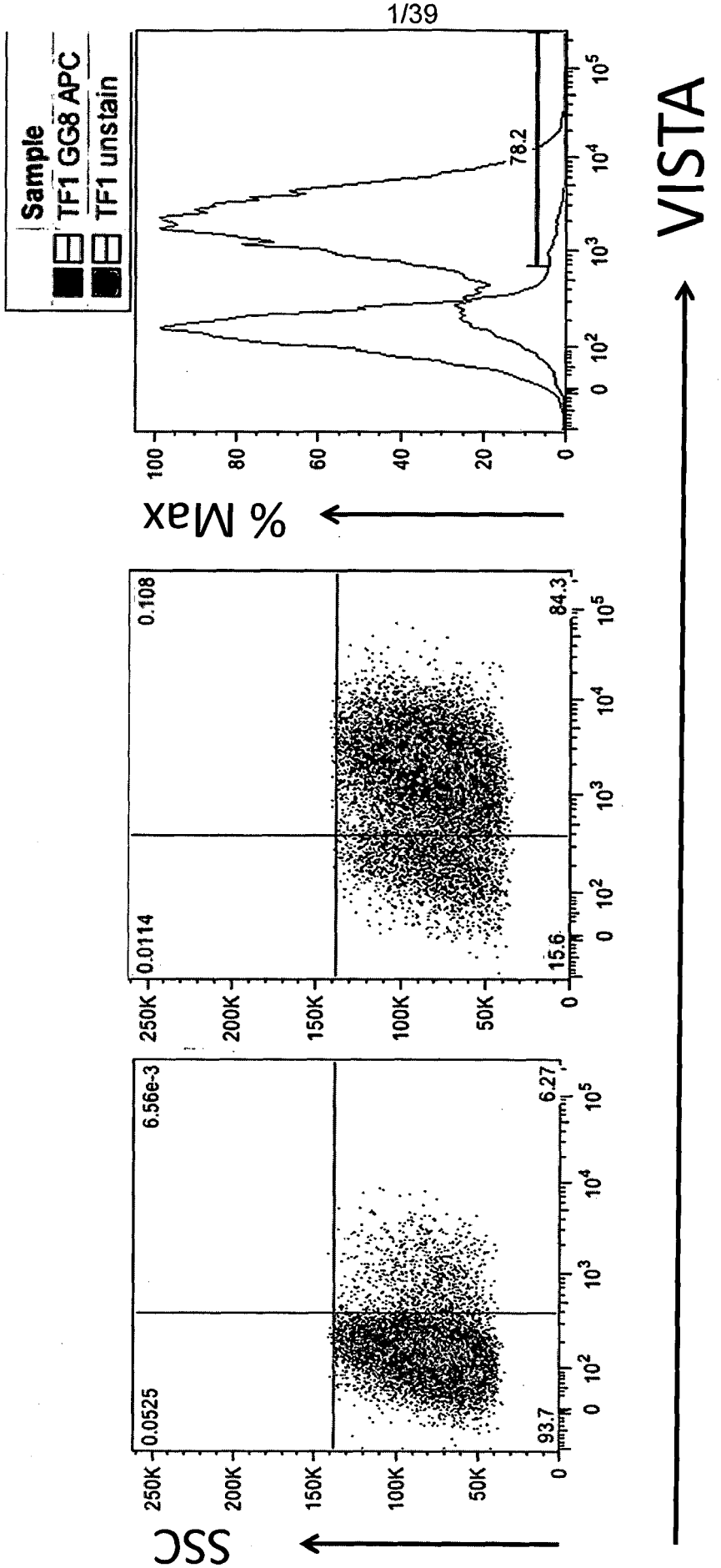
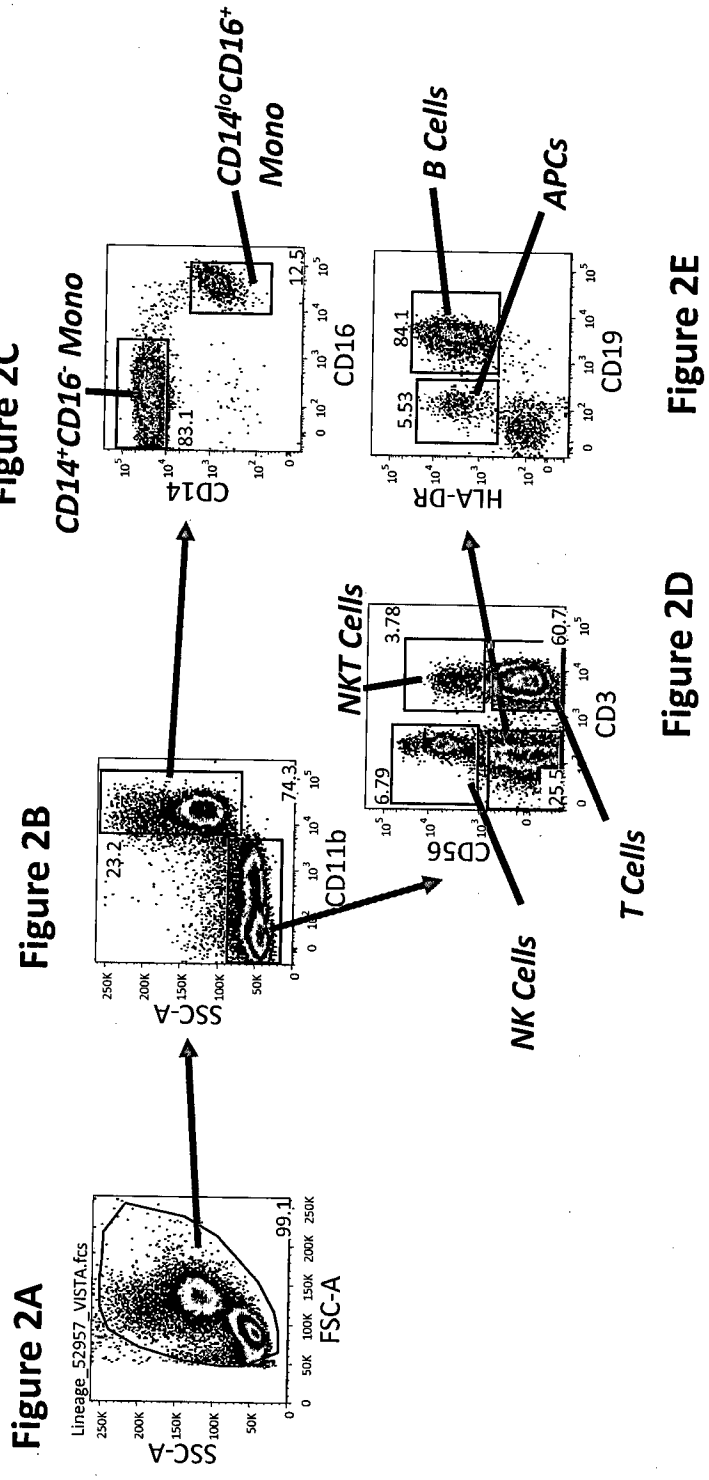


Figure 1A

Figure 1B

Figure 1C


Figure 2A
Lineage_52957_VISTA.fcs
SSC-A
FSC-A
99.1
Figure 2B
SSC-A
CD11b
23.2
74.3
Figure 2C
CD14+CD16- Mono
CD14loCD16+ Mono
CD14
CD16
83.1
12.5
Figure 2D
NKT Cells
NK Cells
T Cells
CD56
CD3
3.78
6.79
60.7
25.5
Figure 2E
B Cells
APCs
HLA-DR
CD19
84.1
5.53

