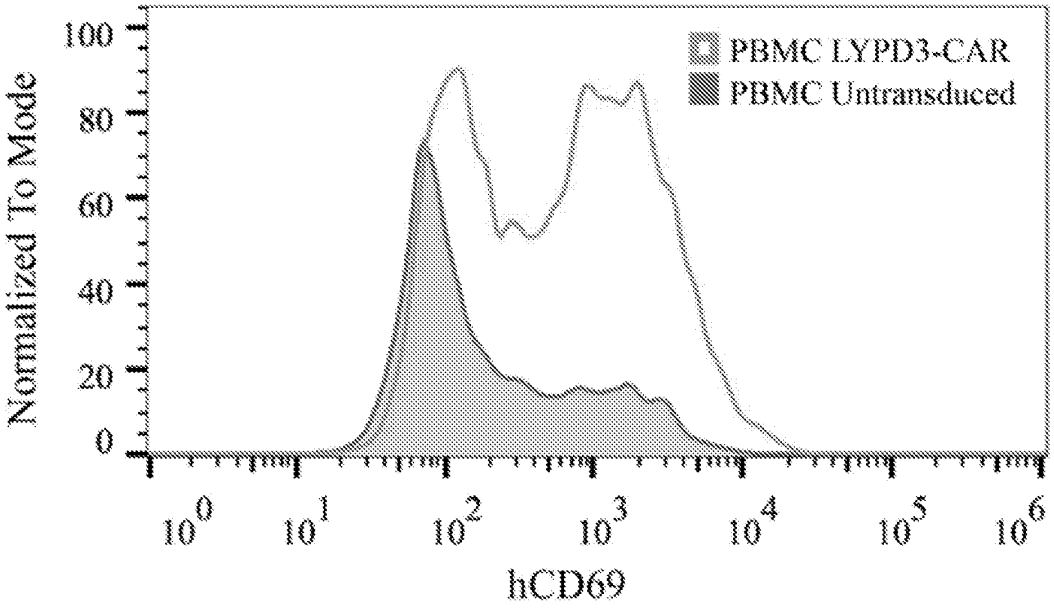

PBMC LYPD3-CAR
PBMC Untransduced
Normalized To Mode
100
80
60
40
20
0
10^0
10^1
10^2
10^3
10^4
10^5
10^6
hCD69

