FIG. 1A

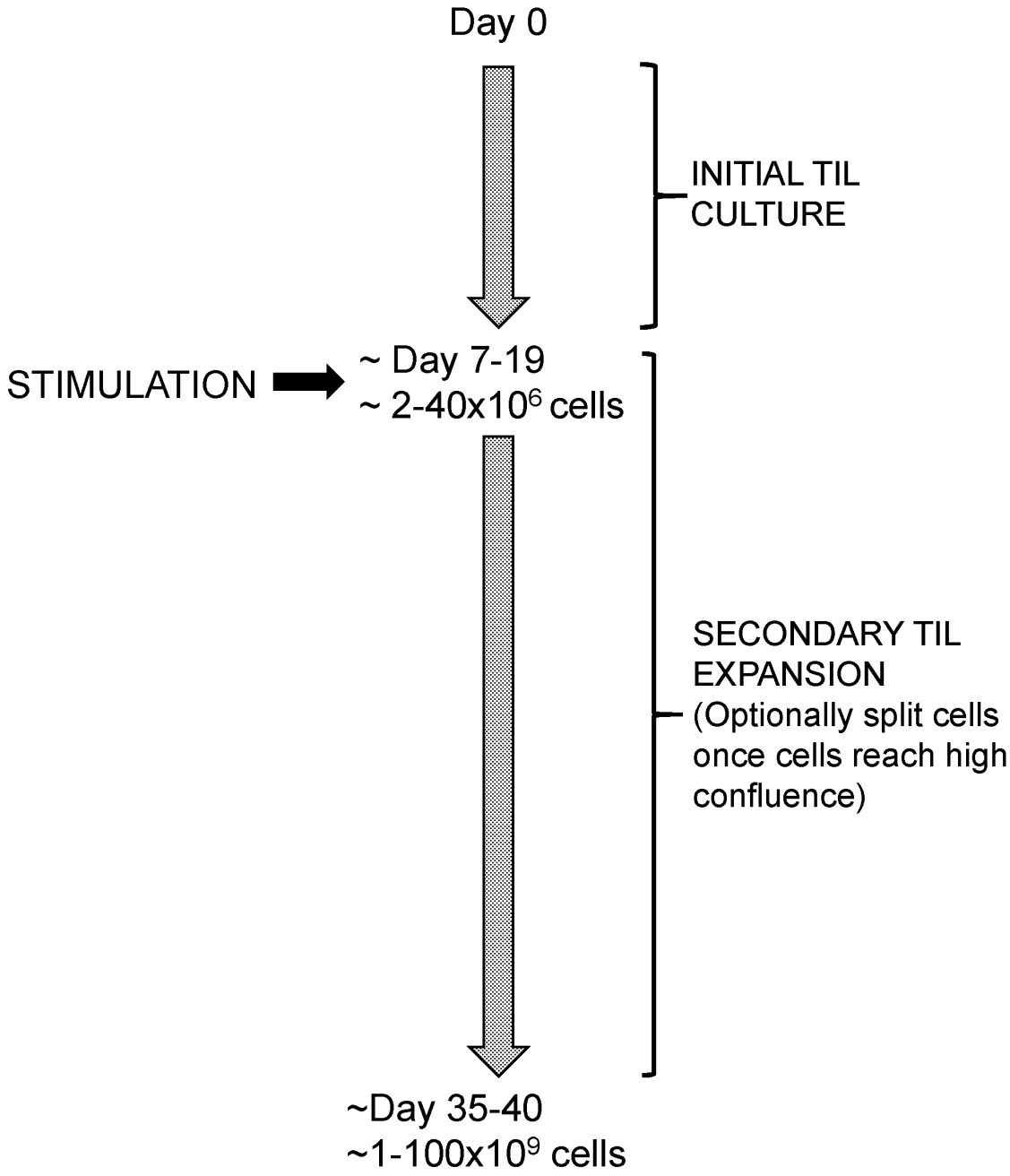

Day 0
INITIAL TIL CULTURE
STIMULATION
~ Day 7-19
~ 2-40x10^6 cells
SECONDARY TIL EXPANSION
(Optionally split cells once cells reach high confluence)
~Day 35-40
~1-100x10^9 cells

FIG. 1B

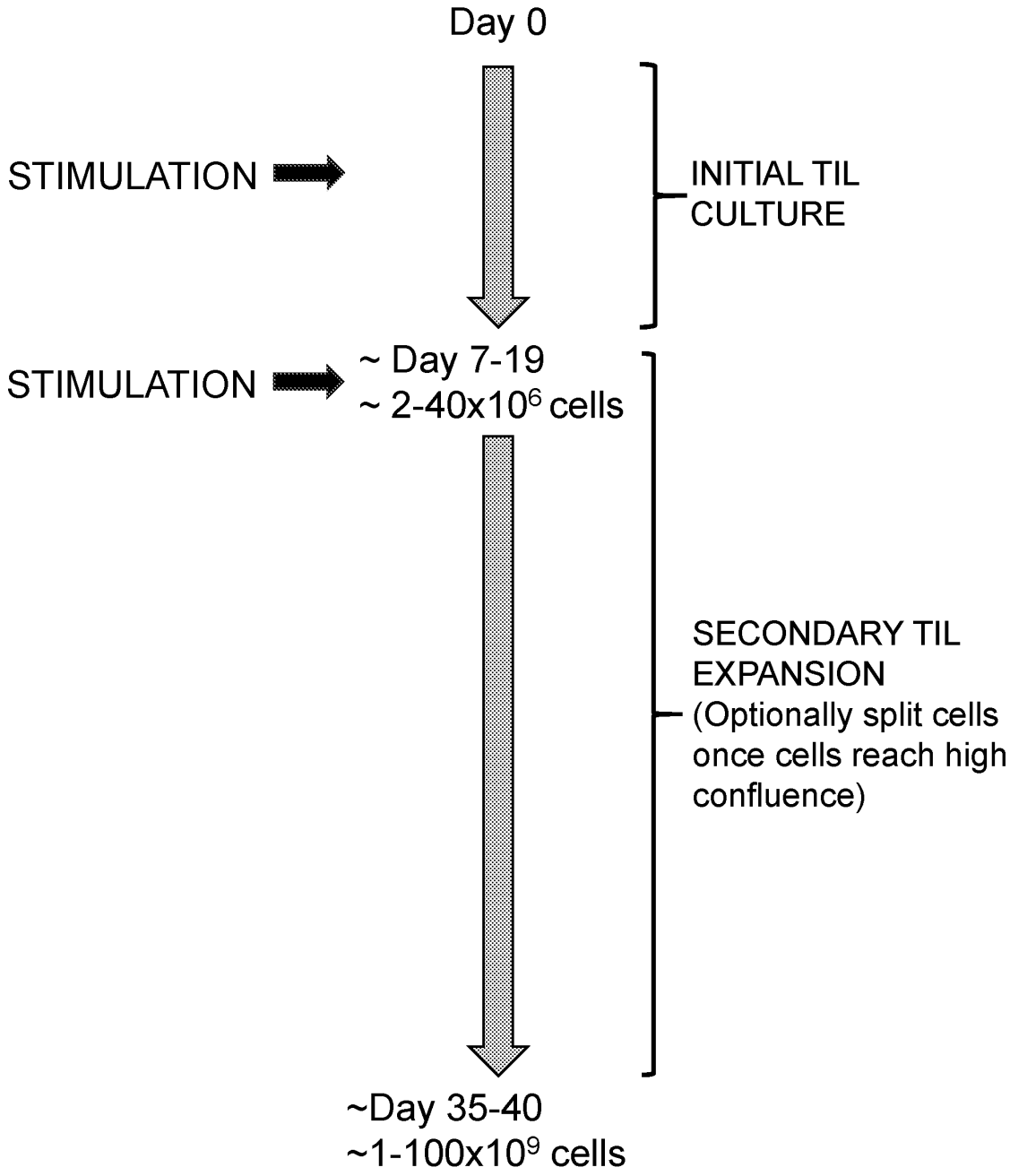

Day 0
STIMULATION
INITIAL TIL CULTURE
STIMULATION
~ Day 7-19
~ 2-40x10^6 cells
SECONDARY TIL EXPANSION
(Optionally split cells once cells reach high confluence)
~Day 35-40
~1-100x10^9 cells

FIG. 1C

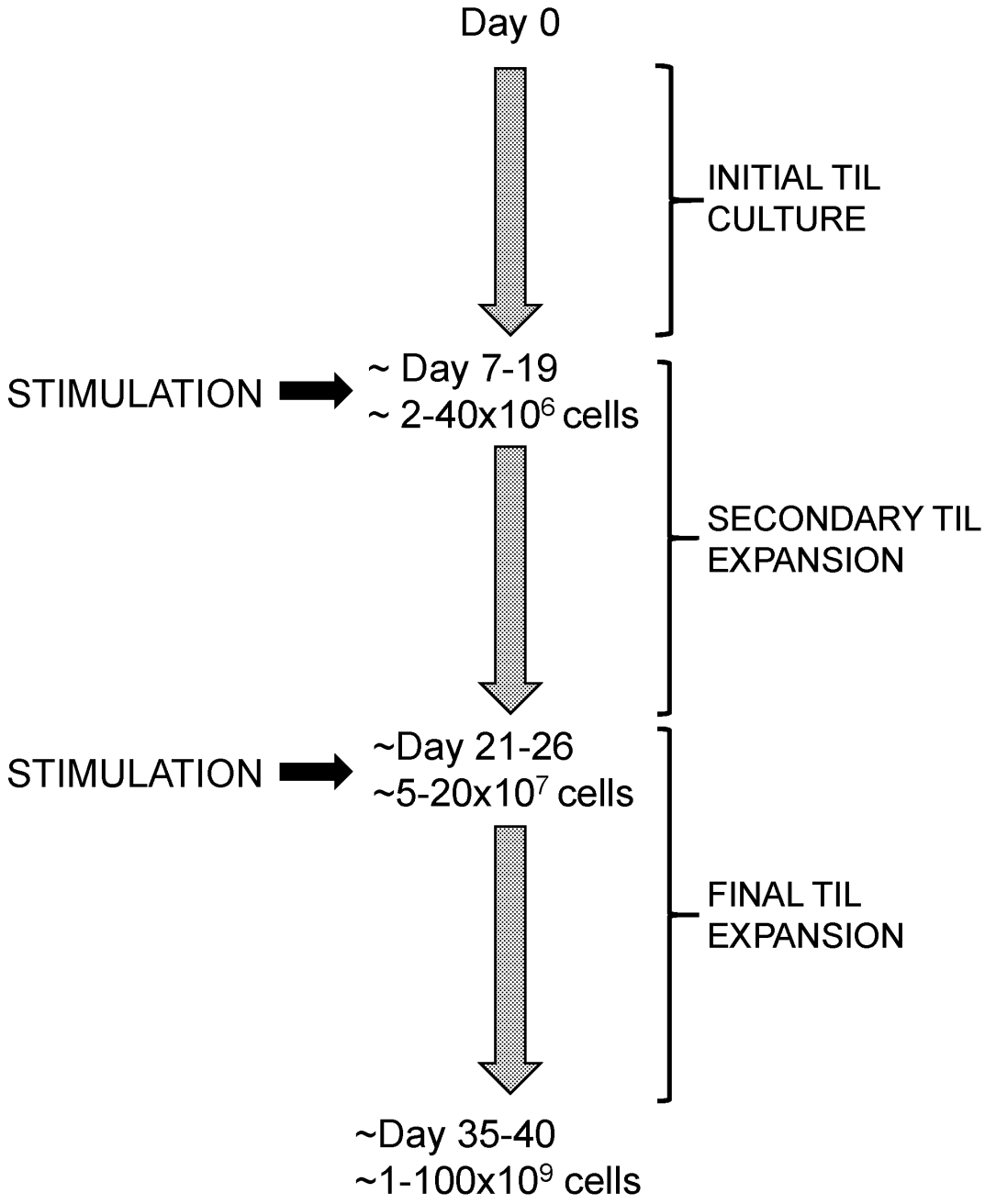

Day 0
INITIAL TIL CULTURE
STIMULATION
~ Day 7-19
~ 2-40x10^6 cells
SECONDARY TIL EXPANSION
STIMULATION
~Day 21-26
~5-20x10^7 cells
FINAL TIL EXPANSION
~Day 35-40
~1-100x10^9 cells

