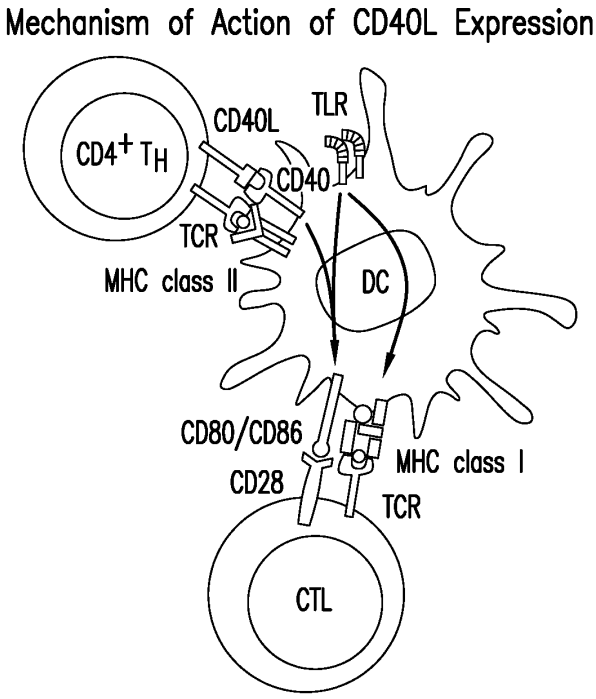

Mechanism of Action of CD40L Expression
CD4+ TH
CD40L
TLR
CD40
TCR
MHC class II
DC
CD80/CD86
CD28
MHC class I
TCR
CTL

FIG.1A

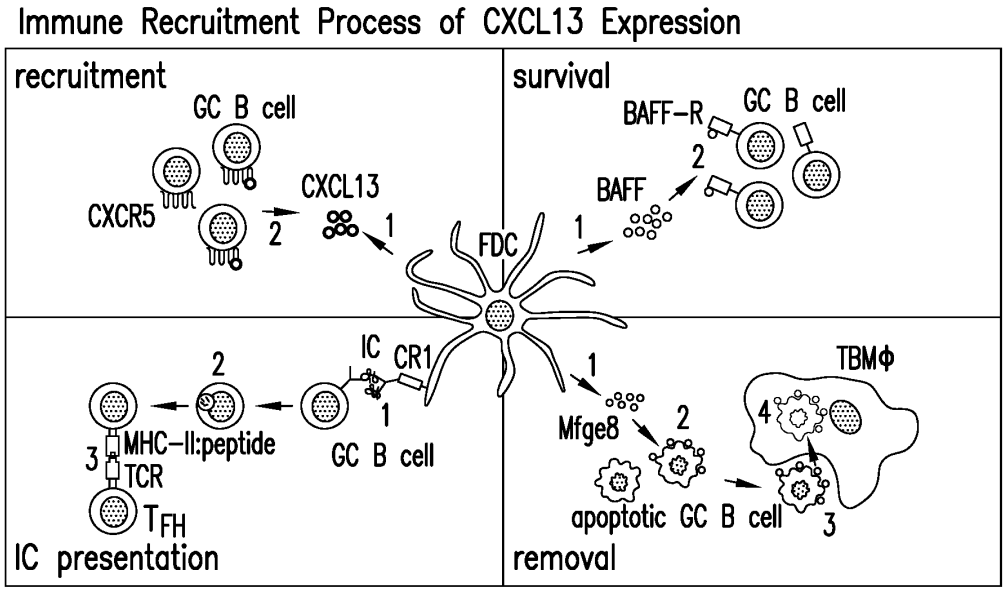

Immune Recruitment Process of CXCL13 Expression
recruitment
GC B cell
CXCR5
CXCL13
survival
BAFF-R
GC B cell
BAFF
FDC
IC
CR1
MHC-II:peptide
TCR
TFH
GC B cell
IC presentation
Mfge8
TBMΦ
apoptotic GC B cell
removal

FIG.1B

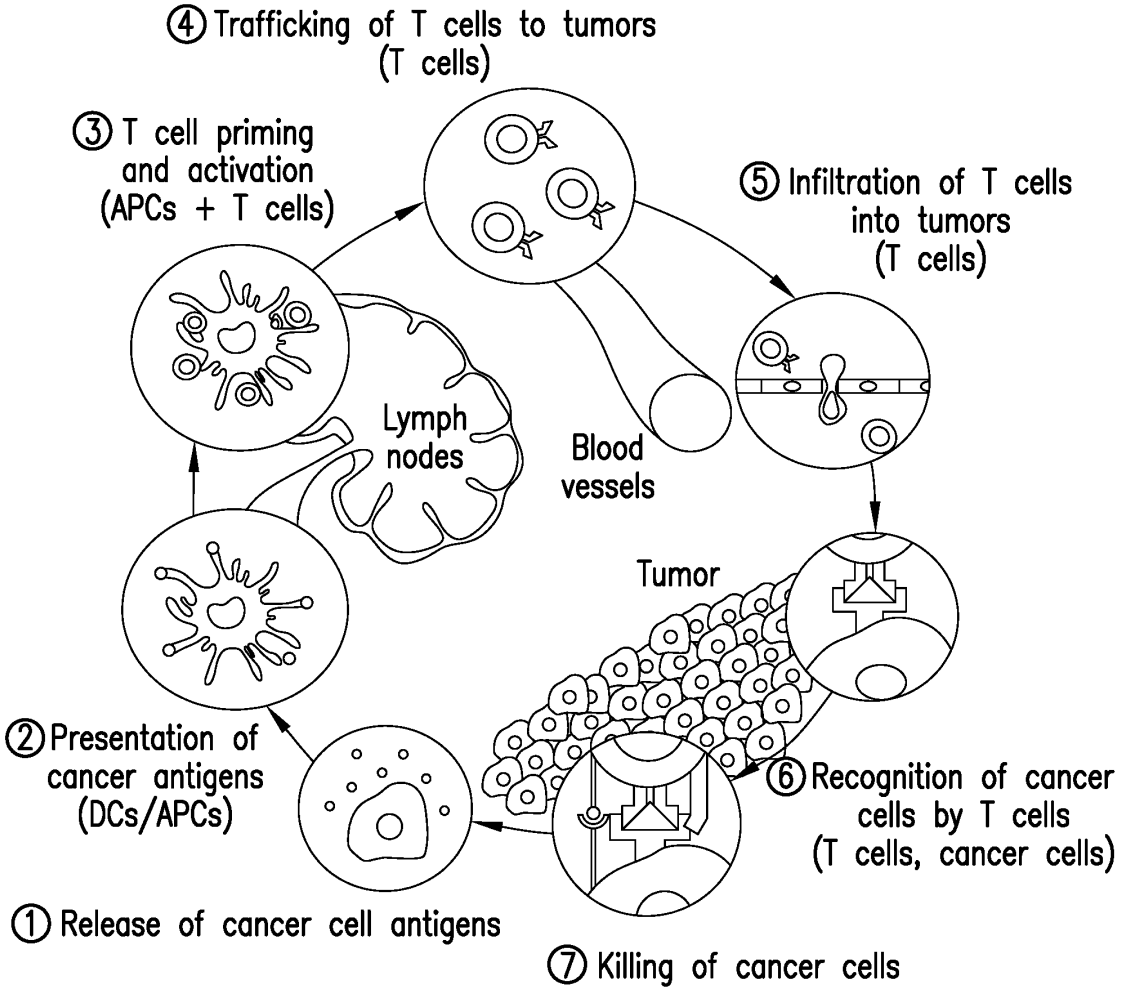

④ Trafficking of T cells to tumors
(T cells)
③ T cell priming
and activation
(APCs + T cells)
⑤ Infiltration of T cells
into tumors
(T cells)
Lymph
nodes
Blood
vessels
Tumor
② Presentation of
cancer antigens
(DCs/APCs)
⑥ Recognition of cancer
cells by T cells
(T cells, cancer cells)
① Release of cancer cell antigens
⑦ Killing of cancer cells