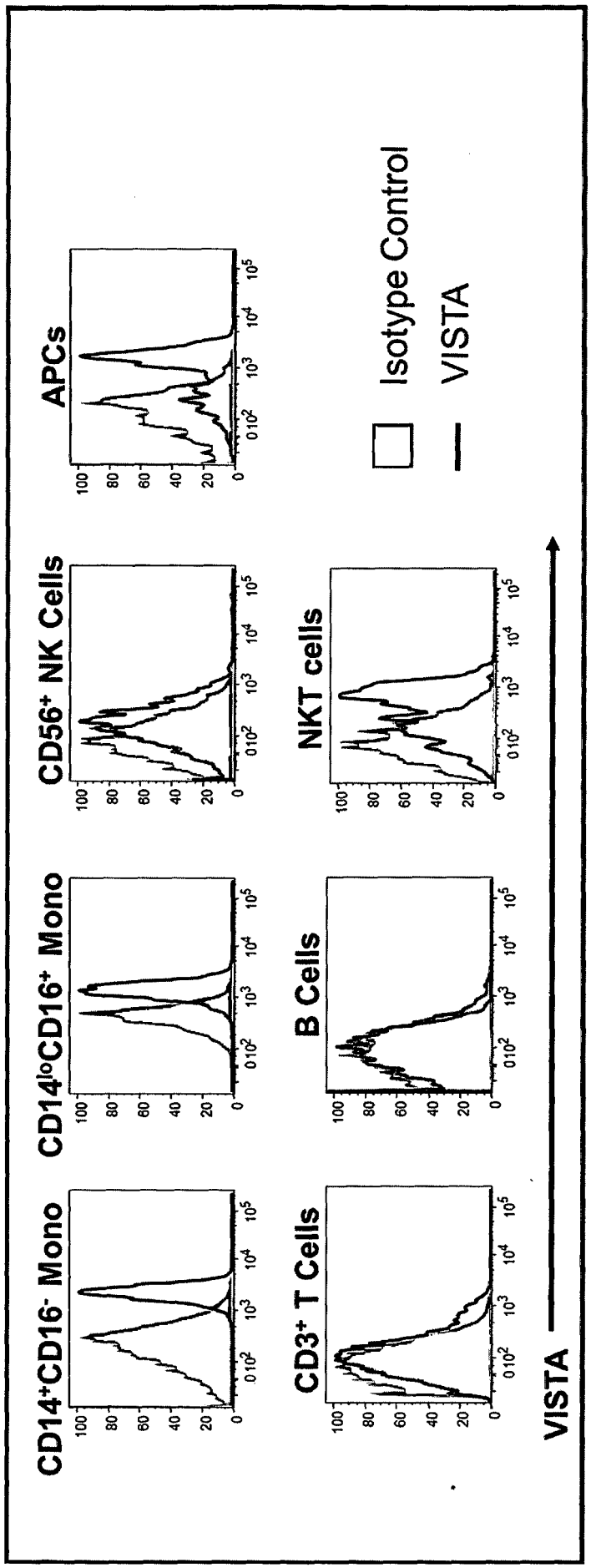


Figure 3A Figure 3B Figure 3C Figure 3D

Figure 3E Figure 3F Figure 3G

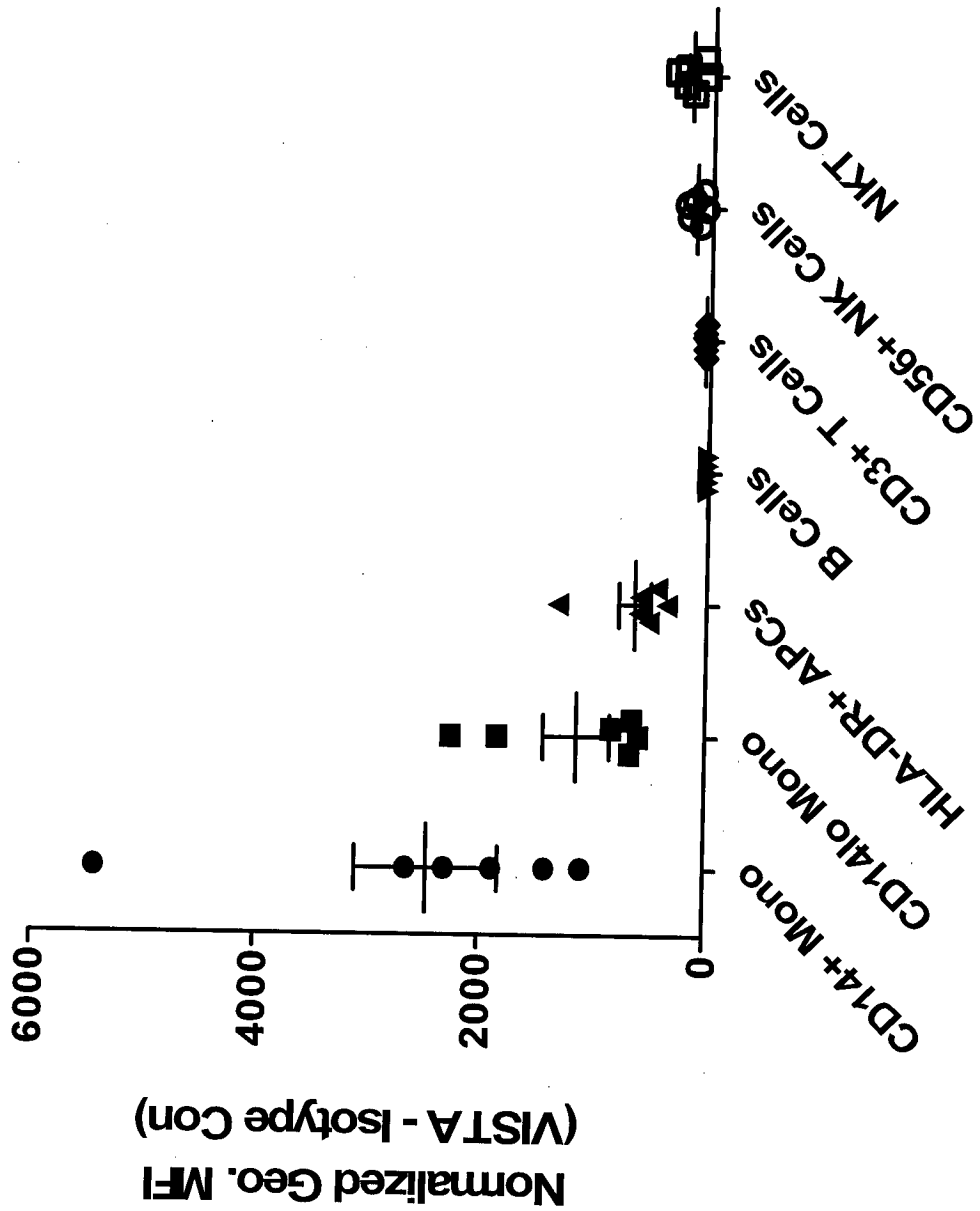

Normalized Geo. MFI
(VISTA - Isotype Con)
6000
4000
2000
0
CD14+ Mono
CD14lo Mono
HLA-DR+ APCs
B cells
CD3+ T cells
CD56+ NK cells
NKT cells