FIG. 1D

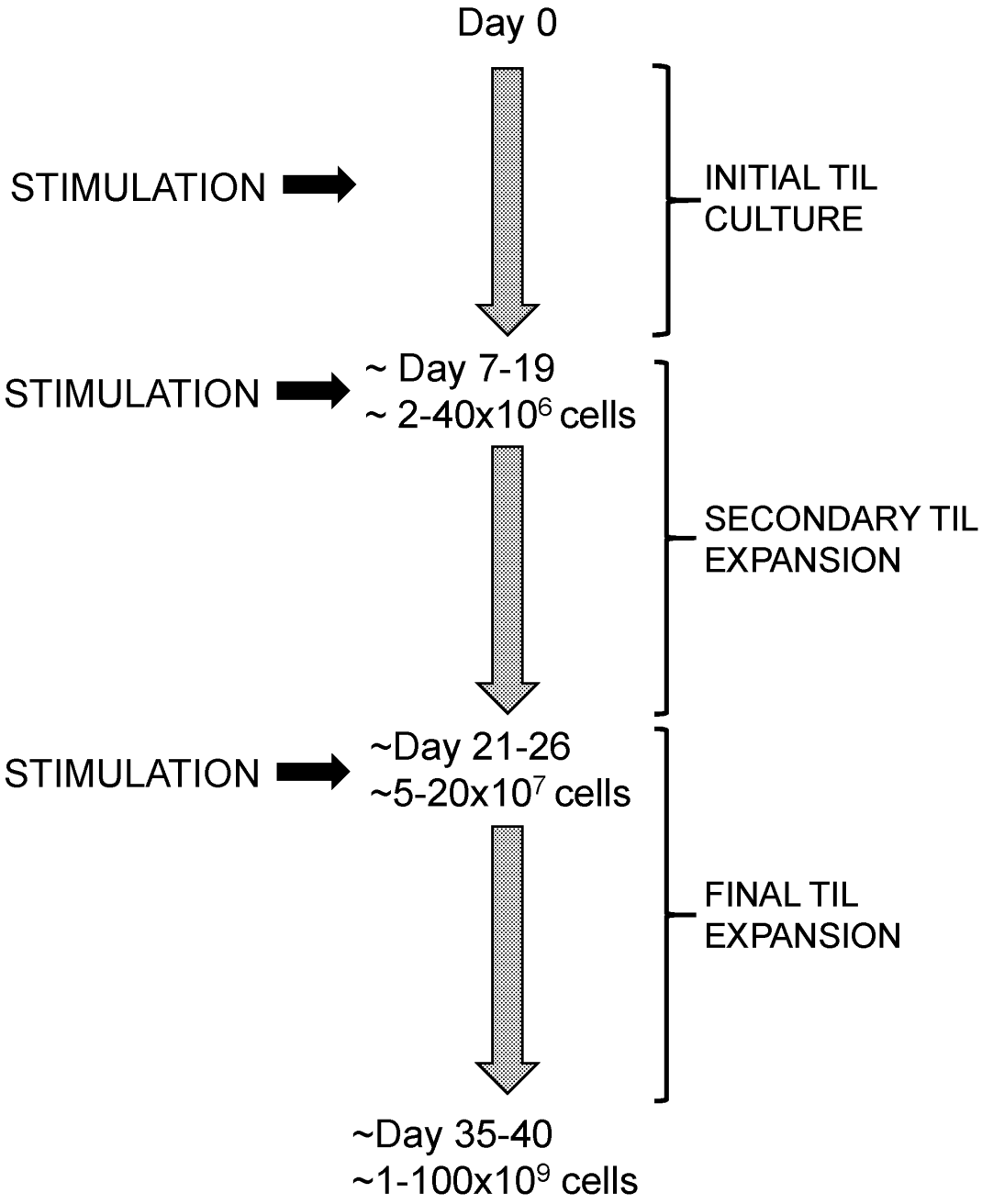

Day 0
STIMULATION
INITIAL TIL CULTURE
STIMULATION
~ Day 7-19
~ 2-40x10^6 cells
SECONDARY TIL EXPANSION
STIMULATION
~Day 21-26
~5-20x10^7 cells
FINAL TIL EXPANSION
~Day 35-40
~1-100x10^9 cells

FIG. 1E

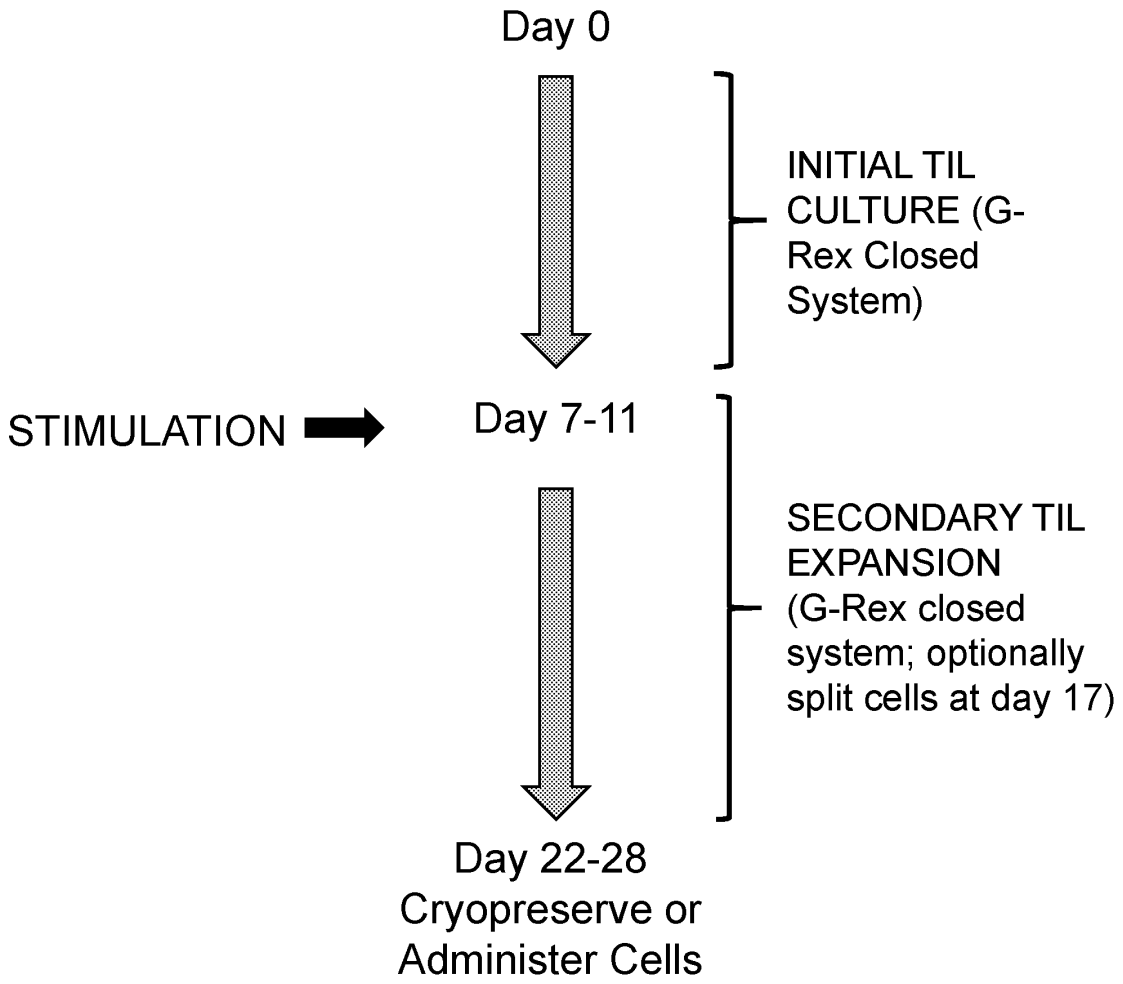

Day 0
INITIAL TIL CULTURE (G-Rex Closed System)
STIMULATION
Day 7-11
SECONDARY TIL EXPANSION (G-Rex closed system; optionally split cells at day 17)
Day 22-28
Cryopreserve or
Administer Cells

FIG. 1F

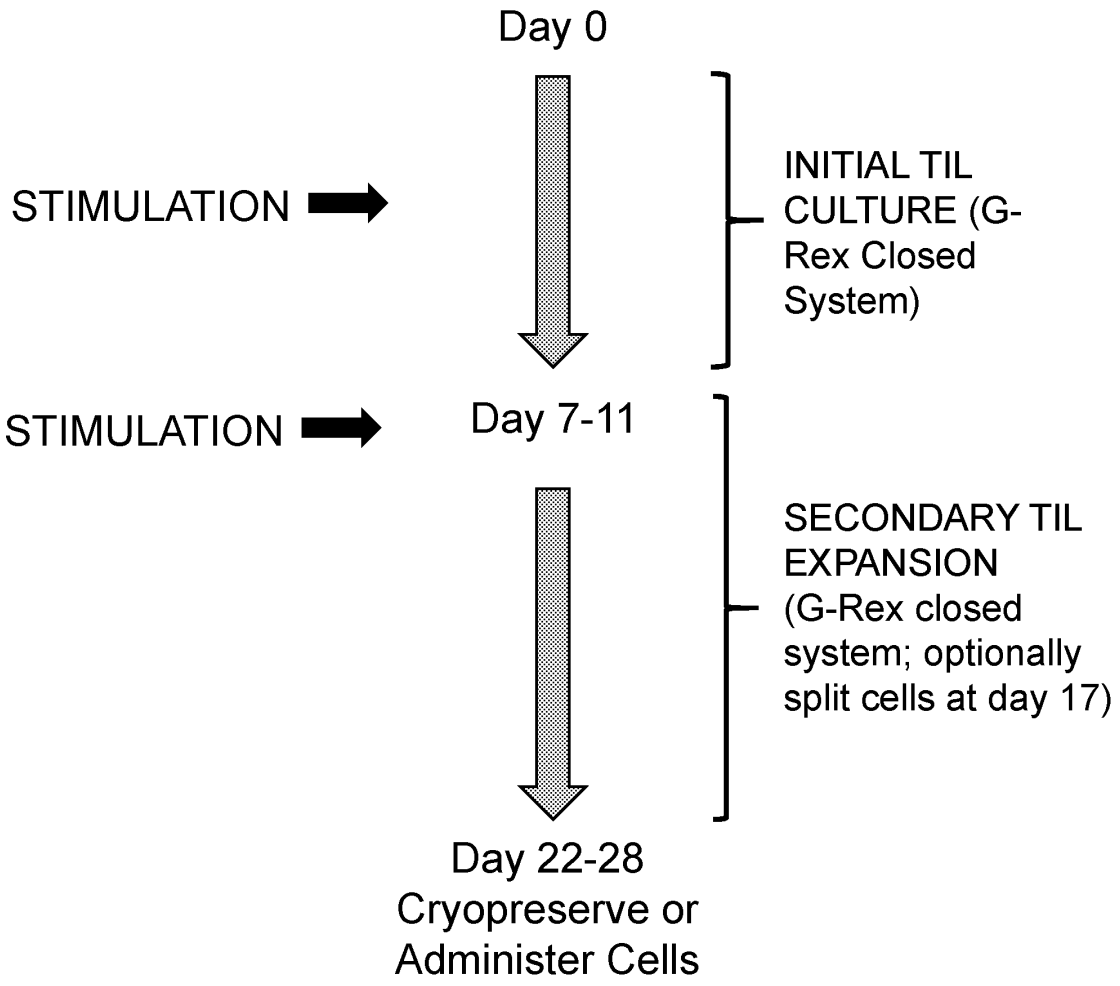

Day 0
STIMULATION
INITIAL TIL CULTURE (G-Rex Closed System)
STIMULATION
Day 7-11
SECONDARY TIL EXPANSION (G-Rex closed system; optionally split cells at day 17)
Day 22-28
Cryopreserve or
Administer Cells