FIG.1C

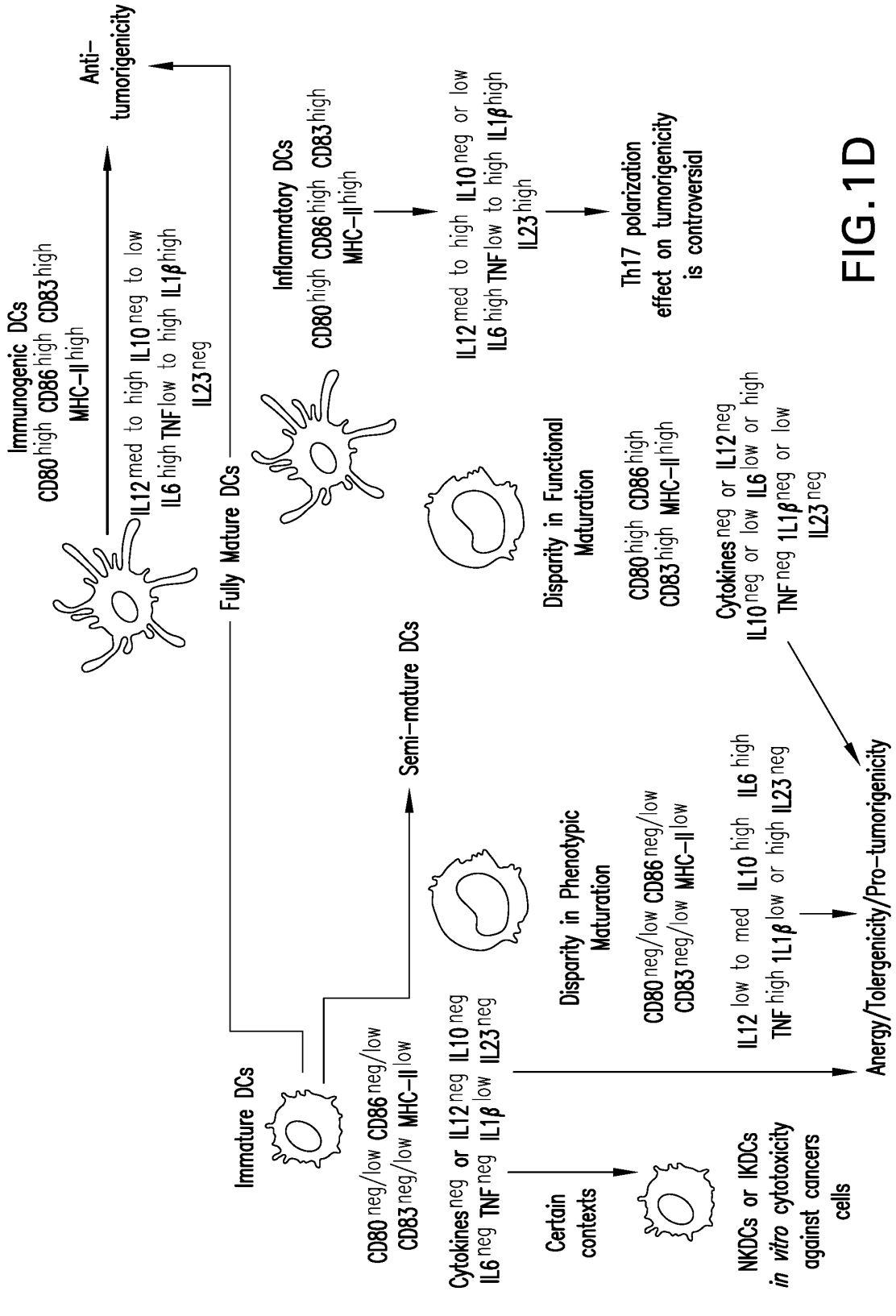

Immunogenic DCs
CD80high CD86high CD83high
MHC–IIhigh
IL12med to high IL10neg to low
IL6high TNFlow to high IL1βhigh
IL23neg
Anti–tumorigenicity
Fully Mature DCs
Inflammatory DCs
CD80high CD86high CD83high
MHC–IIhigh
IL12med to high IL10neg or low
IL6high TNFlow to high IL1βhigh
IL23high
Th17 polarization effect on tumorigenicity is controversial
Disparity in Functional Maturation
CD80high CD86high
CD83high MHC–IIhigh
Cytokinesneg or IL12neg
IL10neg or low IL6low or high
TNFneg 1L1βneg or low
IL23neg
Semi–mature DCs
Disparity in Phenotypic Maturation
CD80neg/low CD86neg/low
CD83neg/low MHC–IIlow
IL12 low to med IL10high IL6 high
TNFhigh 1L1βlow or high IL23neg
Anergy/Tolergenicity/Pro–tumorigenicity
Immature DCs
CD80neg/low CD86neg/low
CD83neg/low MHC–IIlow
Cytokinesneg or IL12neg IL10neg
IL6neg TNFneg IL1βlow IL23neg
Certain contexts
NKDCs or IKDCs in vitro cytotoxicity against cancers cells

FIG. 1D

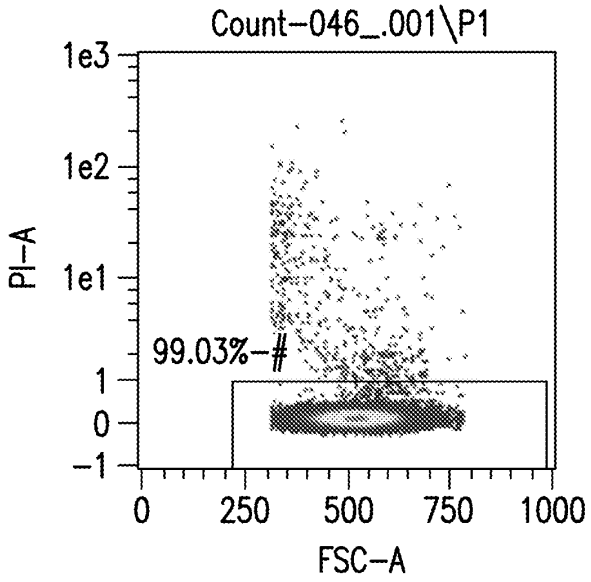

Count-046_.001\P1
1e3
1e2
1e1
1
0
-1
PI-A
99.03%-#
0
250
500
750
1000
FSC-A

FIG.2A

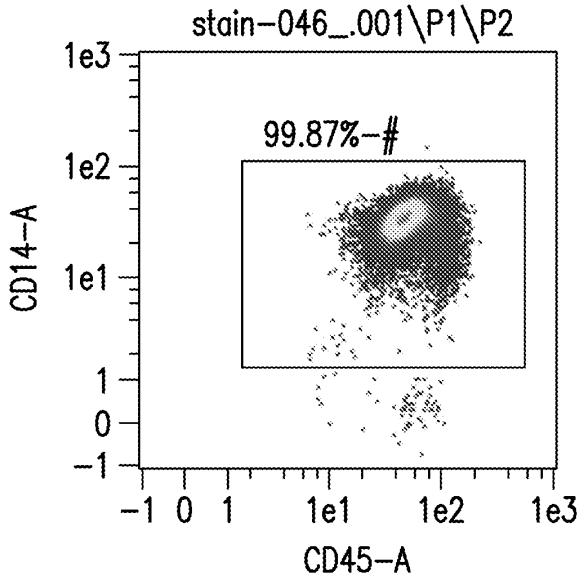

stain-046_.001\P1\P2
1e3
1e2
1e1
1
0
-1
CD14-A
99.87%-#
-1
0
1
1e1
1e2
1e3
CD45-A