Figure 4

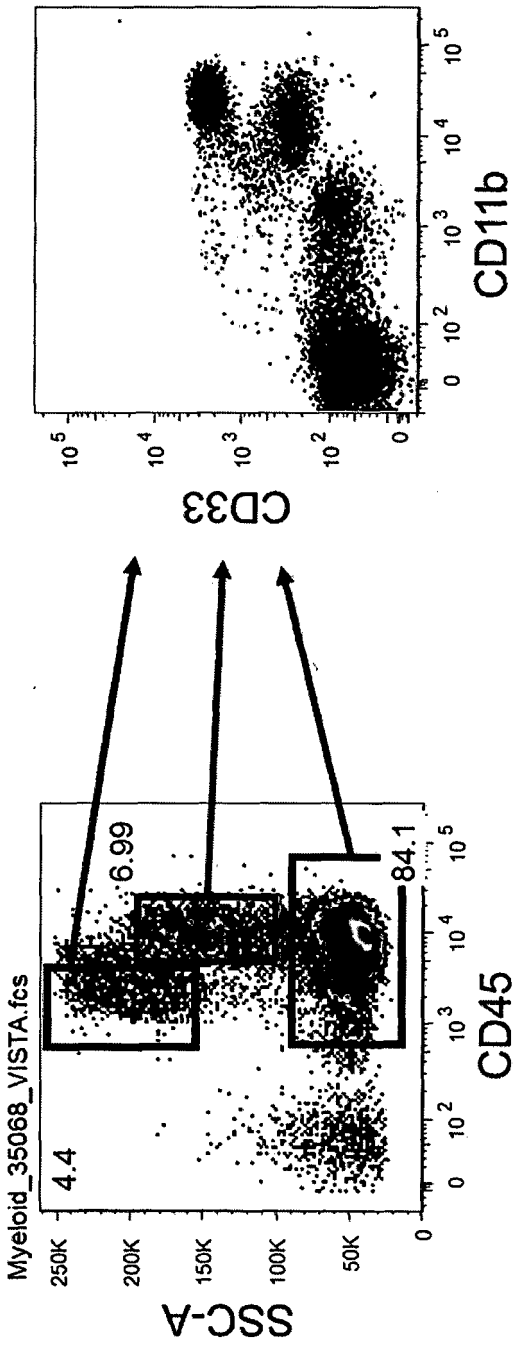


Figure 5A

Figure 5B

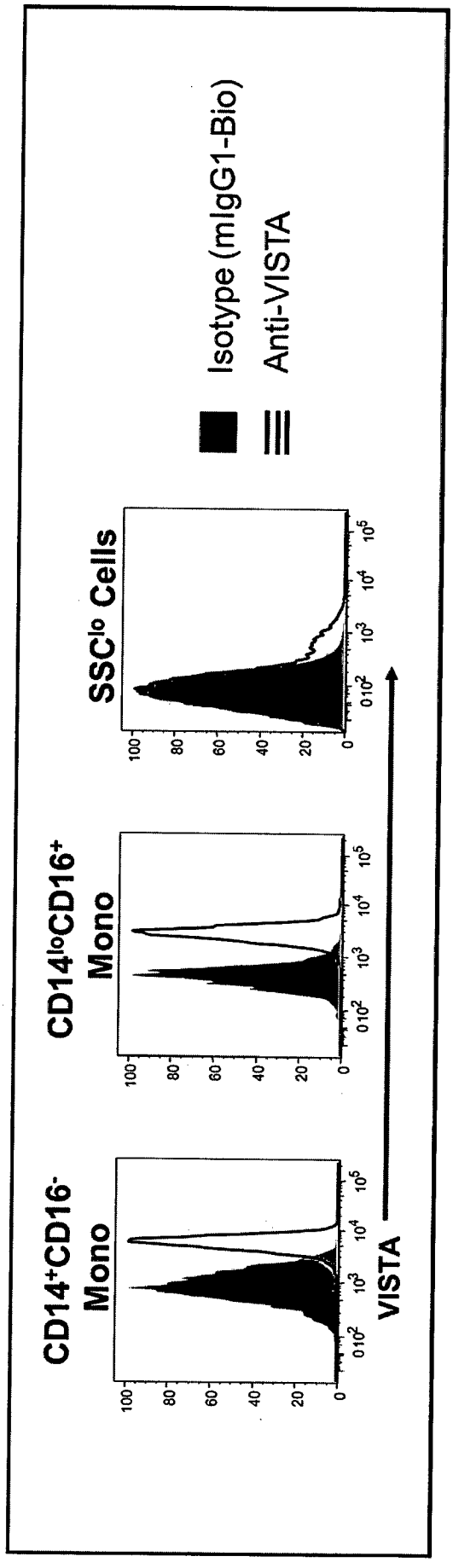


Figure 6A Figure 6B Figure 6C

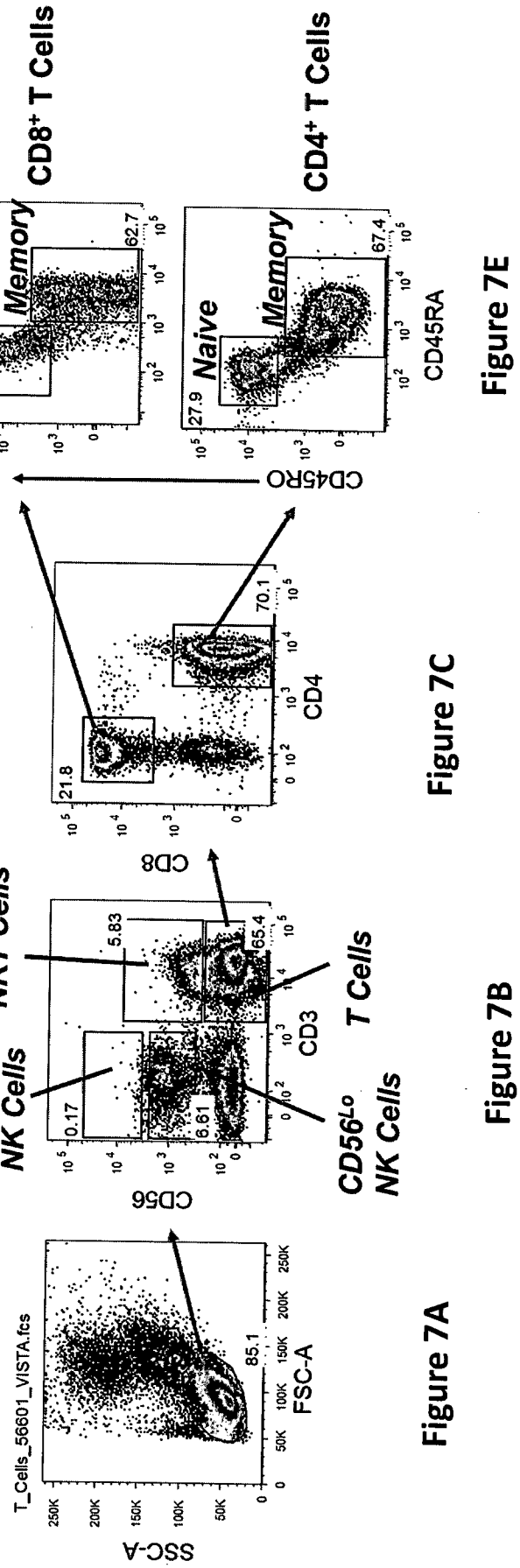


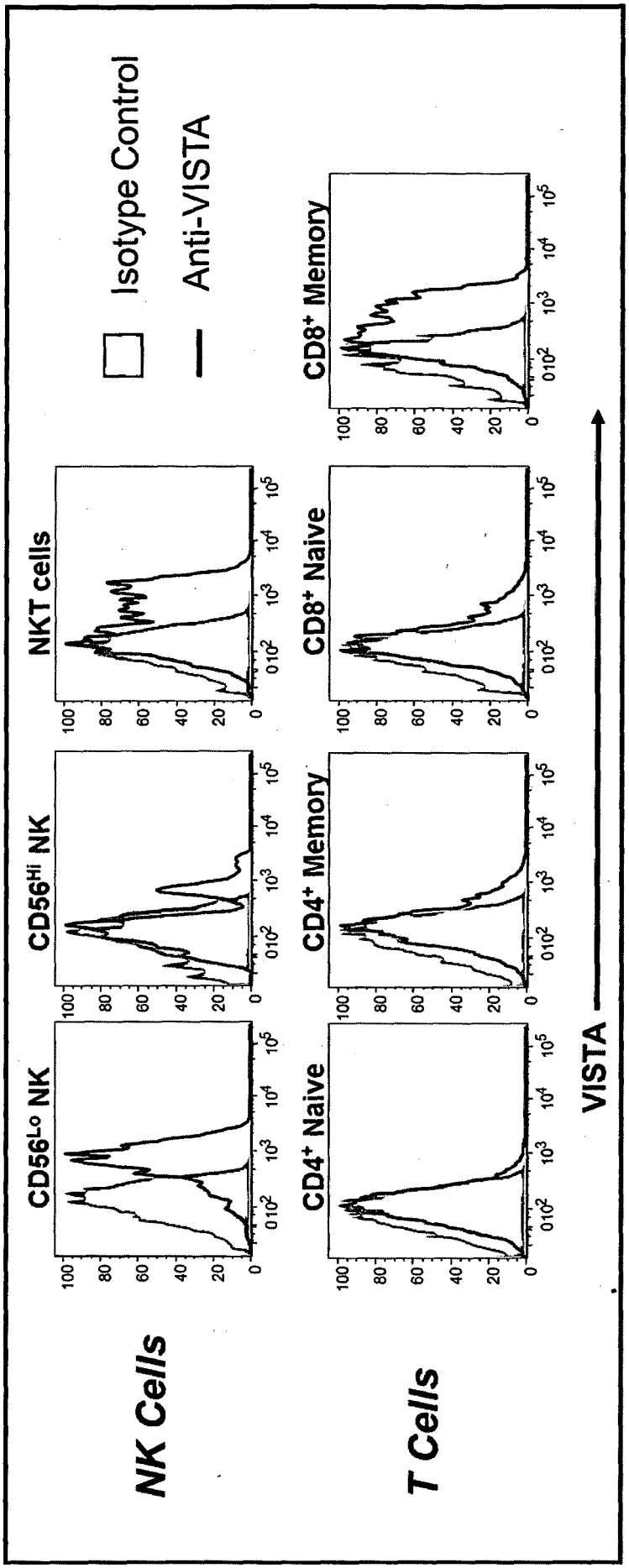
Figure 7A

Figure 7B

Figure 7C

Figure 7D

Figure 7E


Isotype Control
Anti-VISTA
NK Cells
T Cells
CD56Lo NK
CD56Hi NK
NKT cells
CD4+ Naive
CD4+ Memory
CD8+ Naive
CD8+ Memory
VISTA
Figure 8A
Figure 8B
Figure 8C
Figure 8D
Figure 8E
Figure 8F
Figure 8G