FIG. 2A

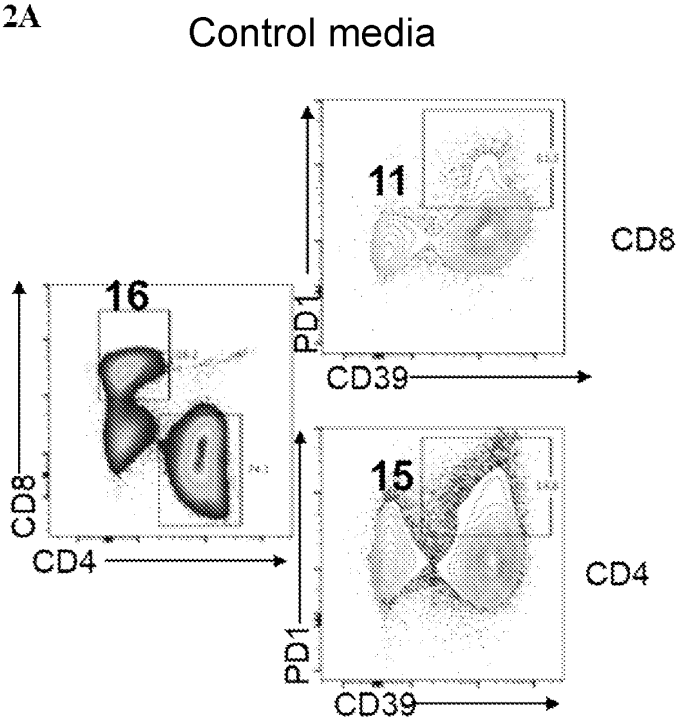

Control media
11
CD8
PD1
CD39
16
CD8
CD4
15
CD4
PD1
CD39

FIG. 2B

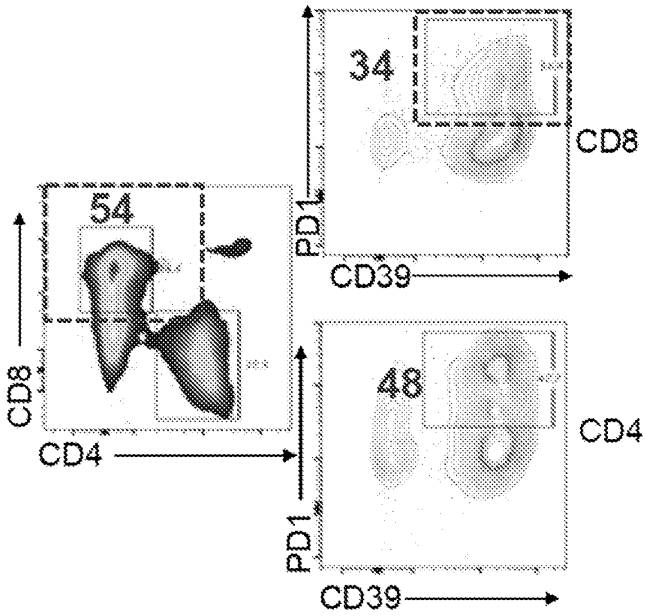
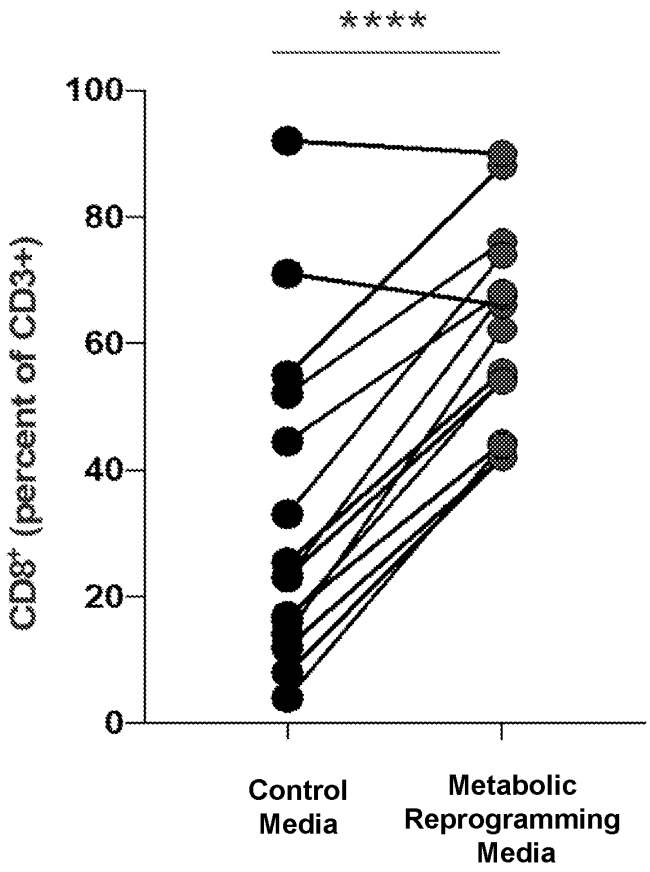

Metabolic reprogramming media
34
CD8
PD1
CD39
54
CD8
CD4
48
CD4
PD1
CD39

FIG. 2C


****
100
80
60
40
20
0
CD8+ (percent of CD3+)
Control Media
Metabolic Reprogramming Media

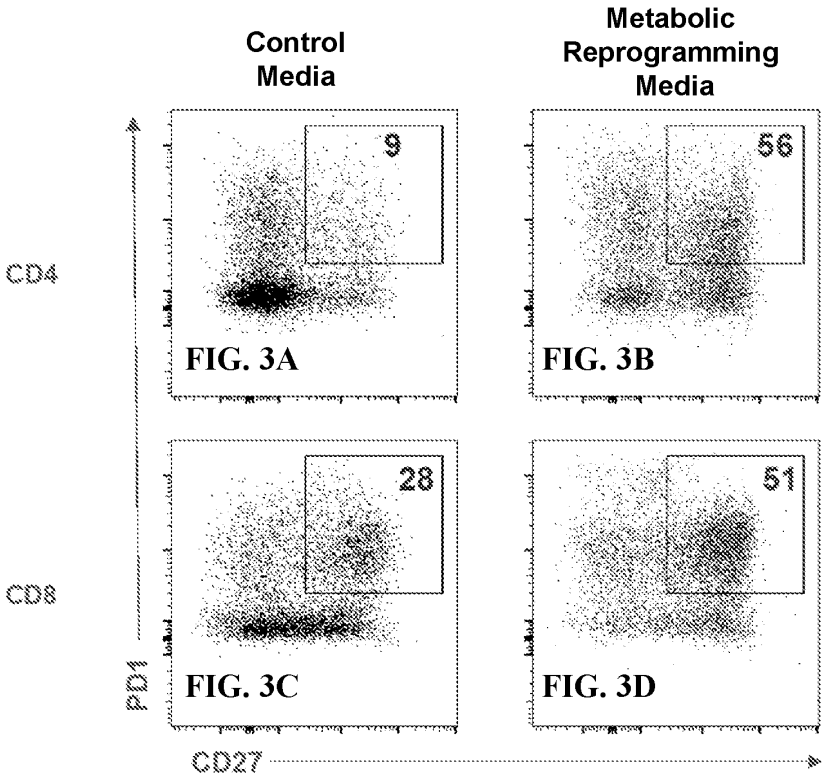


FIG. 3A

FIG. 3B

FIG. 3C

FIG. 3D

FIG. 3E

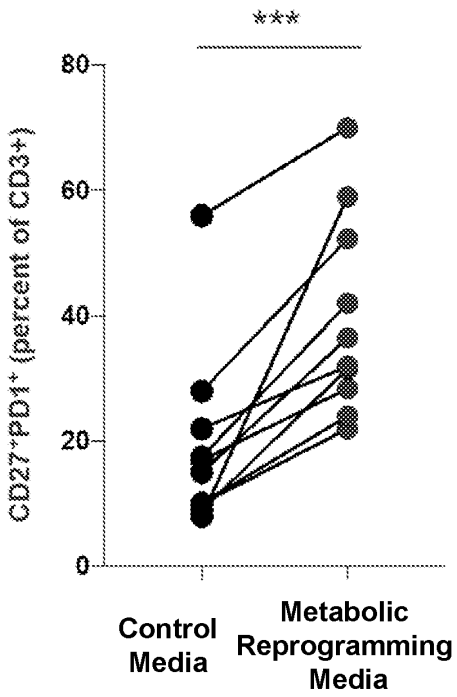
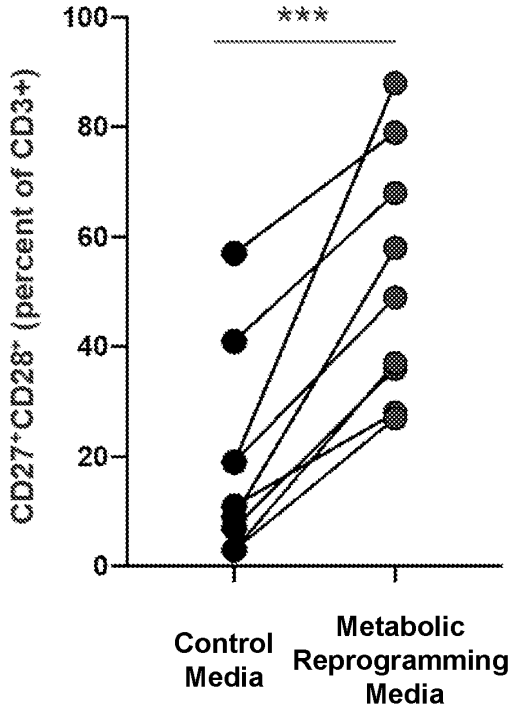