FIG.2B

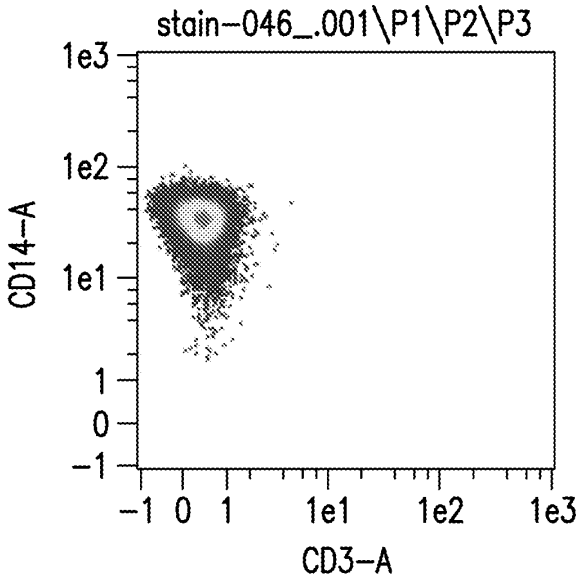

stain-046_.001\P1\P2\P3
1e3
1e2
1e1
1
0
-1
CD14-A
-1 0 1 1e1 1e2 1e3
CD3-A

FIG.2C

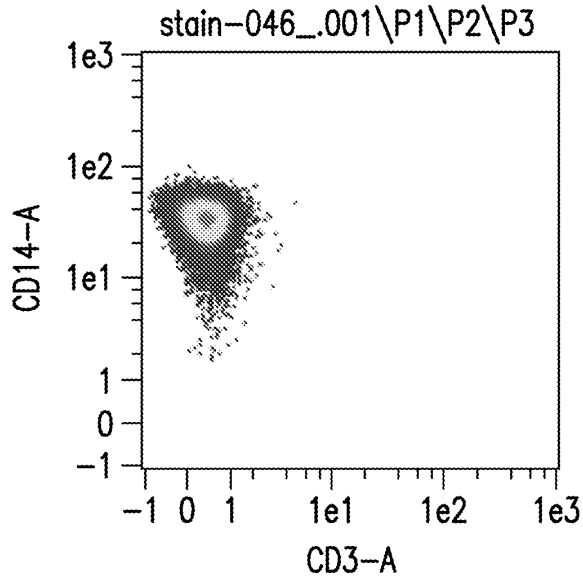

stain-046_.001\P1\P2\P3
1e3
1e2
1e1
1
0
-1
CD14-A
-1 0 1 1e1 1e2 1e3
CD3-A

FIG.2D

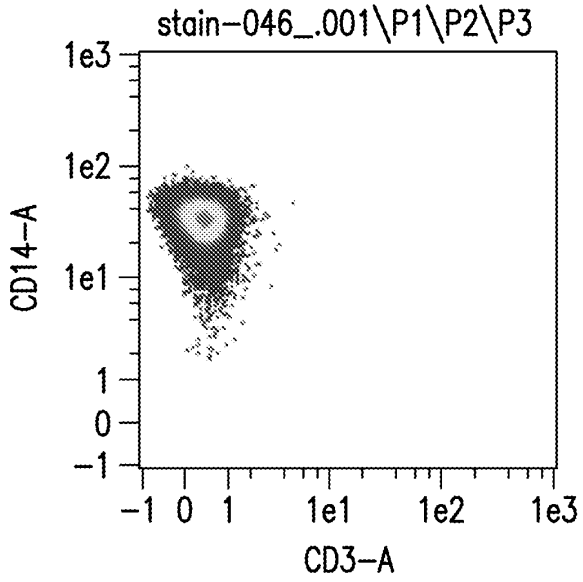

stain-046_.001\P1\P2\P3
1e3
1e2
1e1
1
0
-1
CD14-A
-1 0 1 1e1 1e2 1e3
CD3-A

FIG.2E

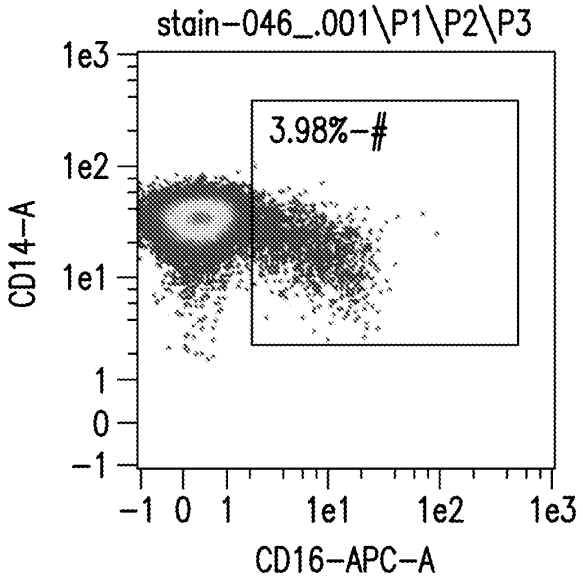

stain-046_.001\P1\P2\P3
3.98%-#
1e3
1e2
1e1
1
0
-1
CD14-A
-1 0 1 1e1 1e2 1e3
CD16-APC-A