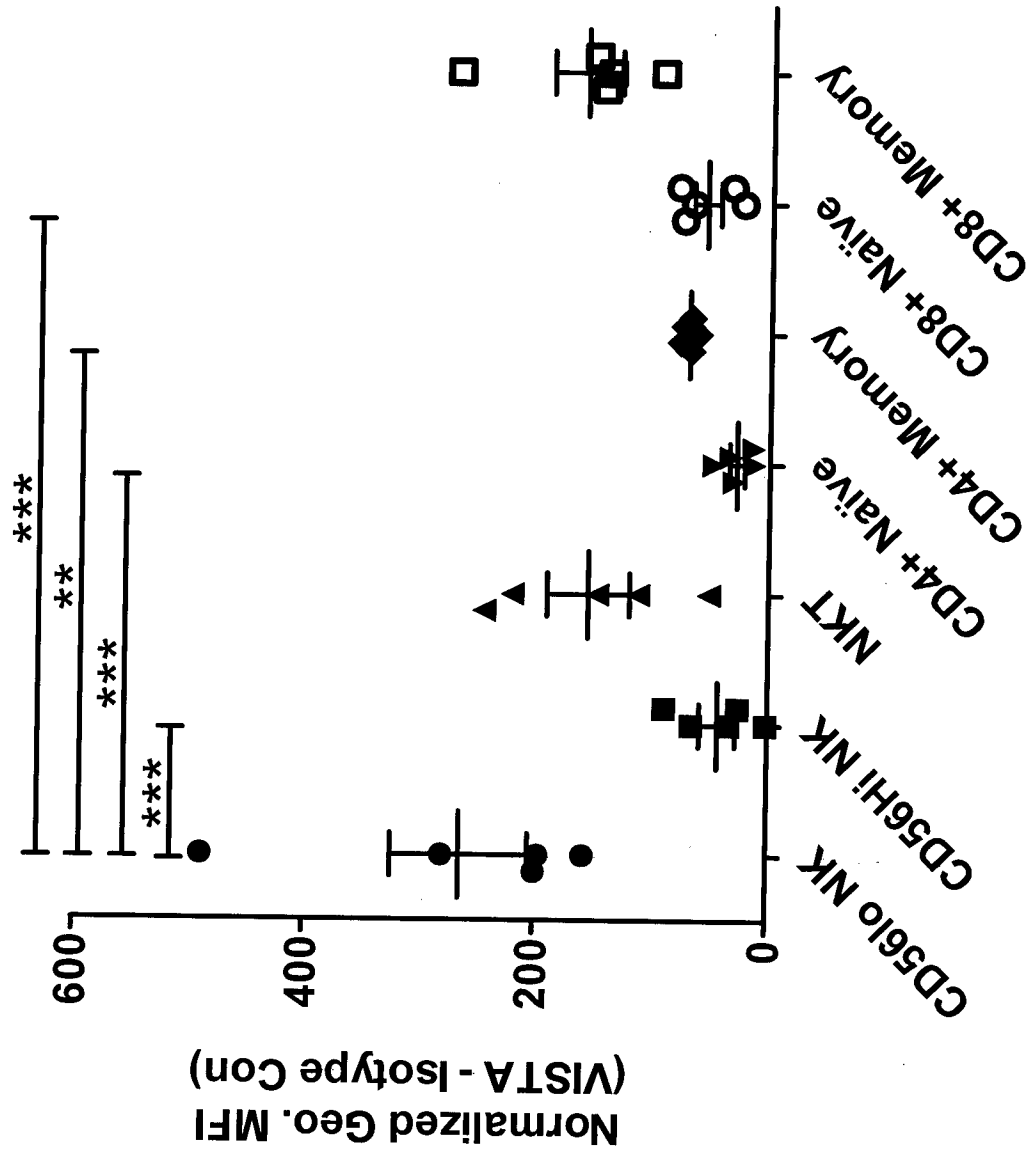
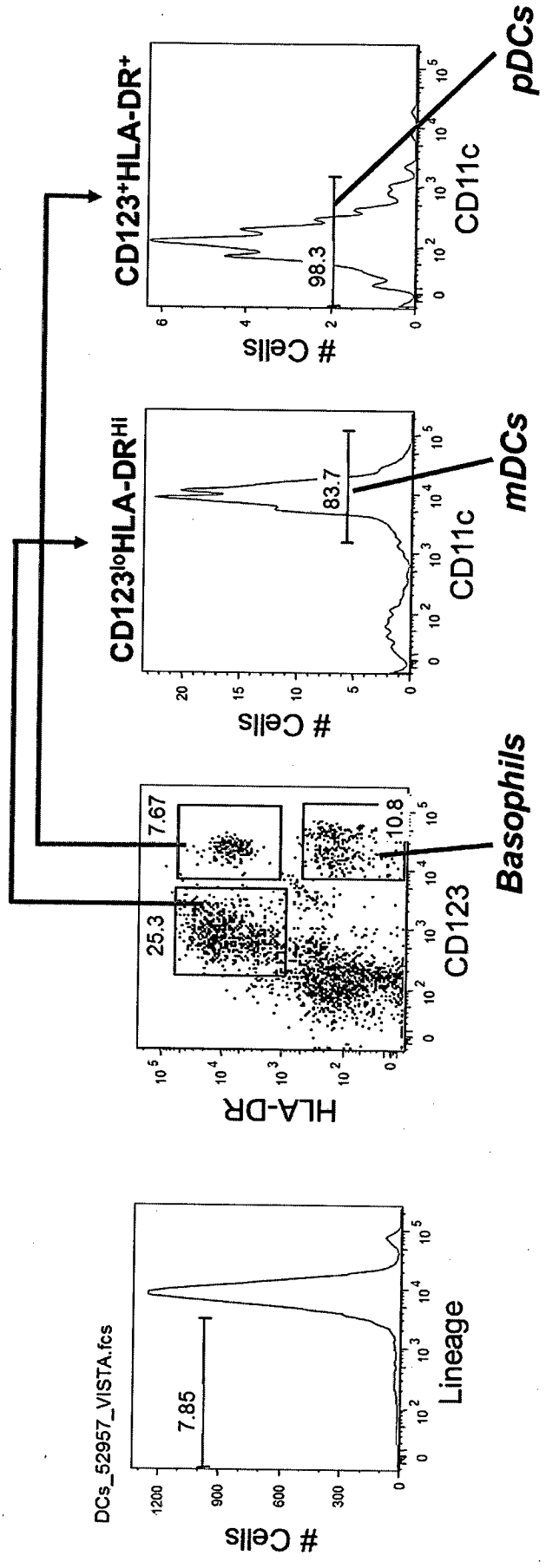

Normalized Geo. MFI
(VISTA - Isotype Con)
600
400
200
0
***
**
***
***
CD56lo NK
CD56Hi NK
NKT
CD4+ Naïve
CD4+ Memory
CD8+ Naïve
CD8+ Memory