FIG. 4


***
100
80
60
40
20
0
CD27+CD28+ (percent of CD3+)
Control Media
Metabolic Reprogramming Media

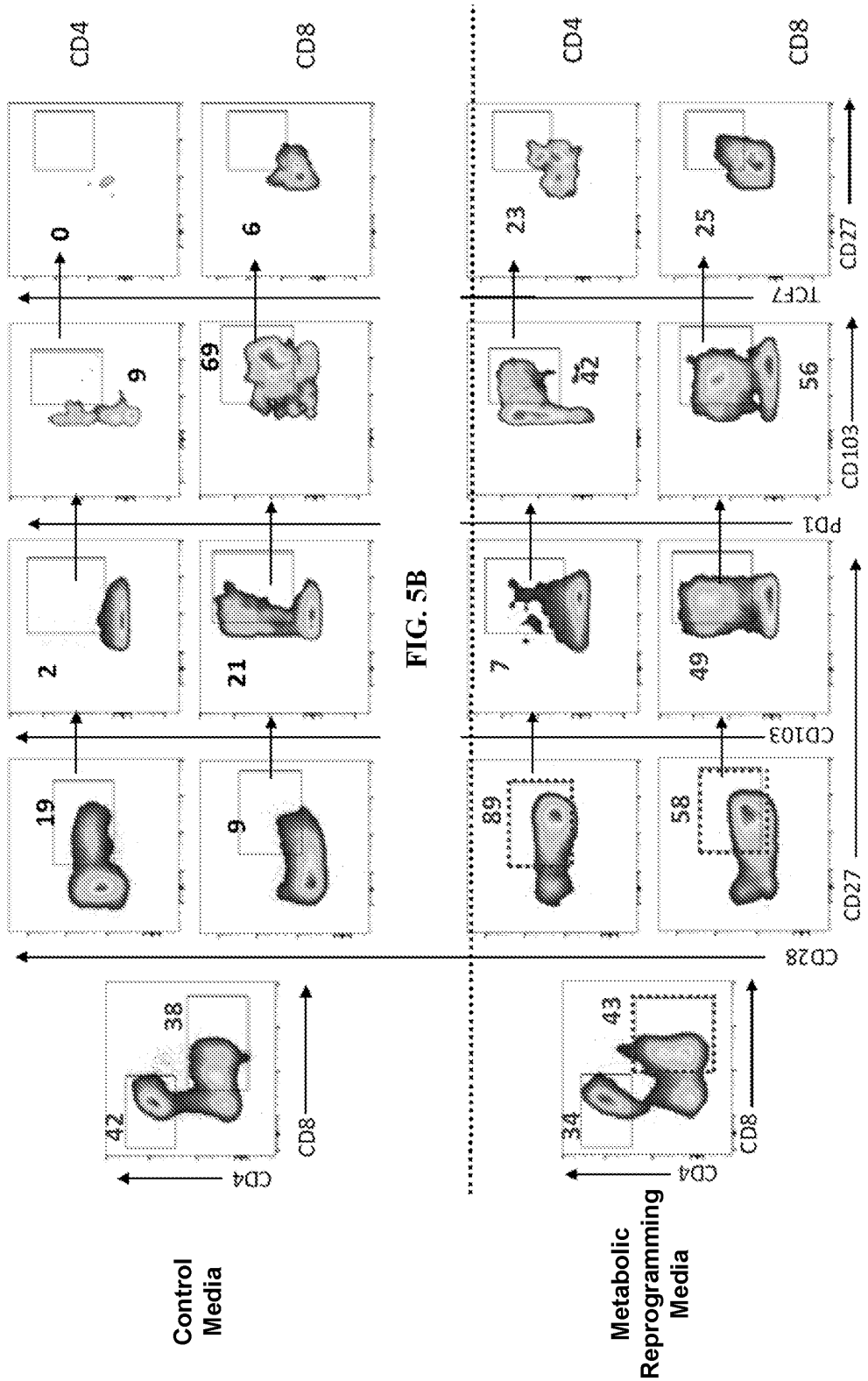
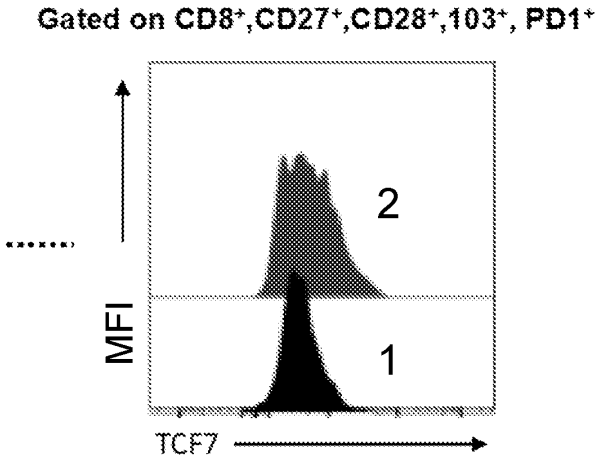

CD4
CD8
0
6
9
69
2
21
19
9
38
42
CD4
CD8
CD28
CD27
CD103
PD1
TCF7
CD27
CD103
CD27
CD8
CD4
23
25
42
56
7
49
89
58
43
34
CD8
CD4
Control Media
Metabolic Reprogramming Media

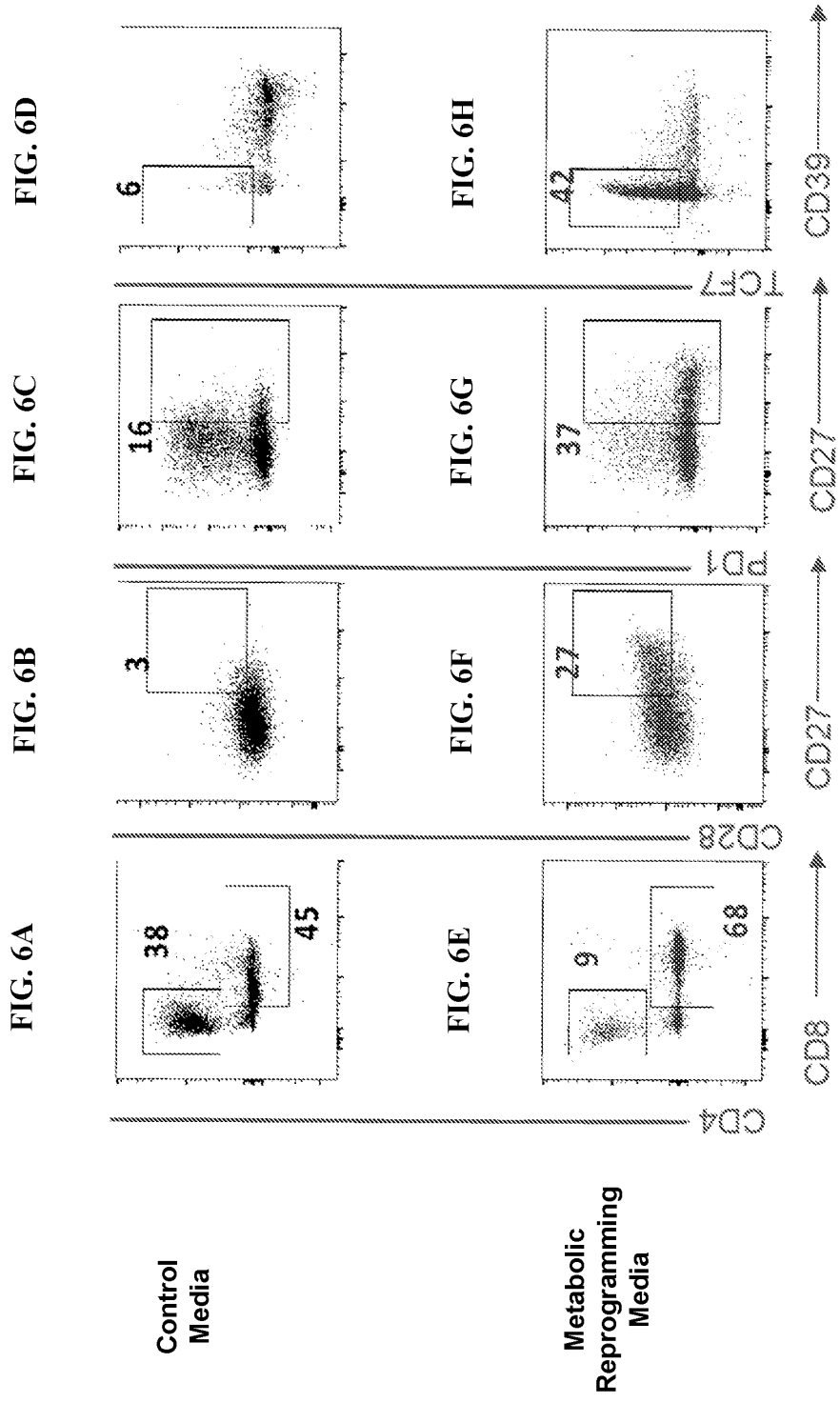
FIG. 5A

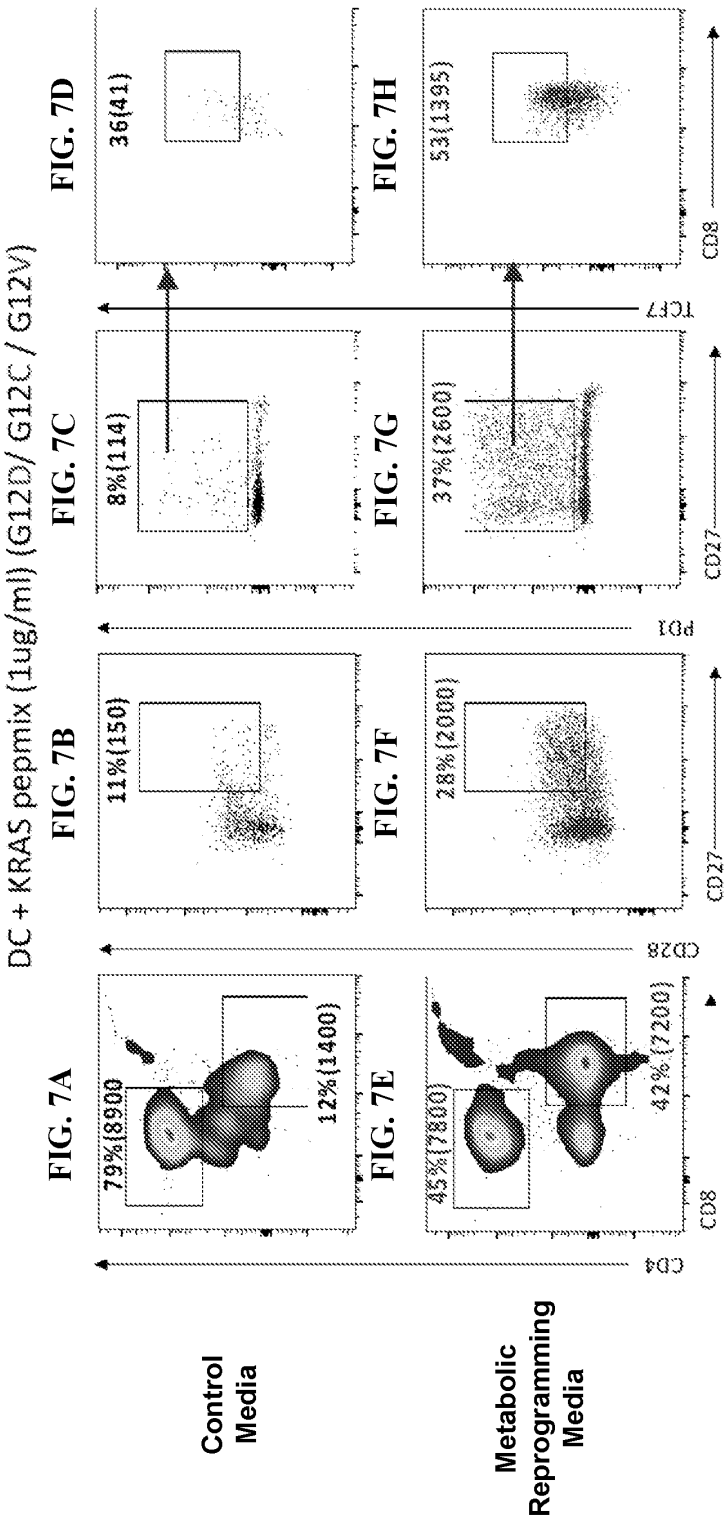
FIG. 5B

FIG. 5C



1 – Control
2 – Metabolic Reprogramming Media


FIG. 6A
FIG. 6B
FIG. 6C
FIG. 6D
FIG. 6E
FIG. 6F
FIG. 6G
FIG. 6H
38
45
3
16
6
9
68
27
37
42
CD4
CD8
CD28
CD27
PD1
TCF7
CD27
CD39
Control Media
Metabolic Reprogramming Media