FIG.2F

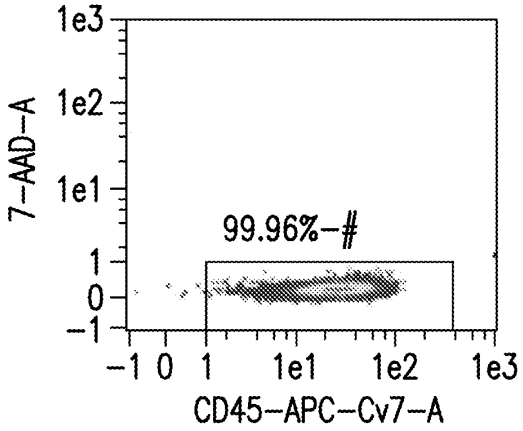


FIG.3A

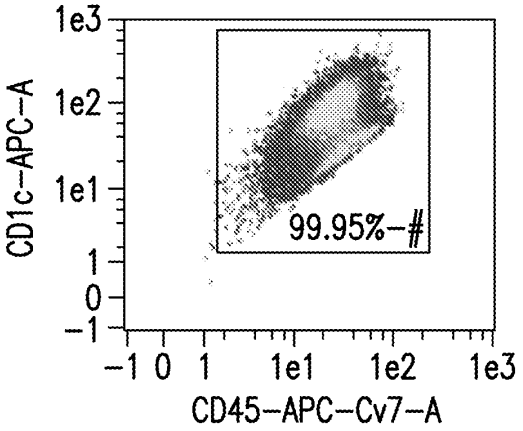


FIG.3B

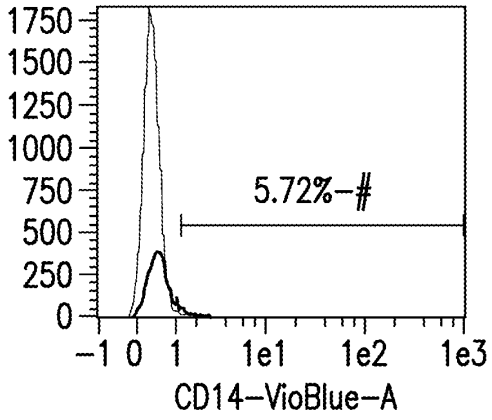


FIG.3C

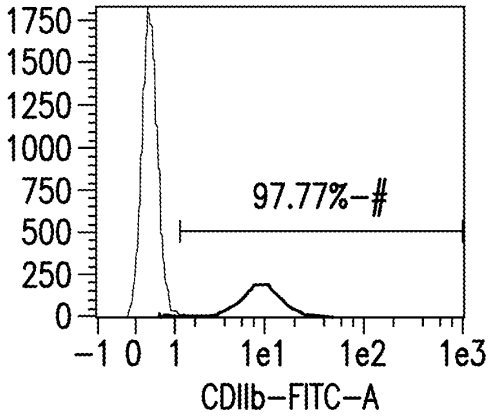


FIG.3D

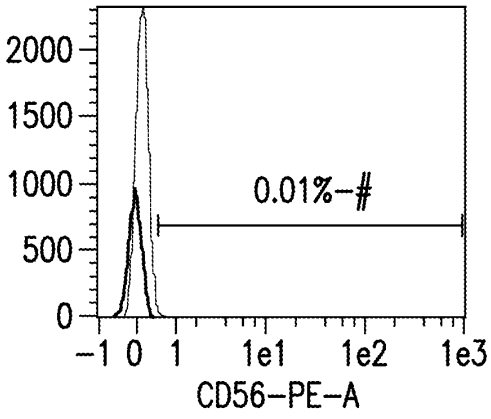


FIG.3E

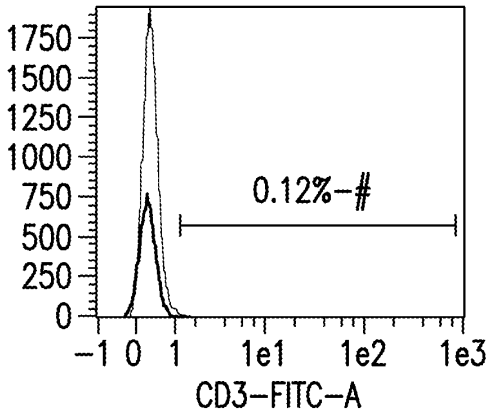


FIG.3F

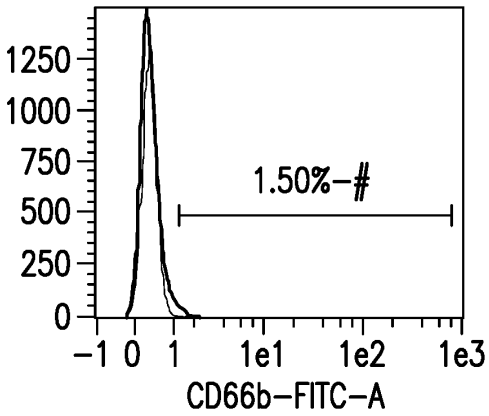


FIG.3G

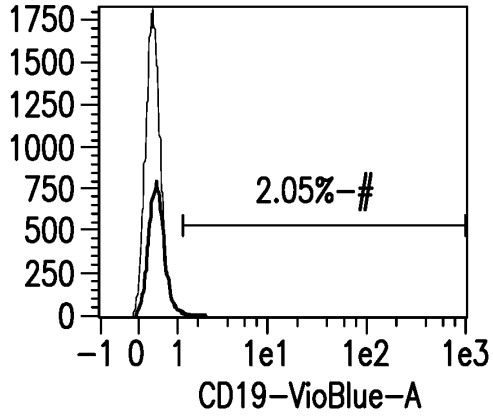


FIG.3H

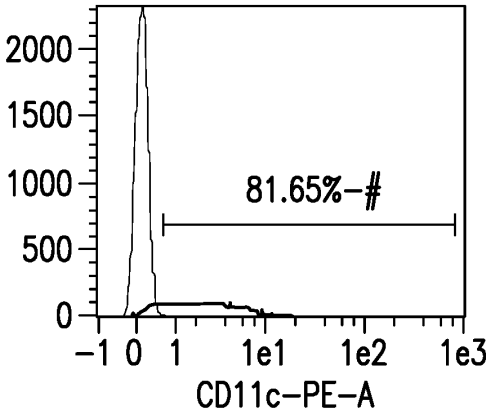


FIG.3I

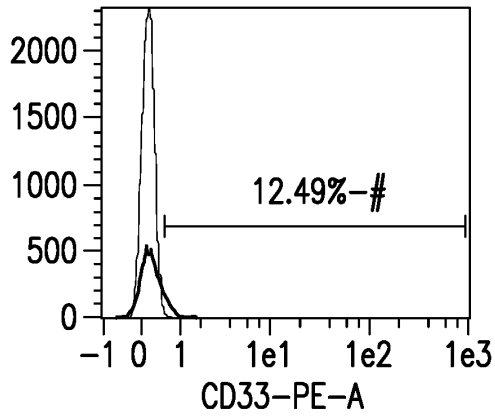


FIG.3J

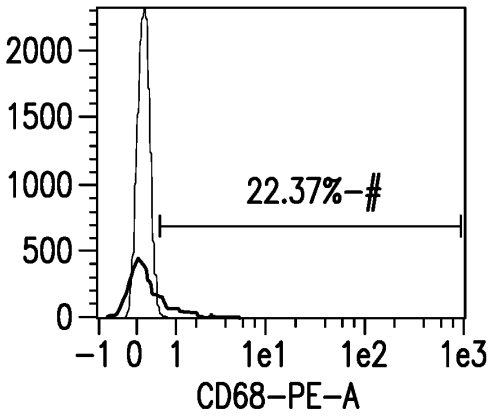