Figure 9


DCs_52957_VISTA.fcs
Cells
Lineage
7.85
Figure 10A
HLA-DR
CD123
7.67
25.3
10.8
Basophils
Figure 10B
CD123loHLA-DRHI
Cells
CD11c
83.7
mDCs
Figure 10C
CD123+HLA-DR+
Cells
CD11c
98.3
pDCs
Figure 10D

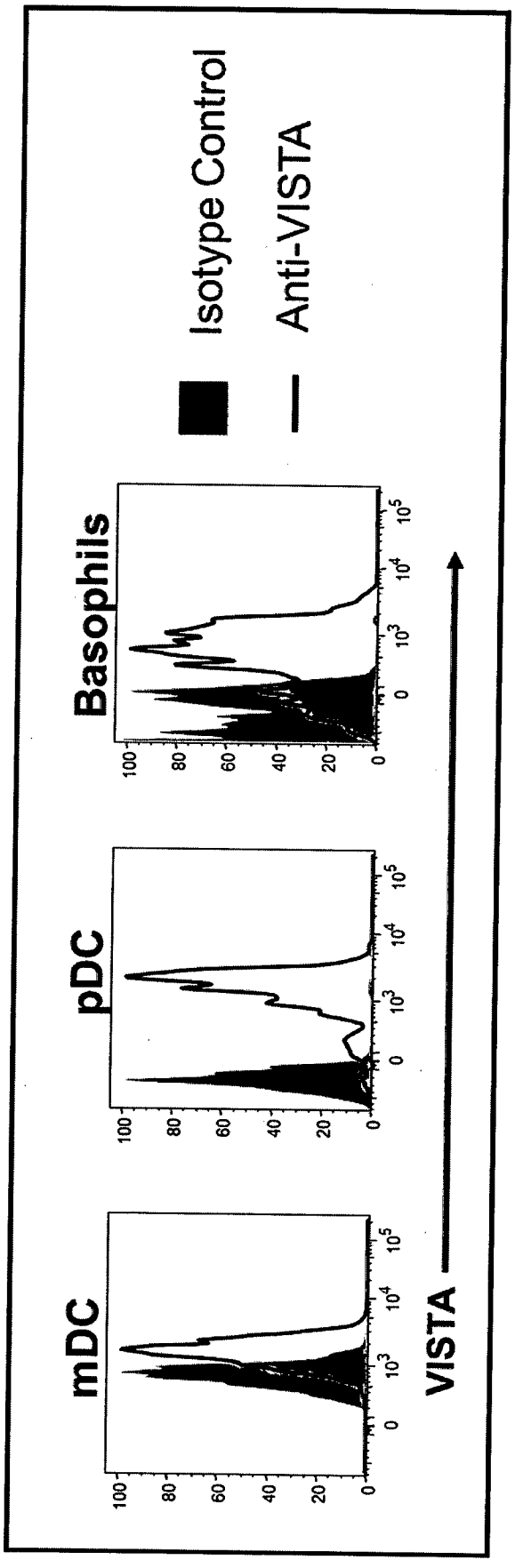


Figure 11A Figure 11B Figure 11C

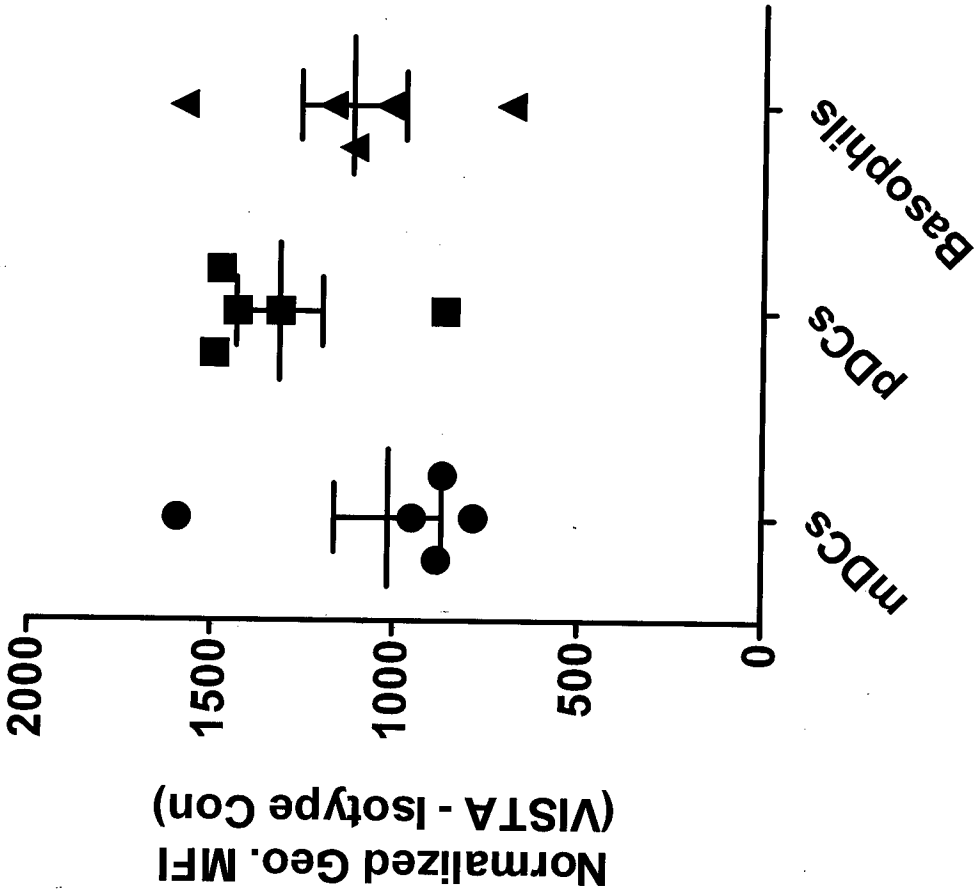

Normalized Geo. MFI
(VISTA - Isotype Con)
2000
1500
1000
500
0
mDCs
pDCs
Basophils