DC + KRAS pepmix (1ug/ml) (G12D/ G12C / G12V)
Control Media
Metabolic Reprogramming Media
FIG. 7A
FIG. 7B
FIG. 7C
FIG. 7D
FIG. 7E
FIG. 7F
FIG. 7G
FIG. 7H
79%(8900)
12%(1400)
11%(150)
8%(114)
36(41)
45%(7800)
42%(7200)
28%(2000)
37%(2600)
53(1395)
CD4
CD8
CD28
CD27
PD1
TCF7

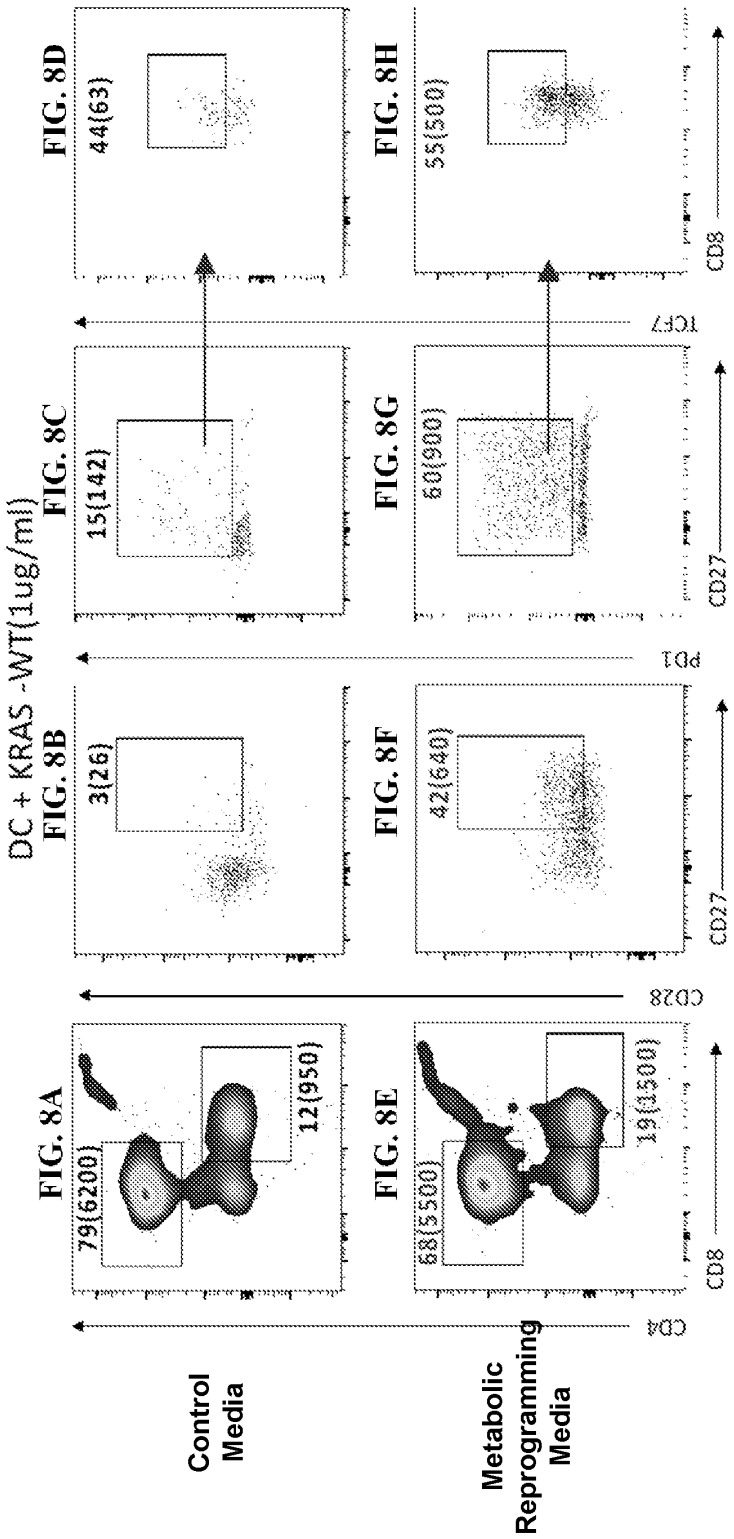

Control Media
Metabolic Reprogramming Media
DC + KRAS -WT(1ug/ml)
FIG. 8A
79(6200)
12(950)
FIG. 8E
68(5500)
19(1300)
FIG. 8B
3(26)
FIG. 8F
42(640)
FIG. 8C
15(142)
FIG. 8G
60(900)
FIG. 8D
44(63)
FIG. 8H
55(500)
CD4
CD8
CD28
CD27
PD1
TCF7

FIG. 9A

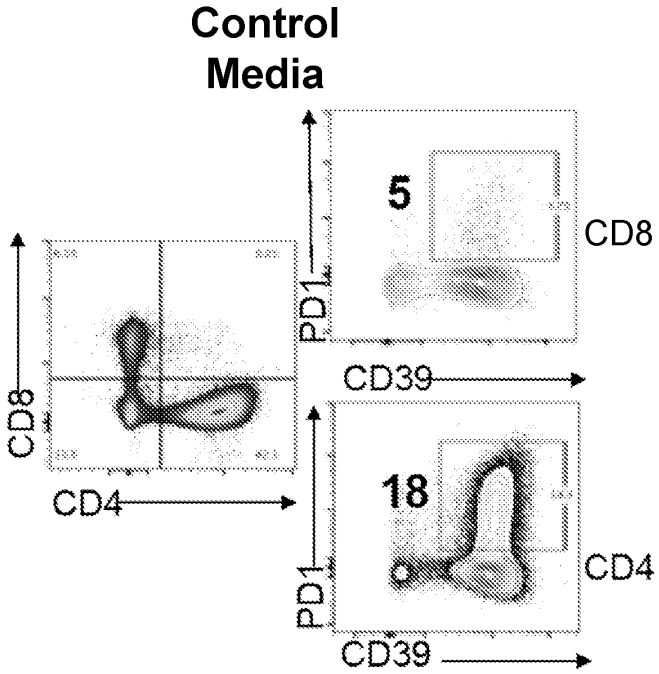

Control
Media
5
CD8
PD1
CD39
CD8
CD4
18
CD4
PD1
CD39

FIG. 9B

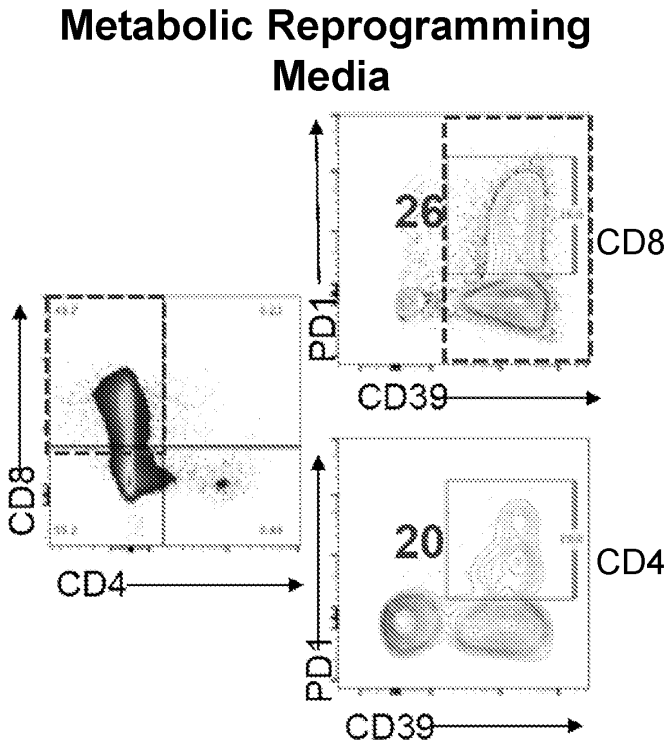
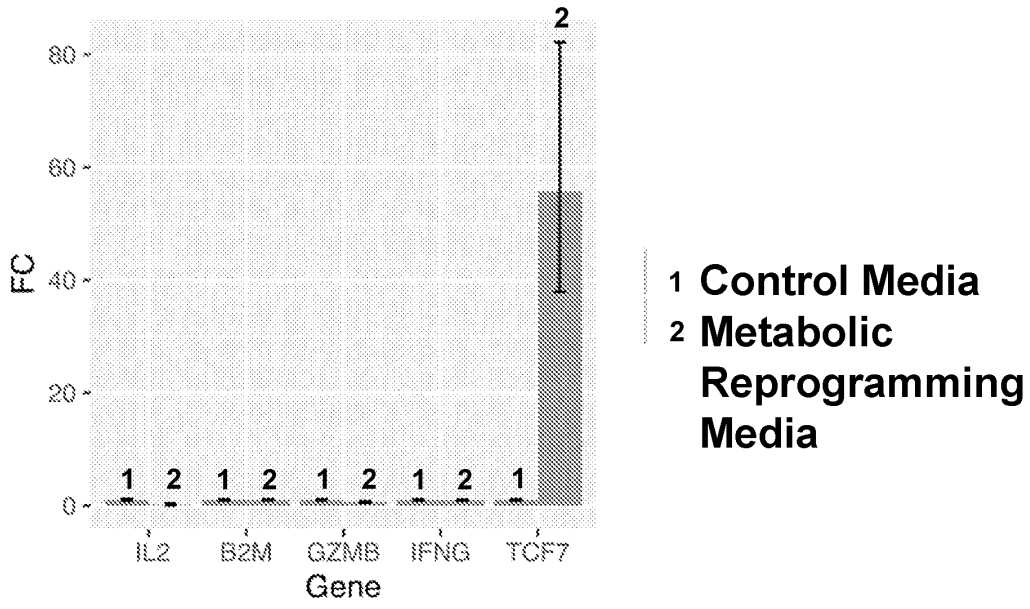
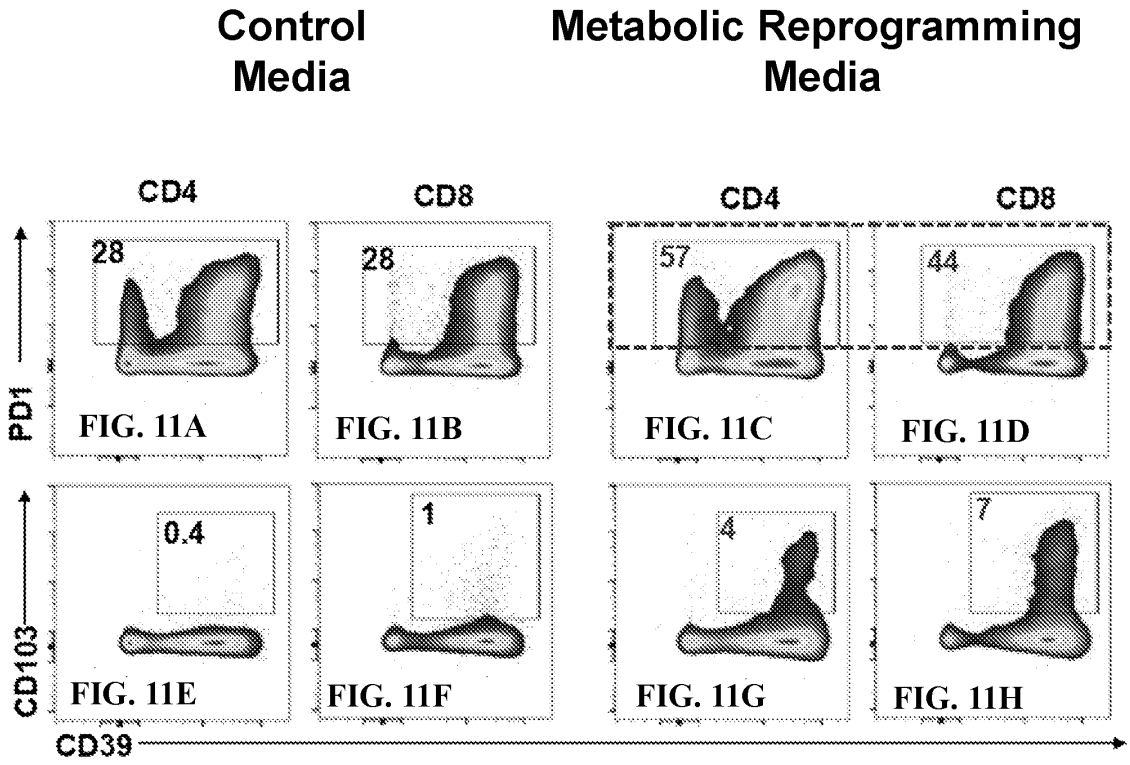