FIG.3K

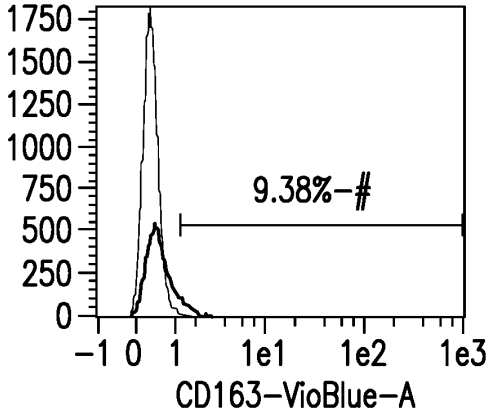


FIG.3L

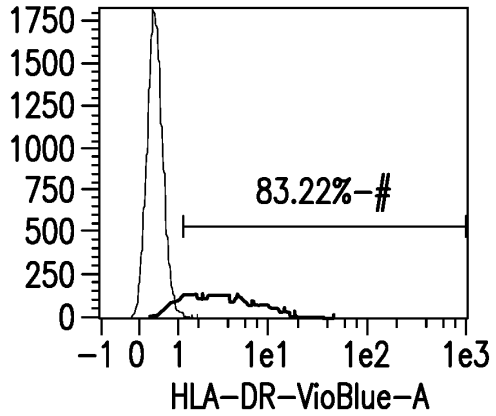


FIG.3M

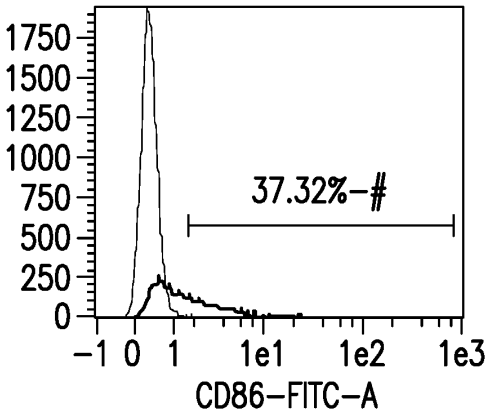


FIG.3N

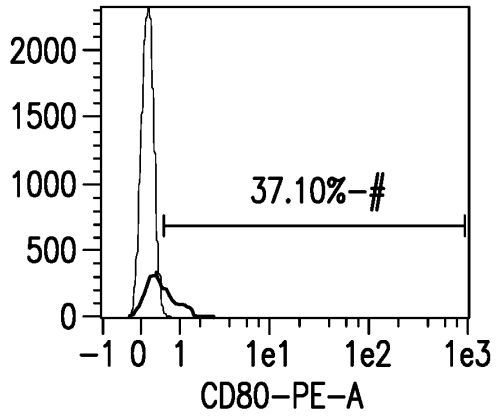


FIG.3O

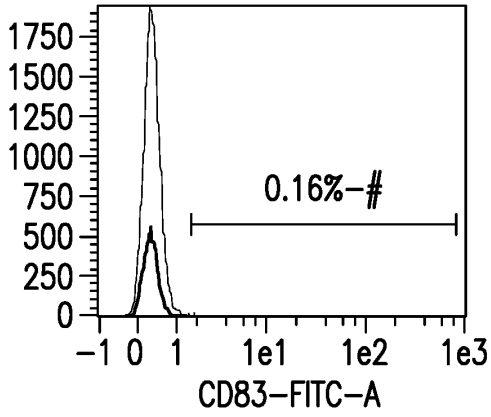


FIG.3P

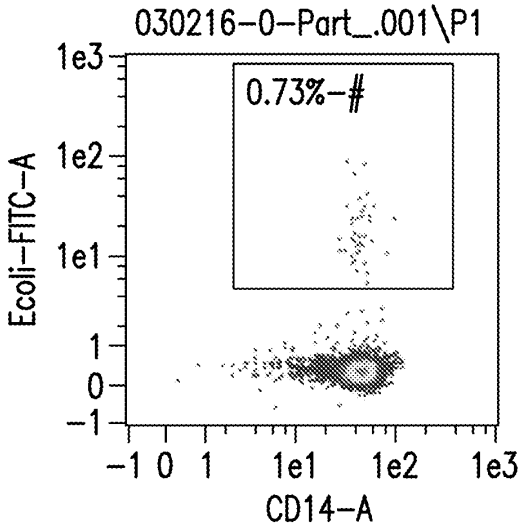

030216-0-Part_.001\P1
0.73%-#
Ecoli-FITC-A
CD14-A
1e3
1e2
1e1
1
0
-1
-1 0 1 1e1 1e2 1e3

FIG.4A

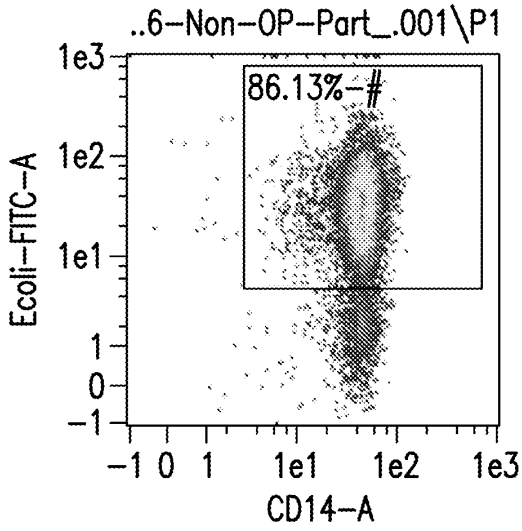

..6-Non-OP-Part_.001\P1
86.13%-#
Ecoli-FITC-A
CD14-A
1e3
1e2
1e1
1
0
-1
-1 0 1 1e1 1e2 1e3