FIG. 6C

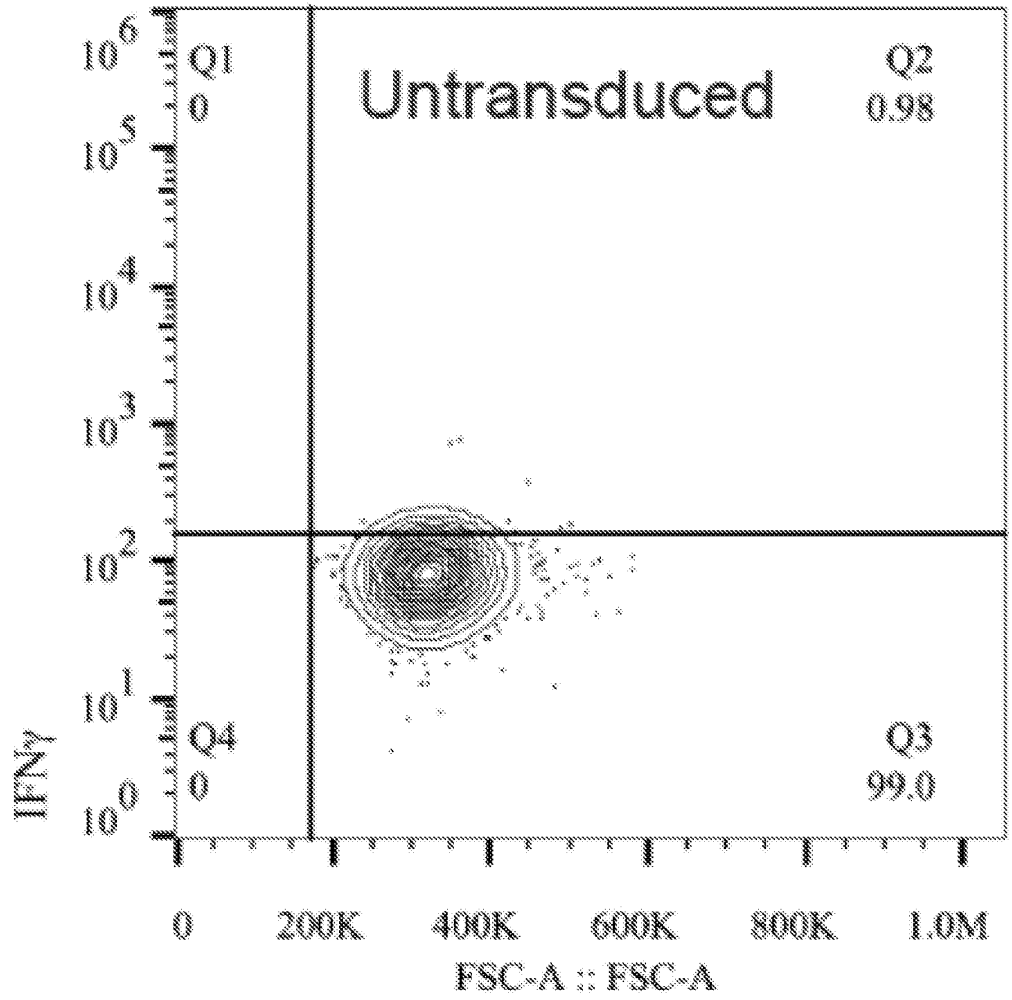

Untransduced
Q1
0
Q2
0.98
Q4
0
Q3
99.0
IFNγ
10^6
10^5
10^4
10^3
10^2
10^1
10^0
0
200K
400K
600K
800K
1.0M
FSC-A :: FSC-A