Metabolic Reprogramming
Media
26
CD8
PD1
CD39
CD8
CD4
20
CD4
PD1
CD39

FIG. 10


FC
80
60
40
20
0
1 2 1 2 1 2 1 2 1
2
IL2
B2M
GZMB
IFNG
TCF7
Gene
1 Control Media
2 Metabolic Reprogramming Media


Control Media
Metabolic Reprogramming Media
CD4
CD8
CD4
CD8
PD1
28
28
57
44
FIG. 11A
FIG. 11B
FIG. 11C
FIG. 11D
CD103
0.4
1
4
7
FIG. 11E
FIG. 11F
FIG. 11G
FIG. 11H
CD39

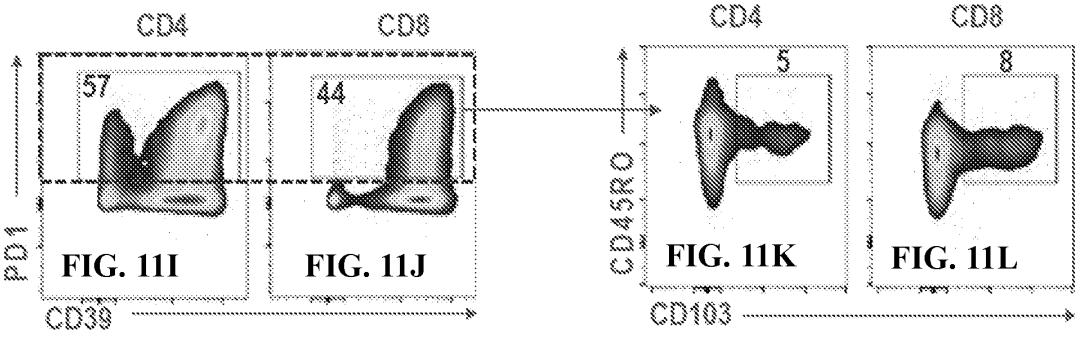

Metabolic Reprogramming Media
CD4
CD8
CD4
CD8
PD1
57
44
5
8
FIG. 11I
FIG. 11J
CD45RO
FIG. 11K
FIG. 11L
CD39
CD103