FIG.4B

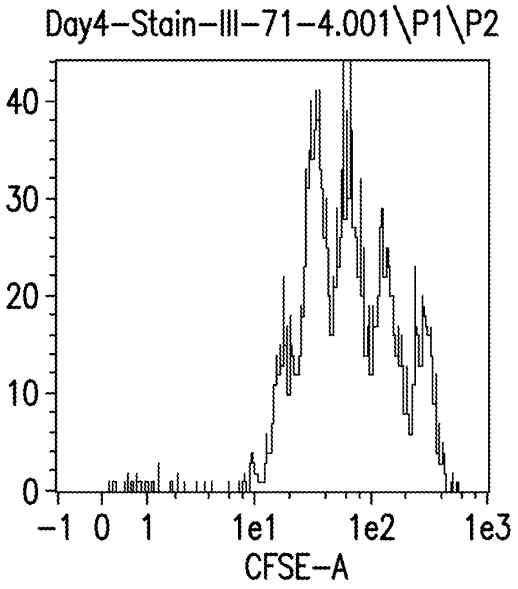


FIG.5A

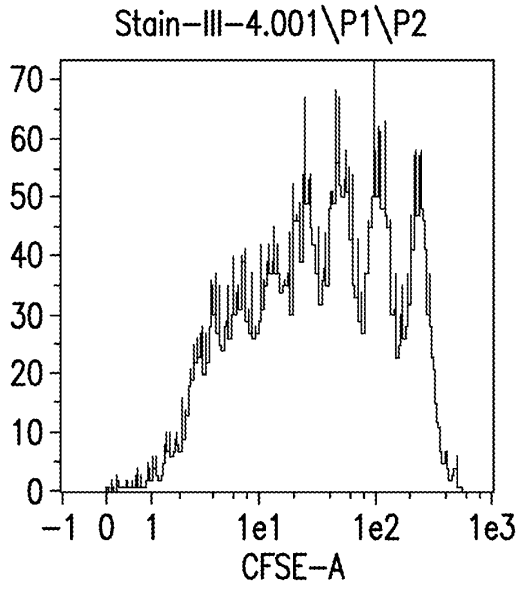


FIG.5B

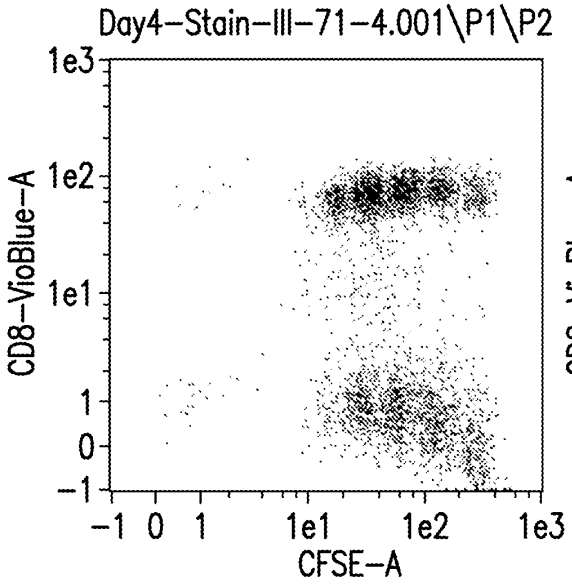


FIG.5C

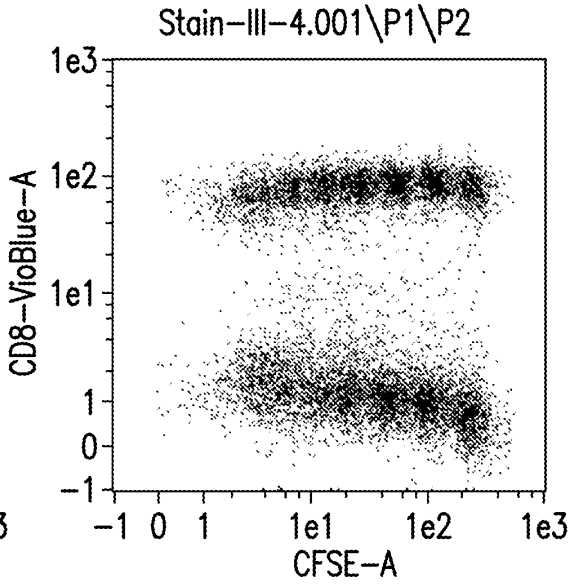


FIG.5D

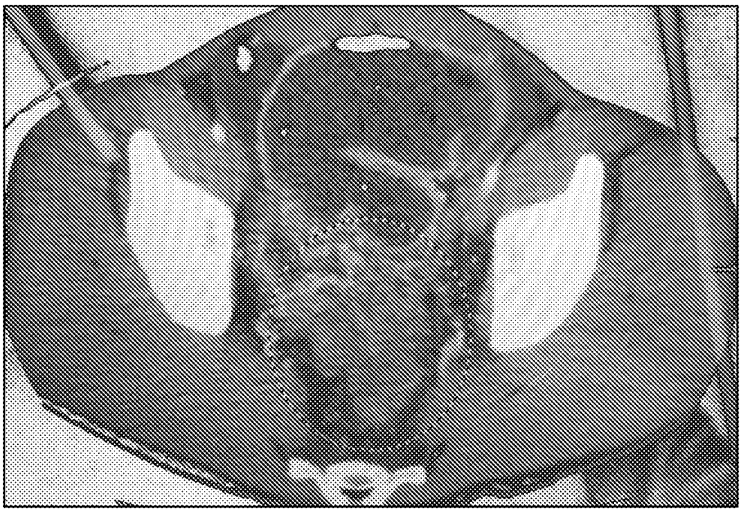


FIG.6A

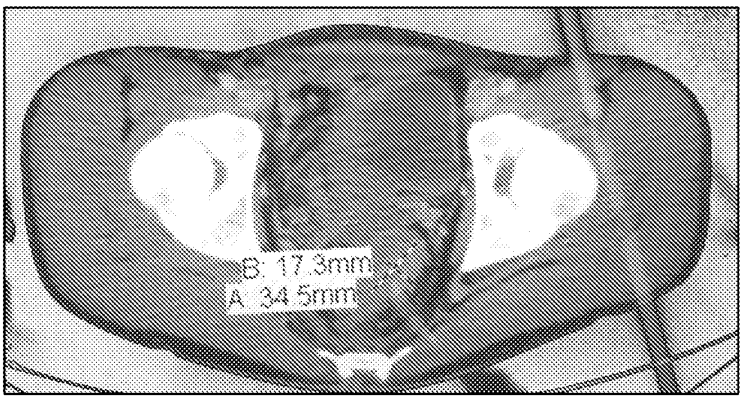


FIG.6B

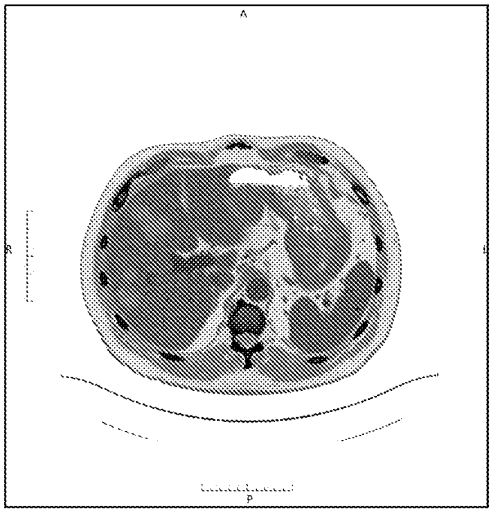


FIG.7A

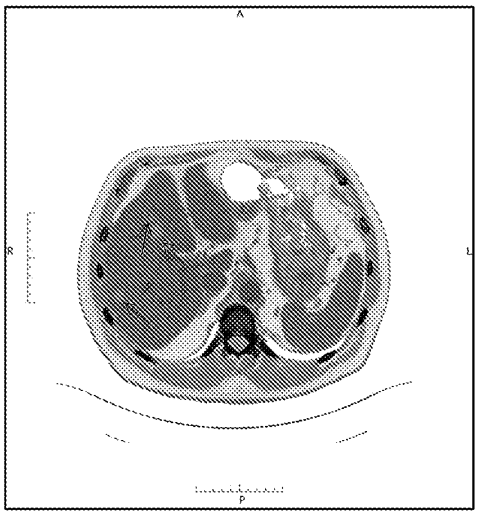


FIG.7B

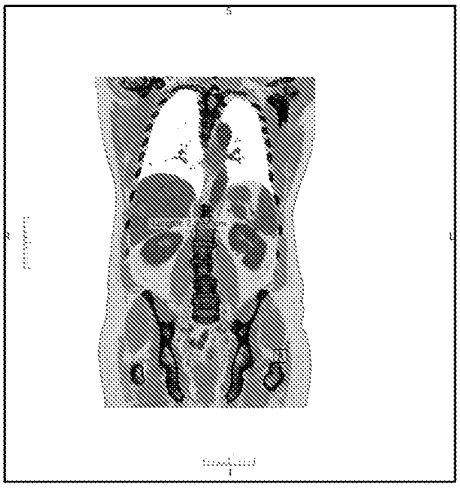


FIG.7C

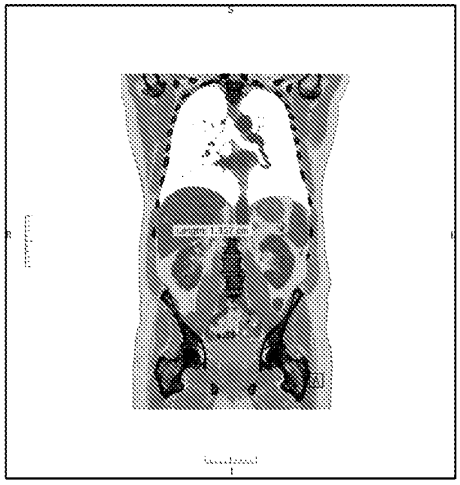


FIG.7D