Figure 12

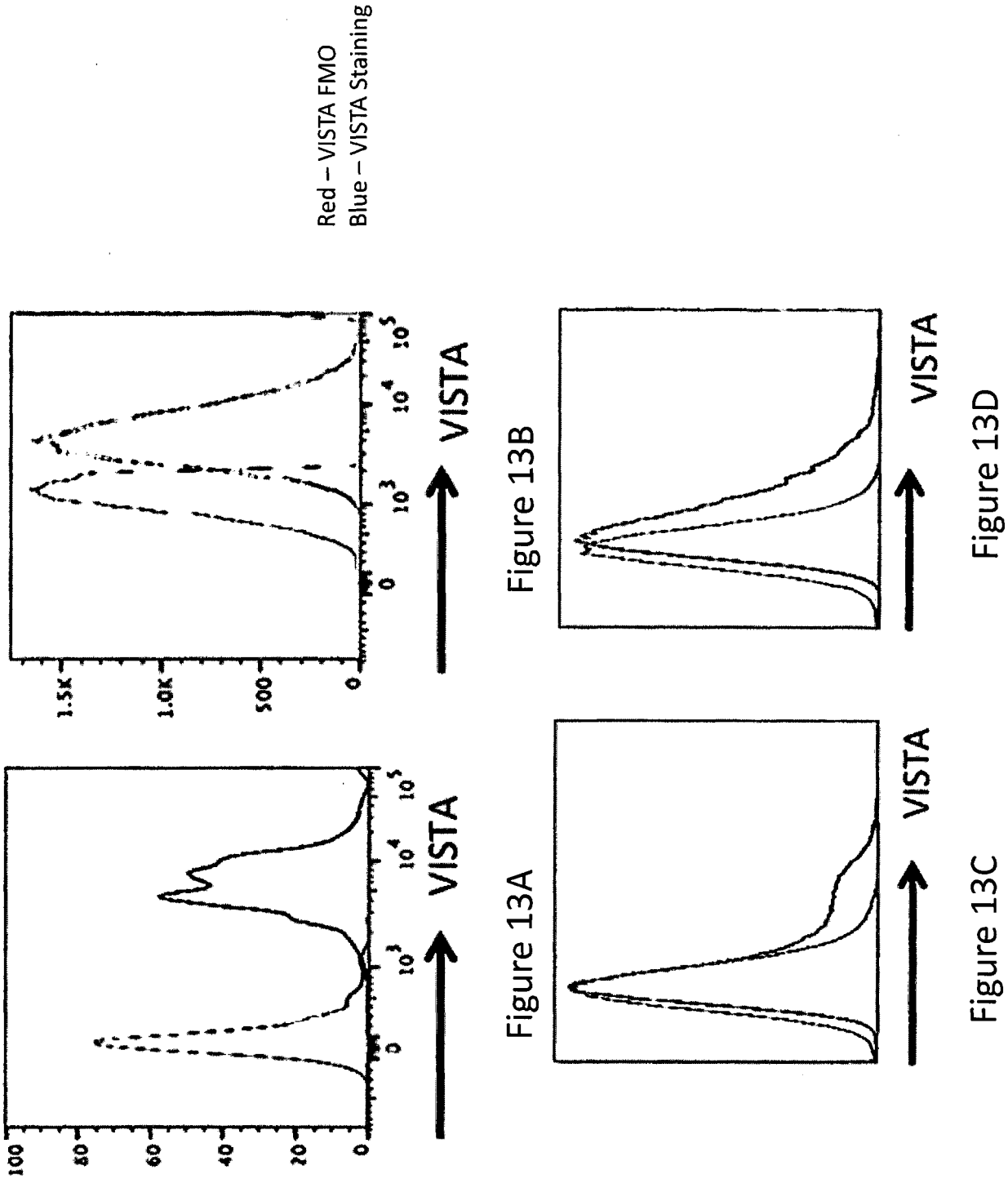


Figure 13A

Figure 13B

Figure 13C

Figure 13D

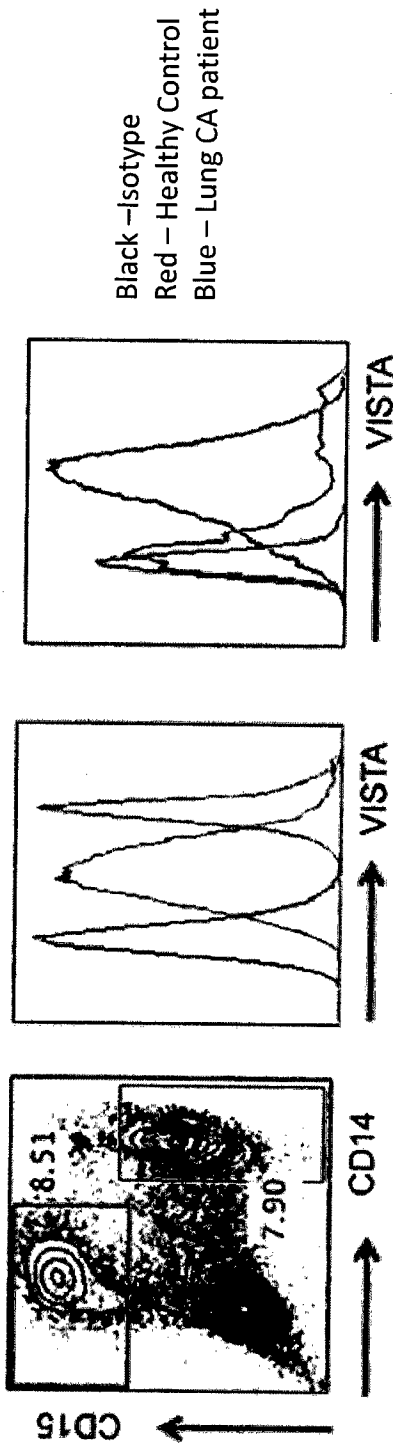


Figure 14C

Figure 14B

Figure 14A

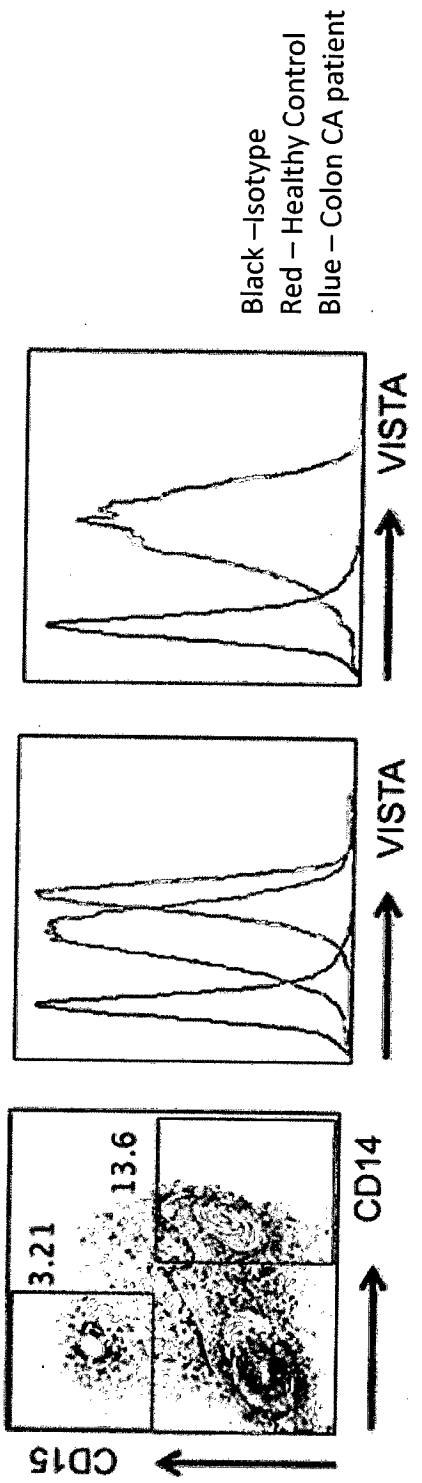


Figure 15A Figure 15B Figure 15C

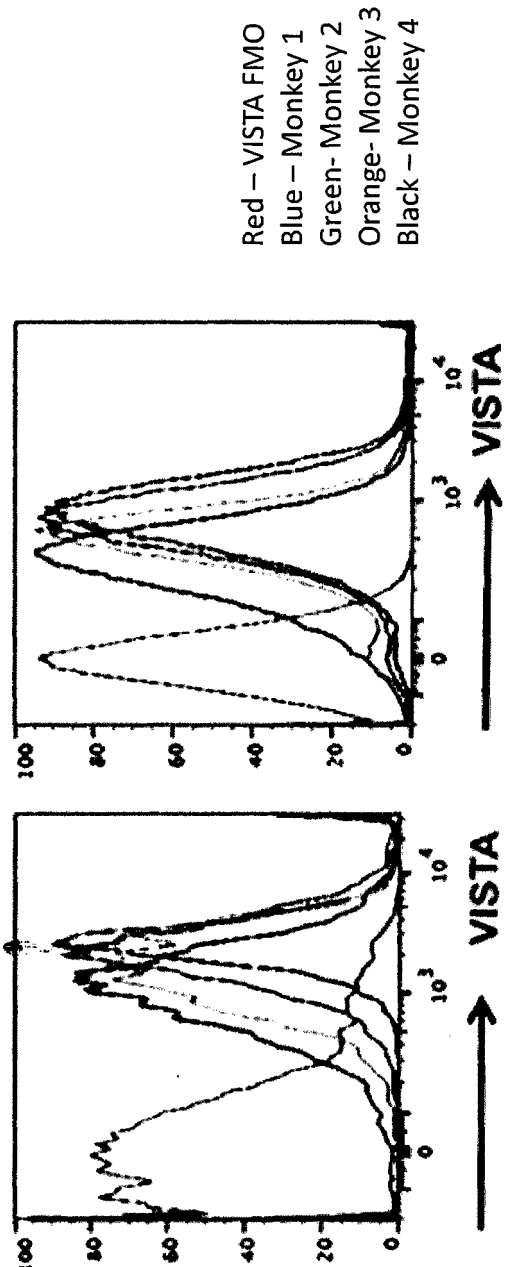


Figure 16A

Figure 16B

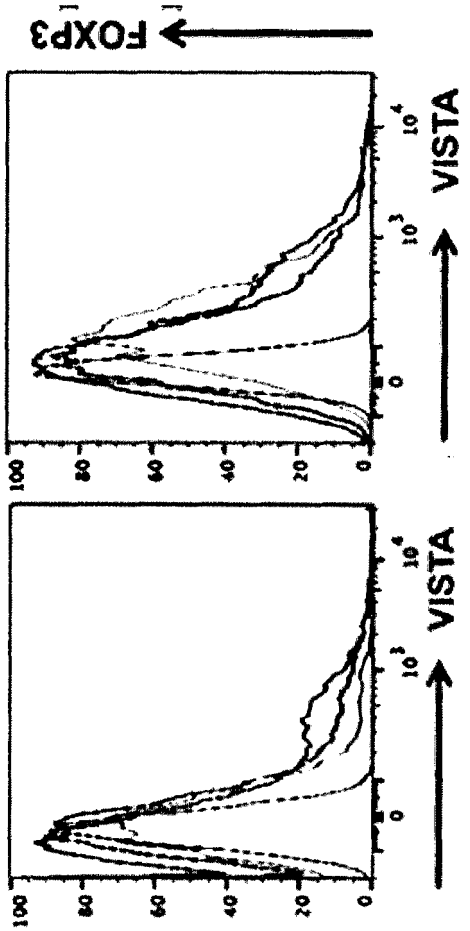


Figure 16C

Figure 16D

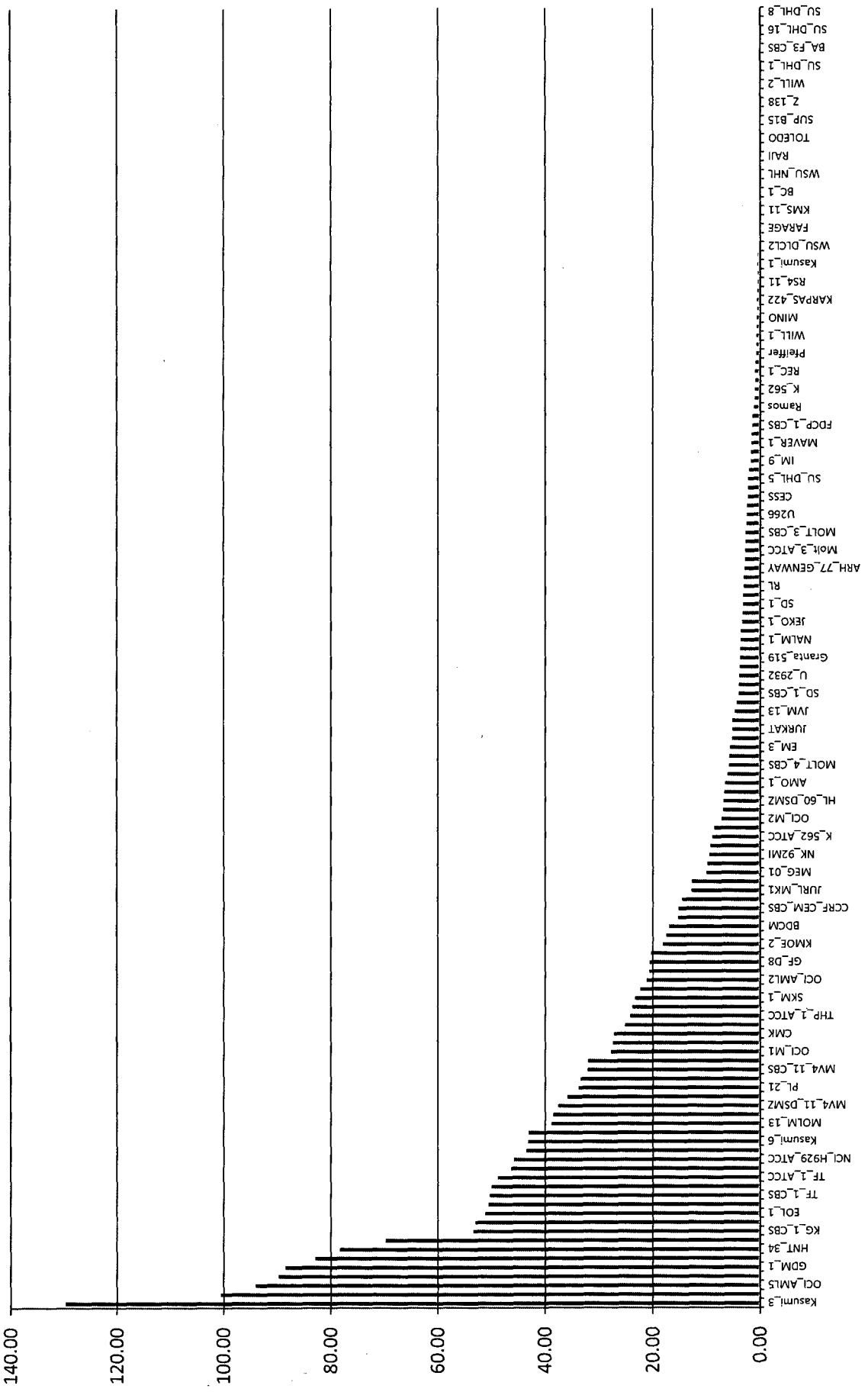

140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
Kasumi_3
OCI_AML5
GDM_1
HNT_34
KG_1_CBS
EOL_1
TF_1_CBS
TF_1_ATCC
NCI_H929_ATCC
Kasumi_6
MOLM_13
MV4_11_DSMZ
PL_21
MV4_11_CBS
OCI_M1
CMK
THP_1_ATCC
SKM_1
OCI_AML2
GF_D8
KMOE_2
BDCM
CCRF_CEM_CBS
JURL_MK1
MEG_01
NK_92MI
K_562_ATCC
OCI_M2
HL_60_DSMZ
AMO_1
MOLT_4_CBS
EM_3
JURKAT
JVM_13
SD_1_CBS
U_2932
Granta_519
NALM_1
JEKO_1
SD_1
RL
ARH_77_GENWAY
Molt_3_ATCC
MOLT_3_CBS
U266
CESS
SU_DHL_5
IM_9
MAVER_1
FDCP_1_CBS
Ramos
K_562
REC_1
Pfeiffer
WILL_1
MINO
KARPAS_422
RS4_11
Kasumi_1
WSU_DLCL2
FARAGE
KMS_11
BC_1
WSU_NHL
RAJI
TOLEDO
SUP_B15
Z_138
WILL_2
SU_DHL_1
BA_F3_CBS
SU_DHL_16
SU_DHL_8