FIG. 6D

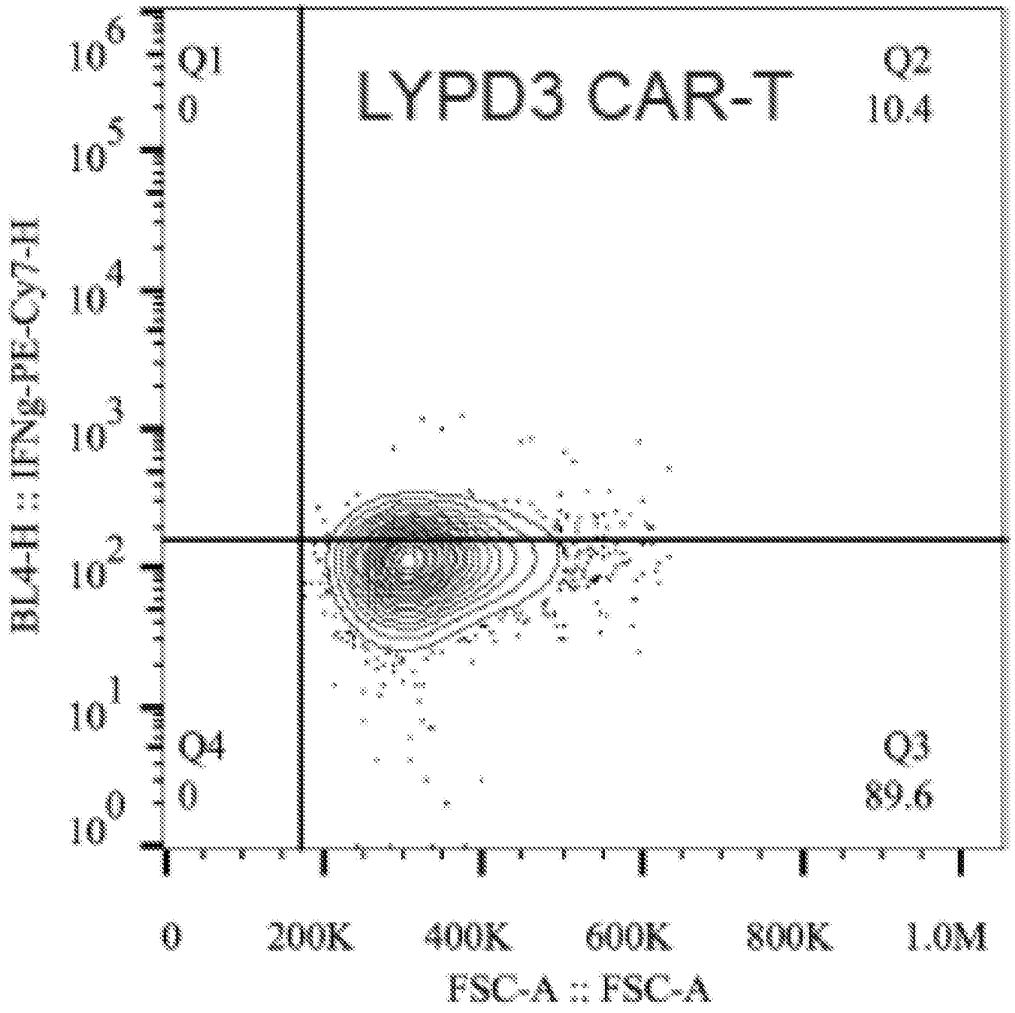
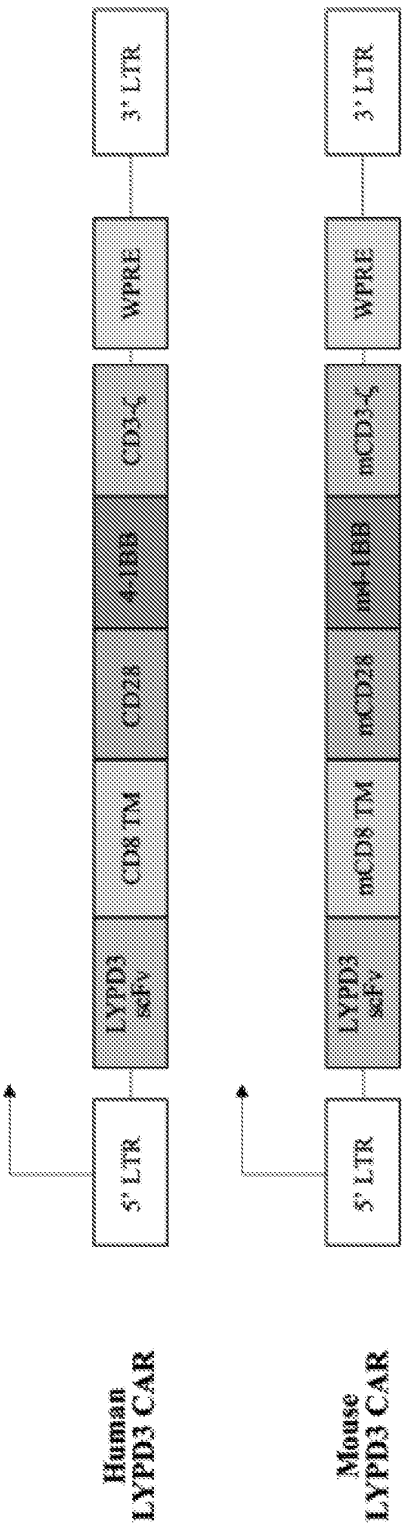

LYPD3 CAR-T
Q1
0
Q2
10.4
Q4
0
Q3
89.6
BL4-H :: IFNg-PE-Cy7-H
10^6
10^5
10^4
10^3
10^2
10^1
10^0
0
200K
400K
600K
800K
1.0M
FSC-A :: FSC-A

FIG. 7


5' LTR
LYPD3 scFv
CD8 TM
CD28
4-1BB
CD3-ζ
WPRE
3' LTR
Human LYPD3 CAR
5' LTR
LYPD3 scFv
mCD8 TM
mCD28
mod-1BB
mCD3-ζ
WPRE
3' LTR
Mouse LYPD3 CAR