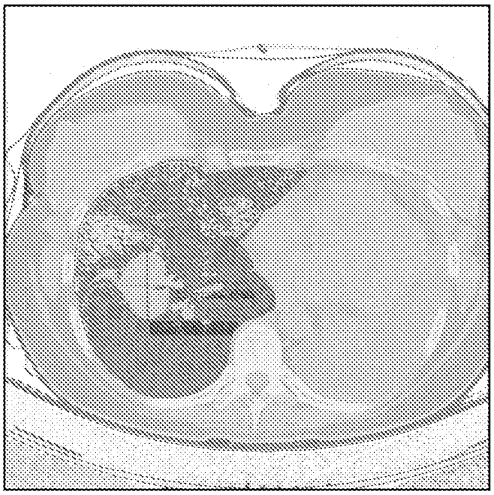


FIG.8A

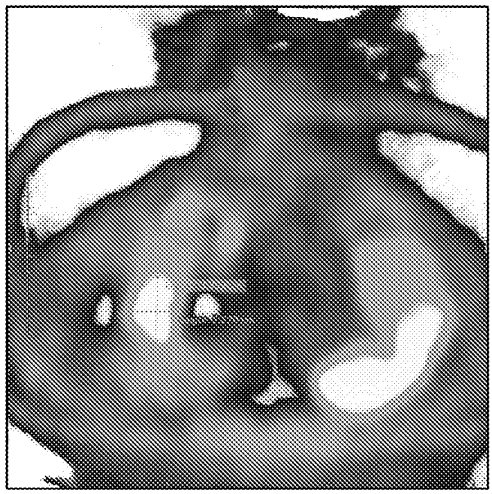


FIG.8B

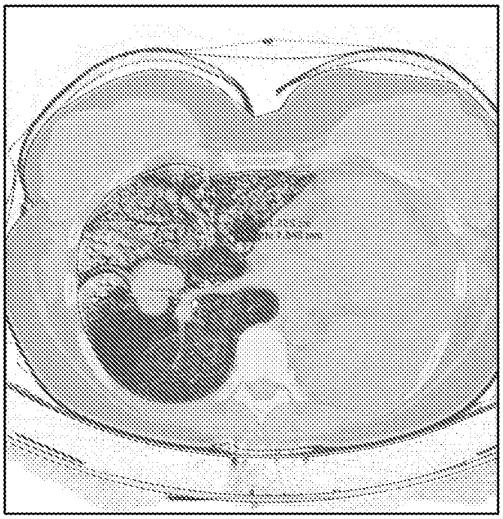


FIG.8C



FIG.8D

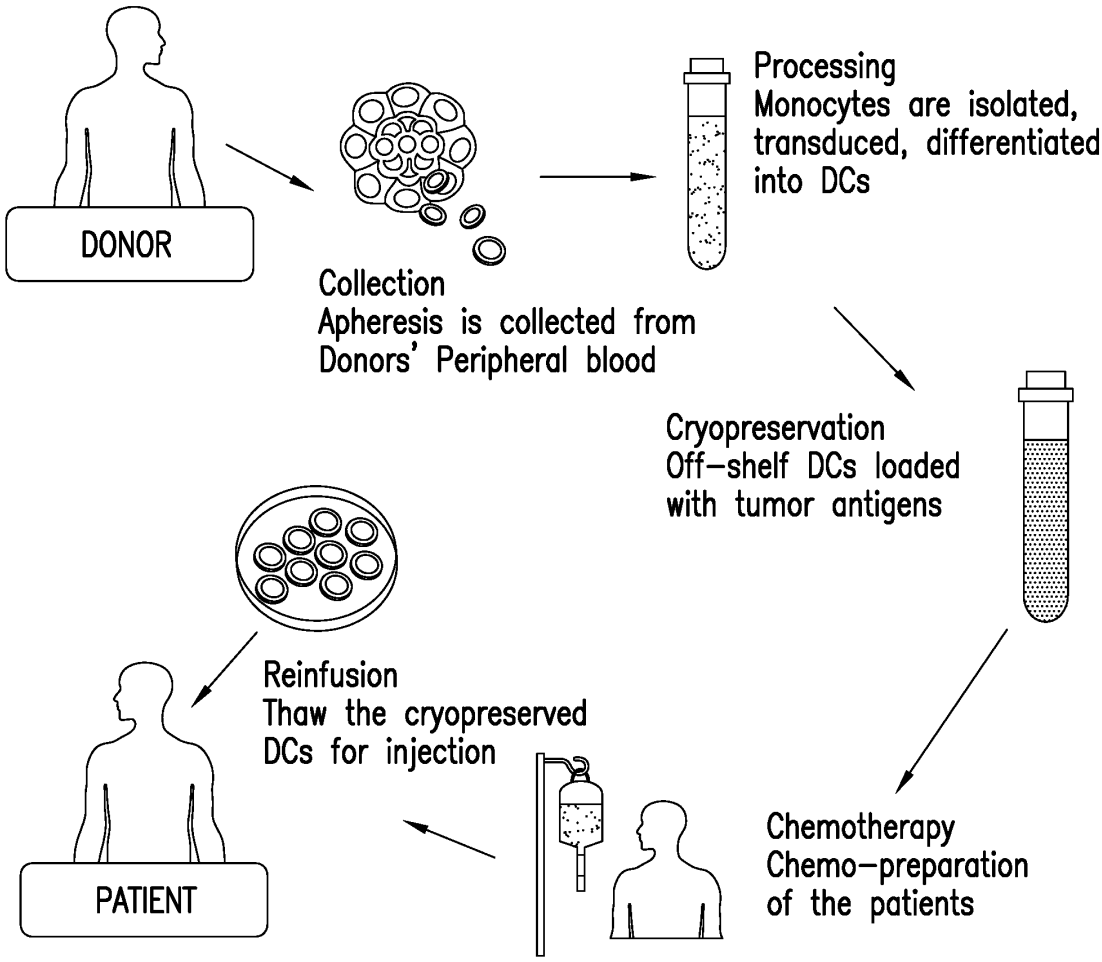

DONOR
Collection
Apheresis is collected from
Donors' Peripheral blood
Processing
Monocytes are isolated,
transduced, differentiated
into DCs
Cryopreservation
Off-shelf DCs loaded
with tumor antigens
Chemotherapy
Chemo-preparation
of the patients
Reinfusion
Thaw the cryopreserved
DCs for injection
PATIENT