FIG. 12

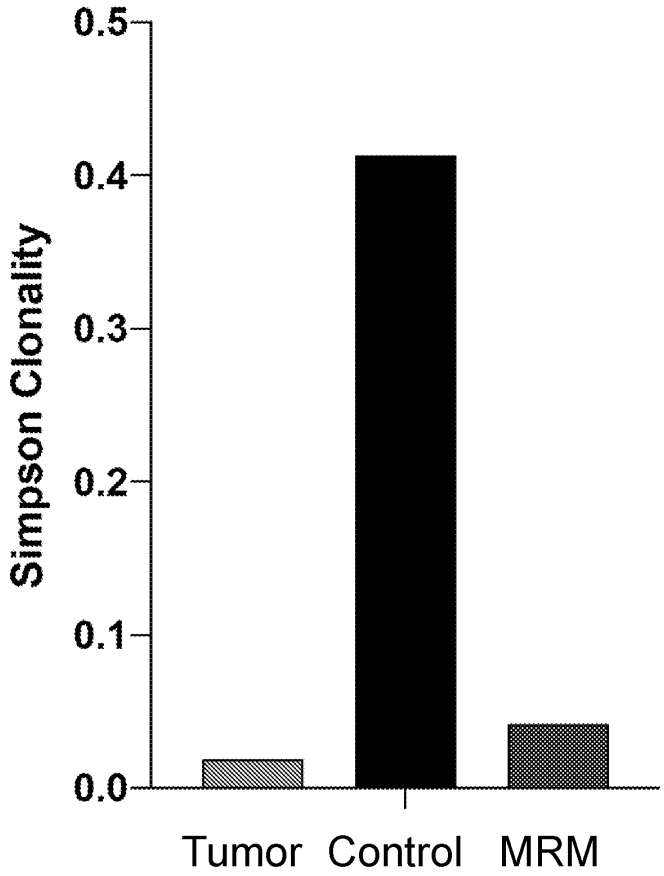


FIG. 13A

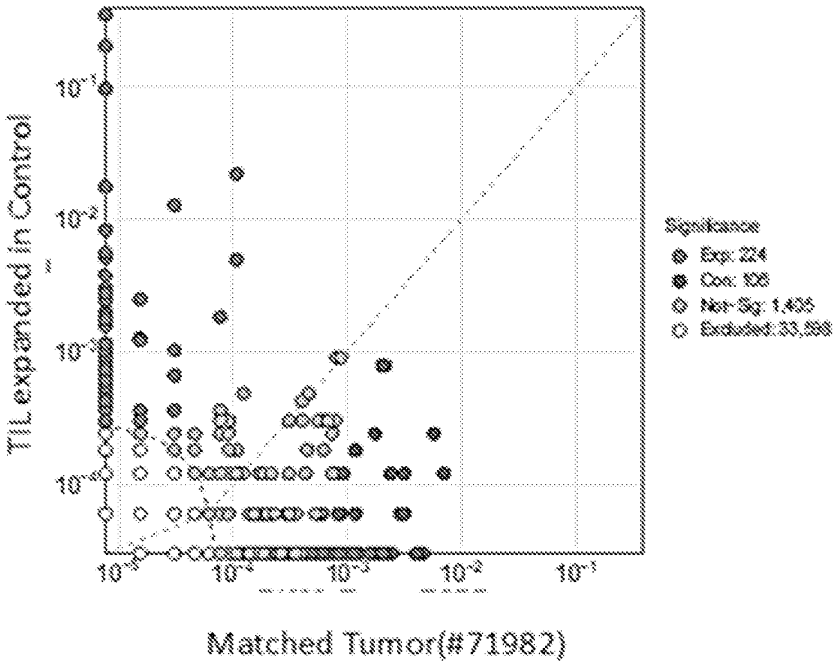


FIG. 13B

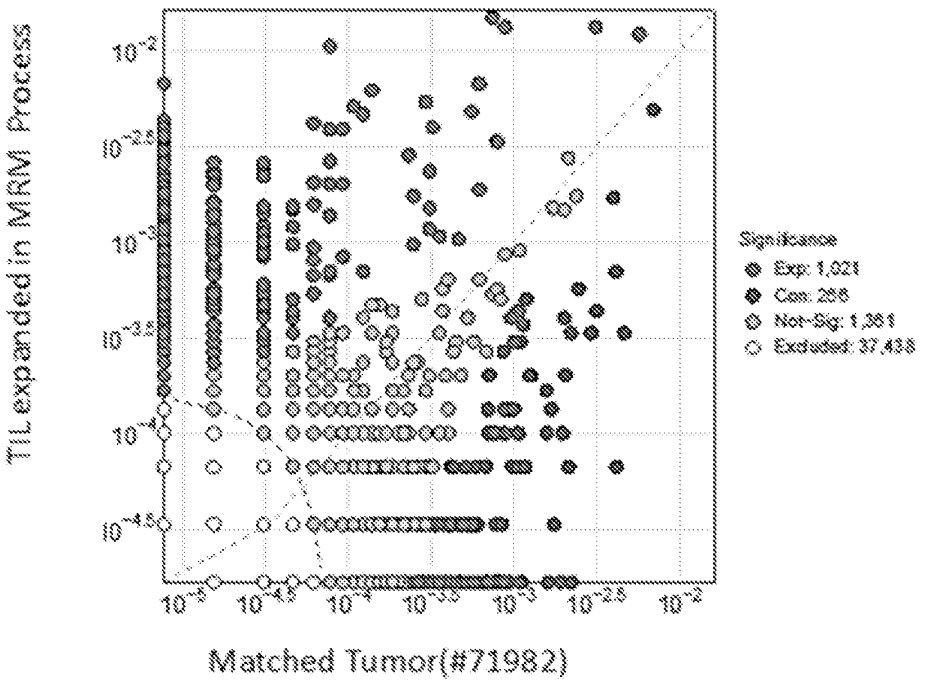


FIG. 13C

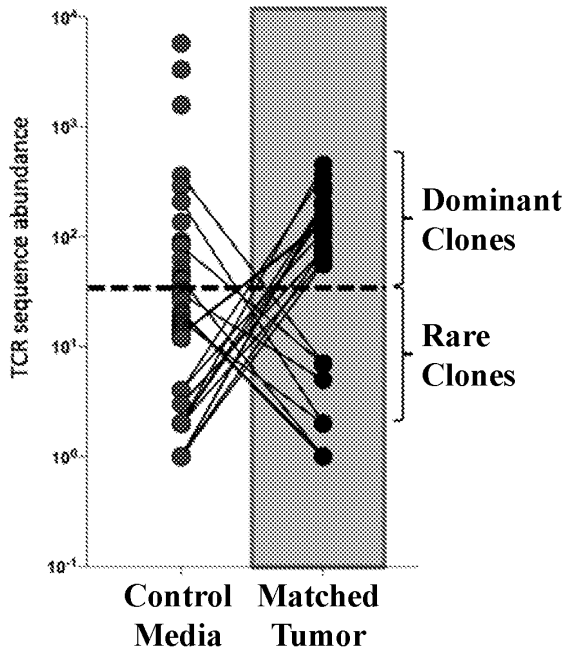


FIG. 13D

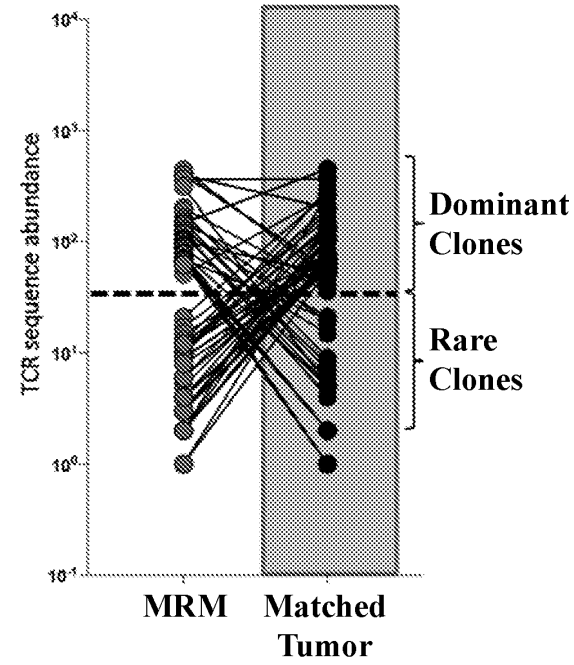
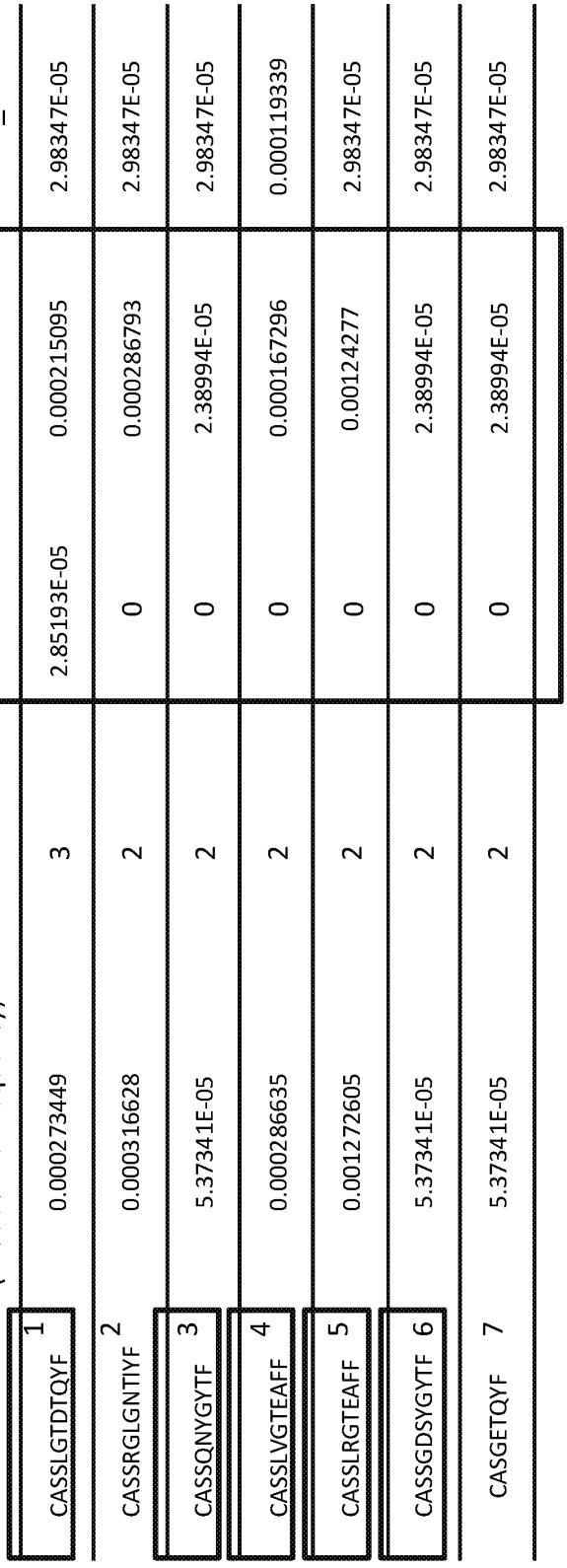


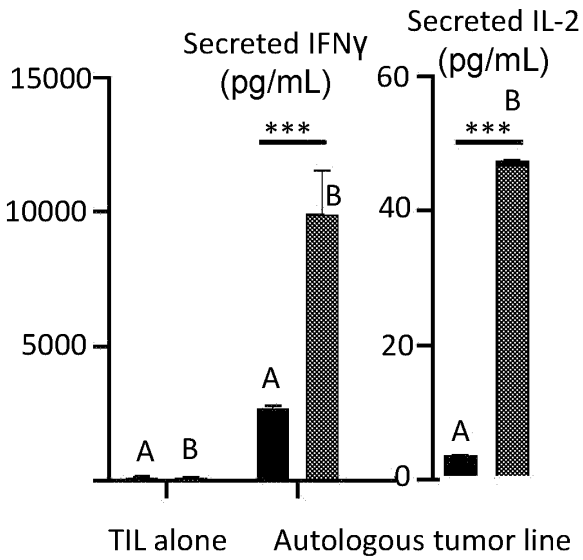
FIG. 14



Amino Acid	Sum (Productive Frequency)	Present In	Control	MRM	70703-Tumor_TCRB
CASSLGTDTQYF [1]	0.000273449	3	2.85193E-05	0.000215095	2.98347E-05
CASSRGLGNTIYF [2]	0.000316628	2	0	0.000286793	2.98347E-05
CASSQNYGYTF [3]	5.37341E-05	2	0	2.38994E-05	2.98347E-05
CASSLVGTEAFF [4]	0.000286635	2	0	0.000167296	0.000119339
CASSLRGTEAFF [5]	0.001272605	2	0	0.00124277	2.98347E-05
CASSGDSYGYTF [6]	5.37341E-05	2	0	2.38994E-05	2.98347E-05
CASGETQYF [7]	5.37341E-05	2	0	2.38994E-05	2.98347E-05

[1]SEQ ID NO: 6; [2]SEQ ID NO: 1; [3]SEQ ID NO: 7; [4]SEQ ID NO: 8; [5]SEQ ID NO: 9; [6]SEQ ID NO: 10; [7]SEQ ID NO: 11.

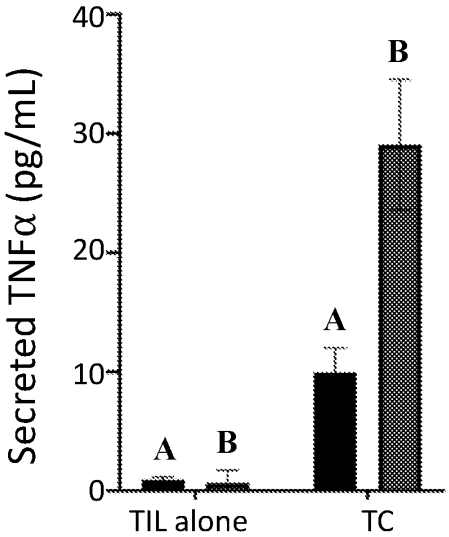
FIG. 15A



A – TILs Generated using control media

B – TILs Generated using MRM

FIG. 15B



A – TILs Generated using control media

B – TILs Generated using MRM

FIG. 15C

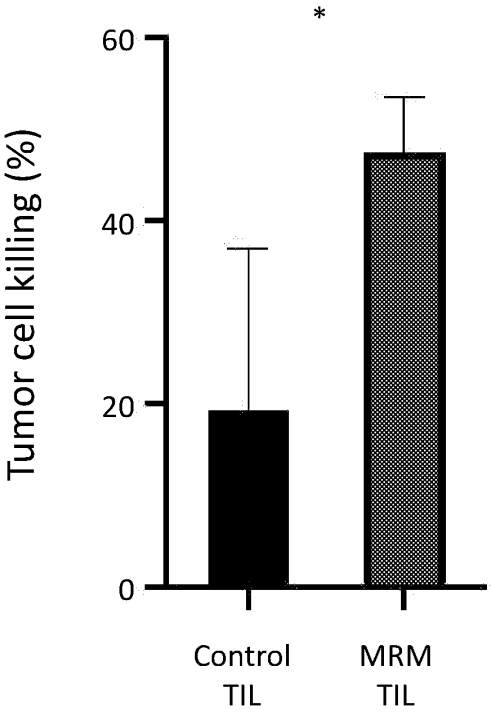


FIG. 15D

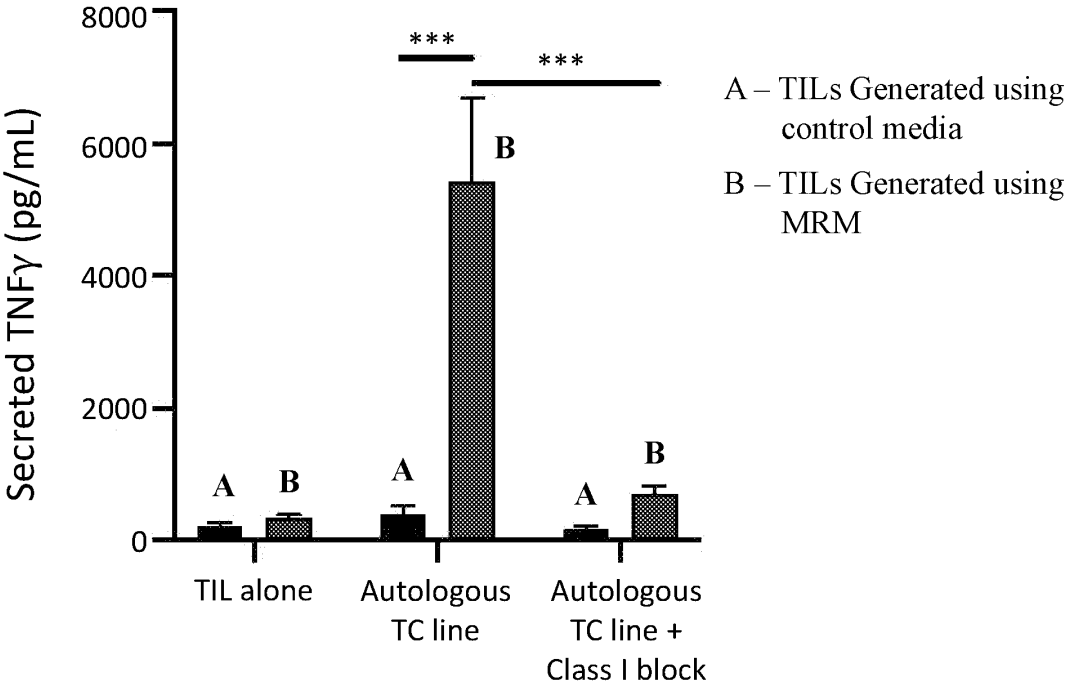
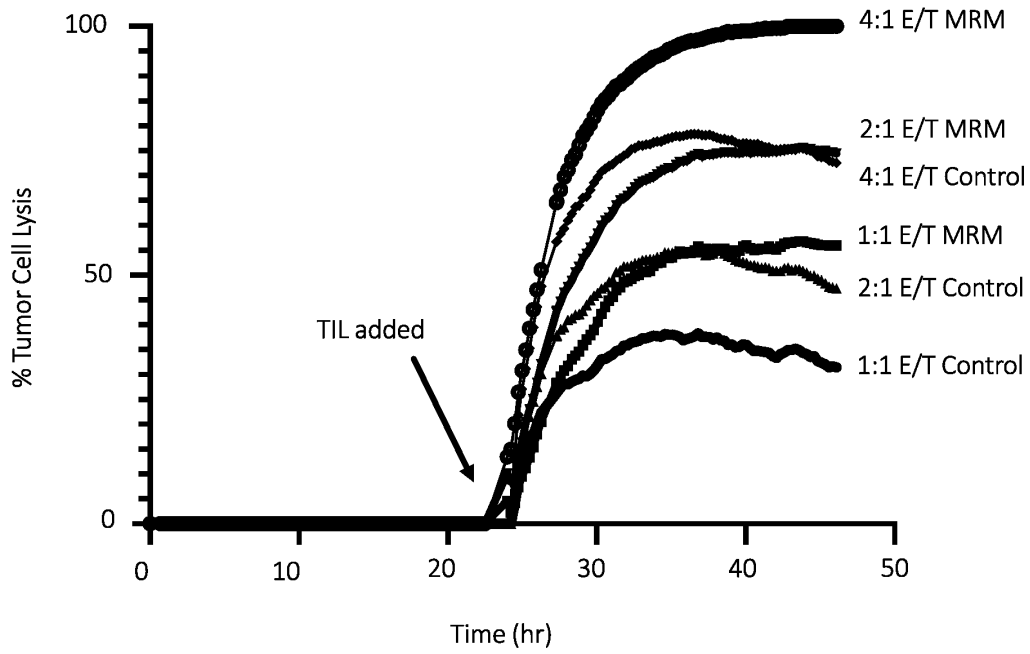


FIG. 16


100
50
0
% Tumor Cell Lysis
TIL added
0
10
20
30
40
50
Time (hr)
4:1 E/T MRM
2:1 E/T MRM
4:1 E/T Control
1:1 E/T MRM
2:1 E/T Control
1:1 E/T Control

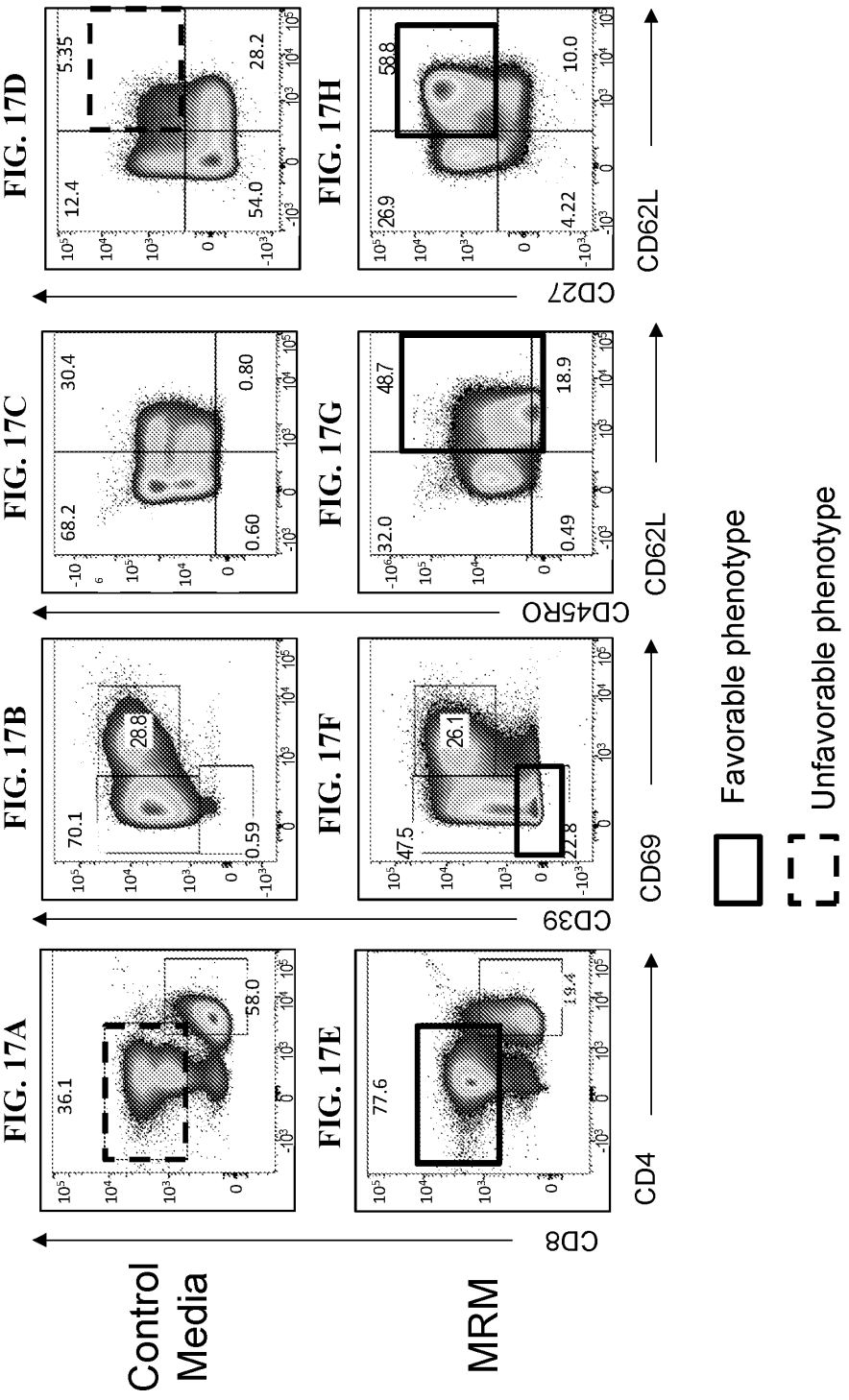

FIG. 17A
FIG. 17B
FIG. 17C
FIG. 17D
FIG. 17E
FIG. 17F
FIG. 17G
FIG. 17H
Control
Media
MRM
CD8
CD4
CD39
CD69
CD45RO
CD62L
CD27
CD62L
Favorable phenotype
Unfavorable phenotype

FIG. 18A

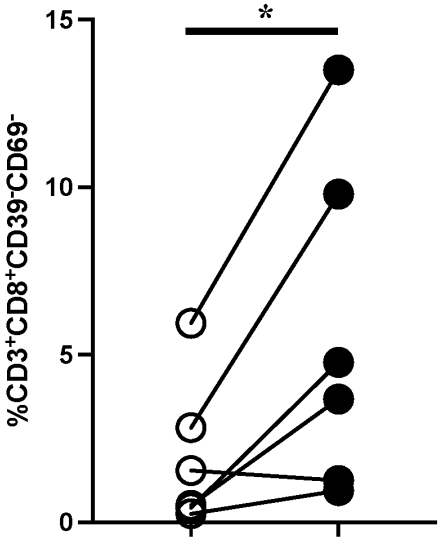


FIG. 18B

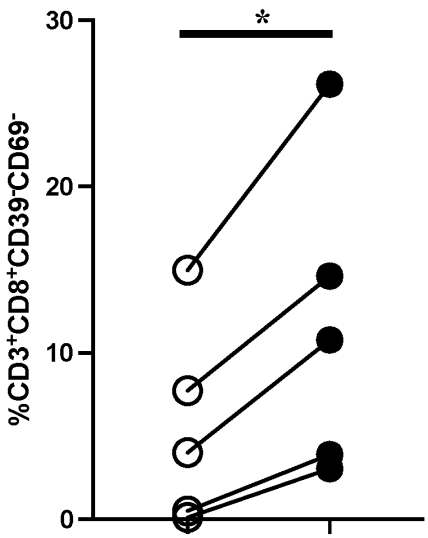
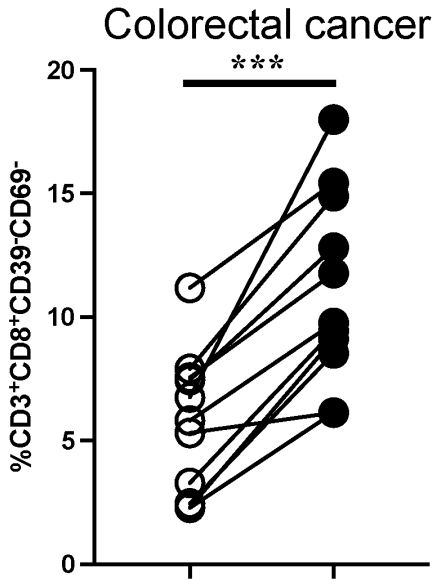


FIG. 18C



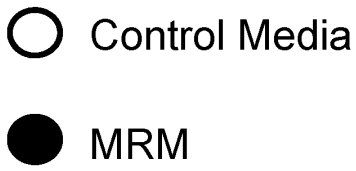


FIG. 19A

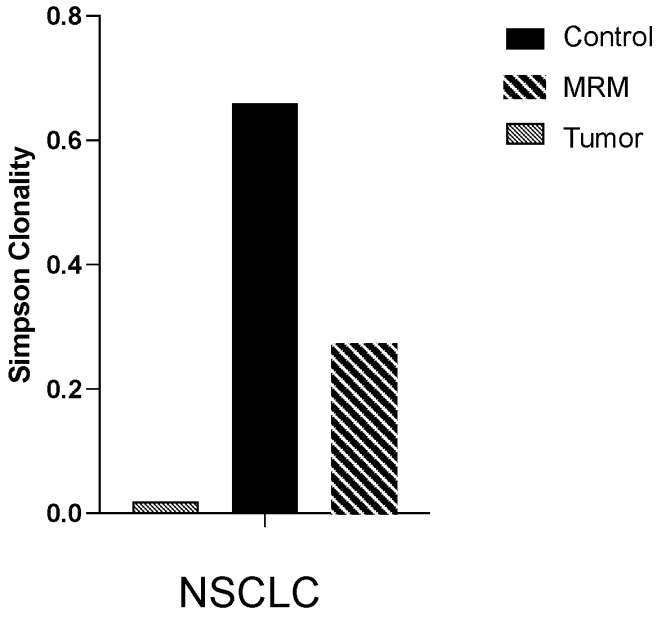


FIG. 19B