FIG.9

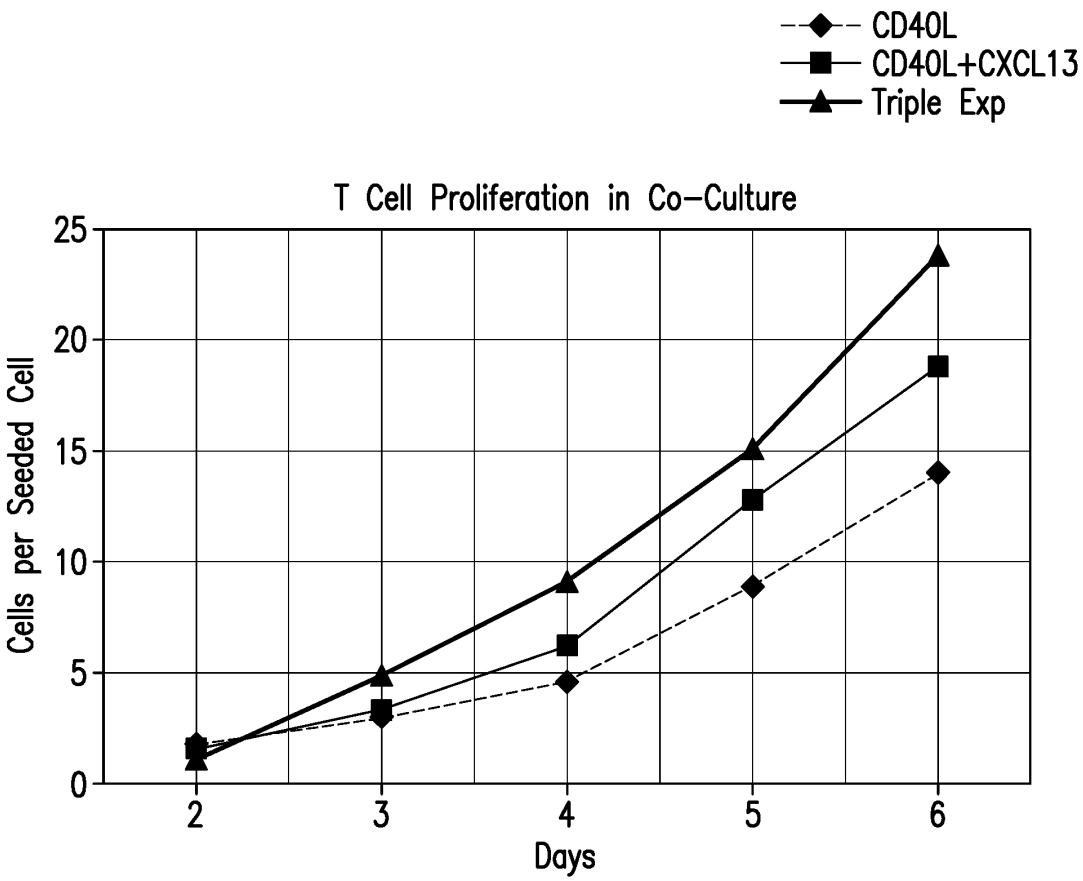

CD40L
CD40L+CXCL13
Triple Exp
T Cell Proliferation in Co-Culture
Cells per Seeded Cell
25
20
15
10
5
0
2
3
4
5
6
Days

FIG.10

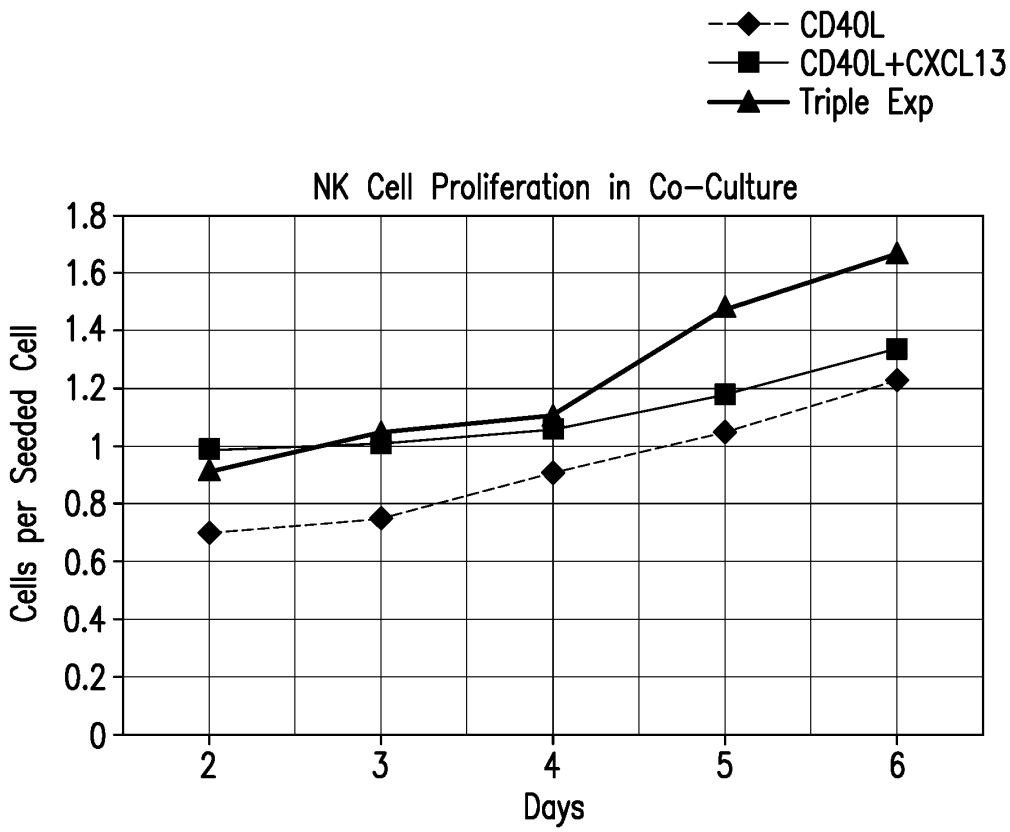

CD40L
CD40L+CXCL13
Triple Exp
NK Cell Proliferation in Co-Culture
Cells per Seeded Cell
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2
3
4
5
6
Days

FIG.11

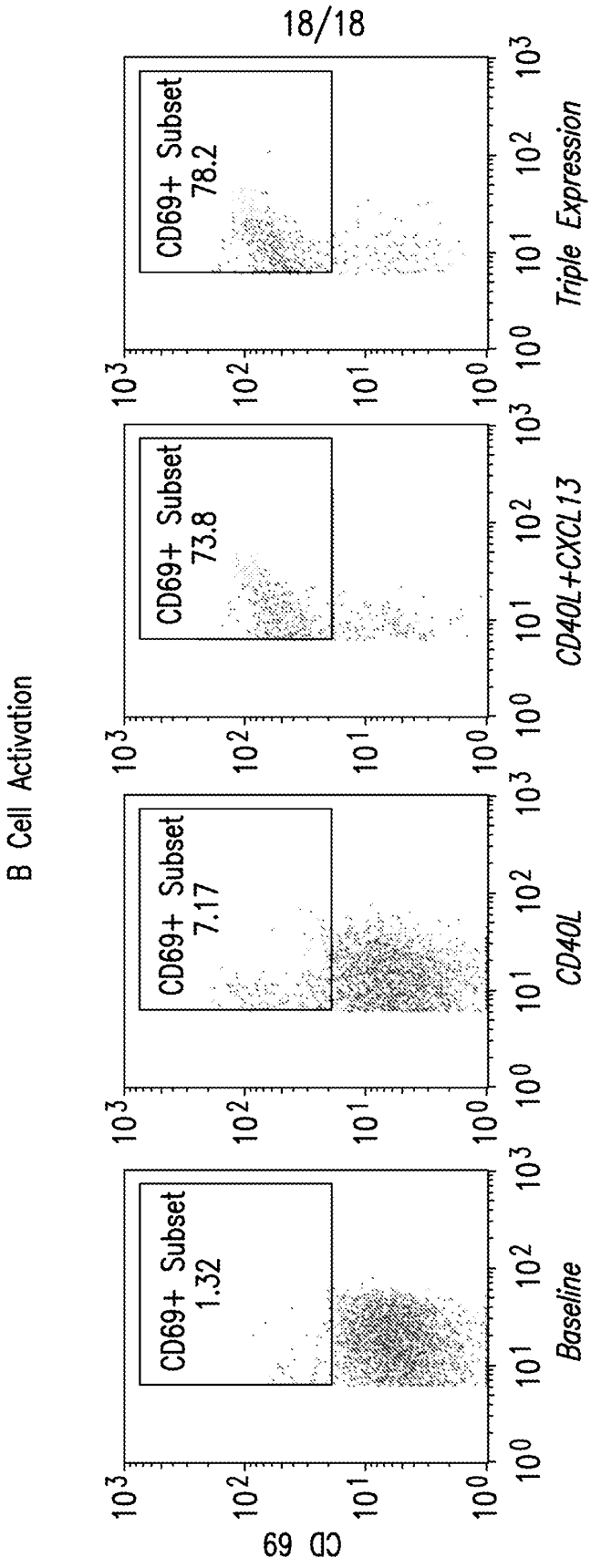

B Cell Activation
CD69+ Subset
1.32
CD69+ Subset
7.17
CD69+ Subset
73.8
CD69+ Subset
78.2
CD 69
CD 19
Baseline
CD40L
CD40L+CXCL13
Triple Expression

FIG. 12