Figure 17

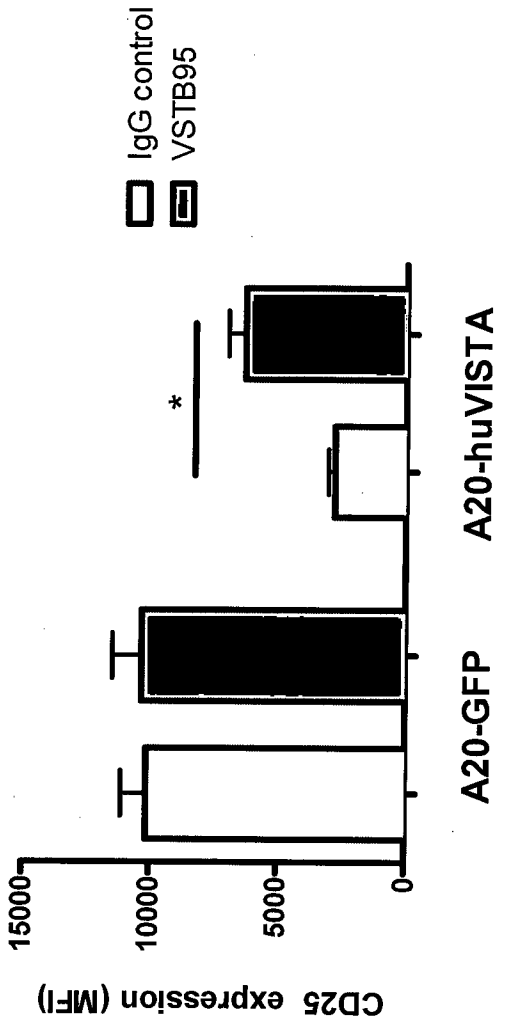
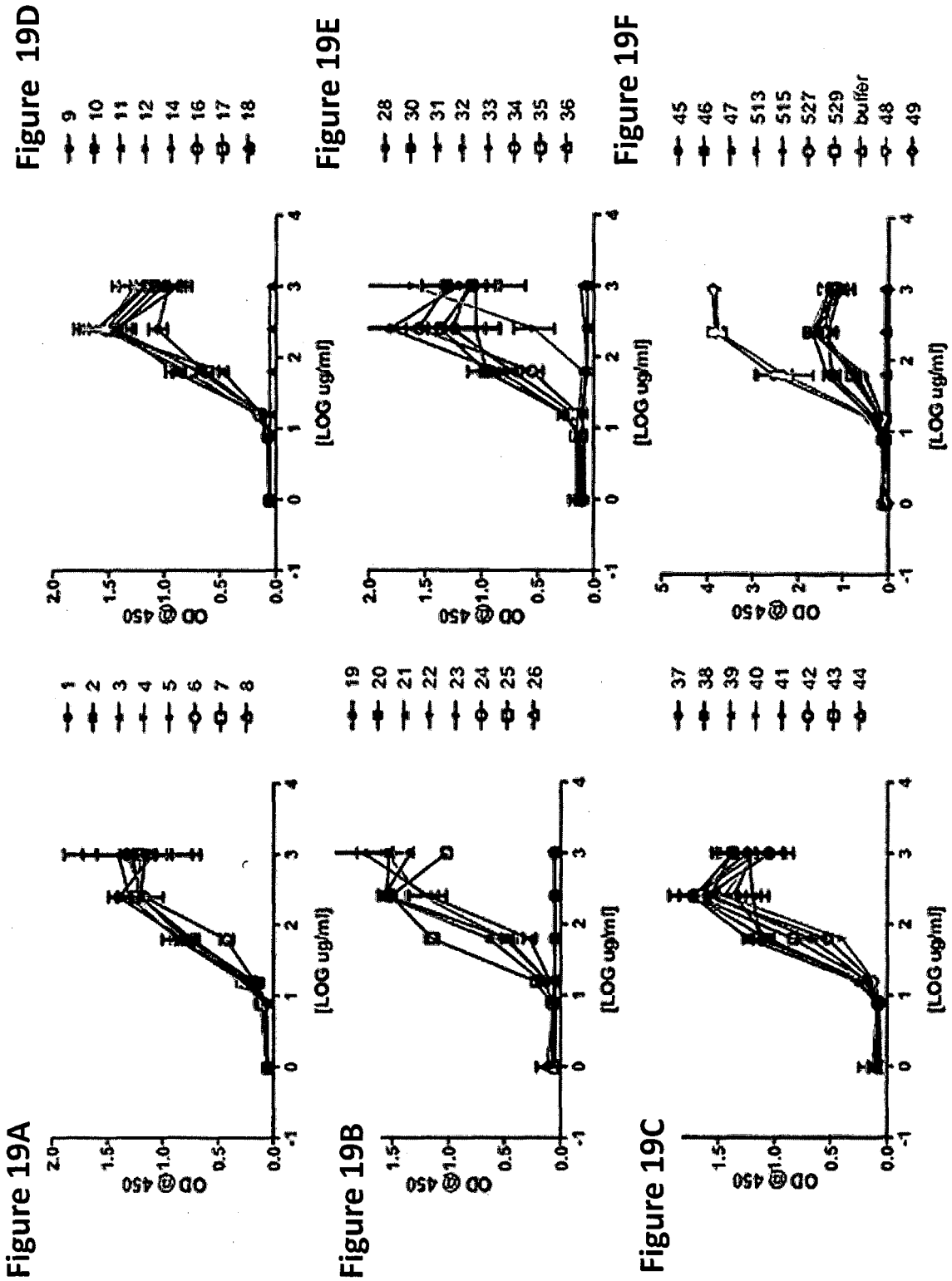

IgG control
VSTB95
*
15000
10000
5000
0
CD25 expression (MFI)
A20-GFP
A20-huVISTA

Figure 18


Figure 19A
Figure 19B
Figure 19C
Figure 19D
Figure 19E
Figure 19F
OD @ 450
[LOG ug/ml]
1 2 3 4 5 6 7 8
9 10 11 12 14 16 17 18
19 20 21 22 23 24 25 26
28 30 31 32 33 34 35 36
37 38 39 40 41 42 43 44
45 46 47 513 515 527 529 buffer 48 49

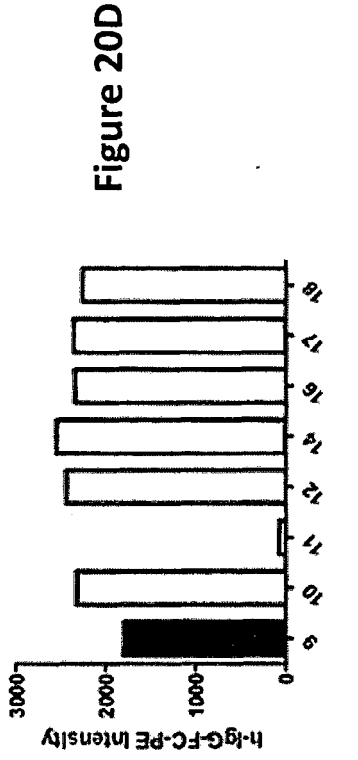


Figure 20D

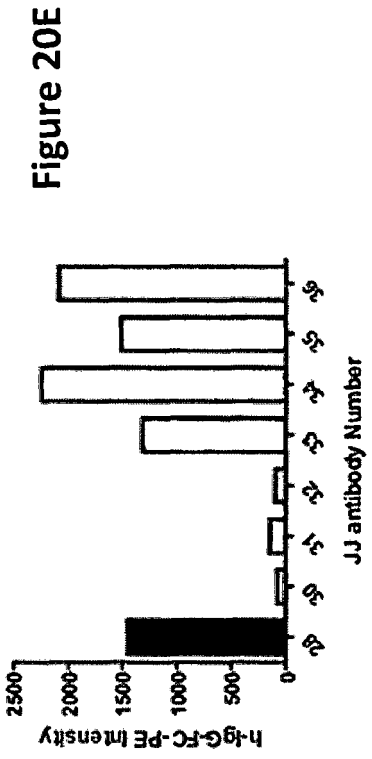


Figure 20E

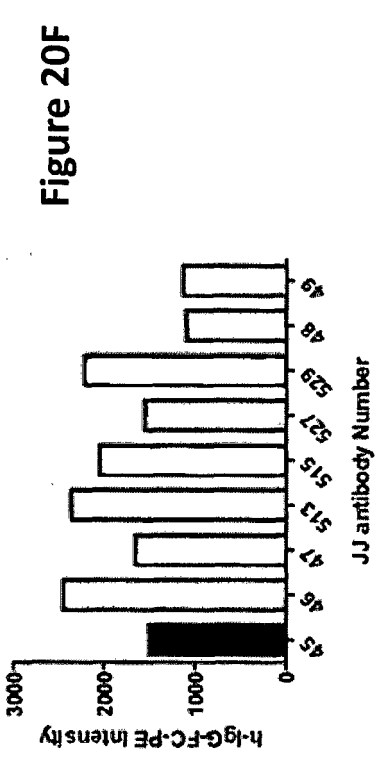


Figure 20F

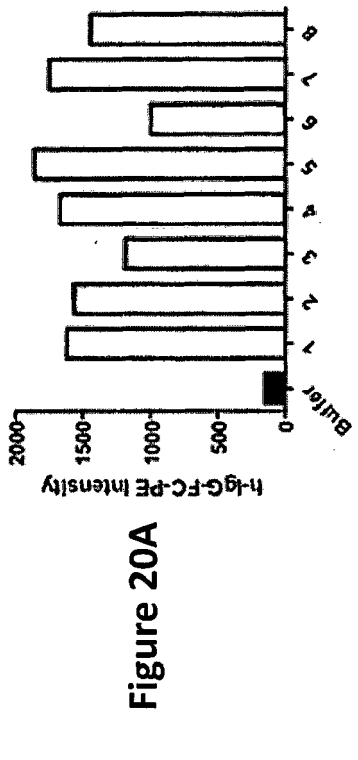


Figure 20A

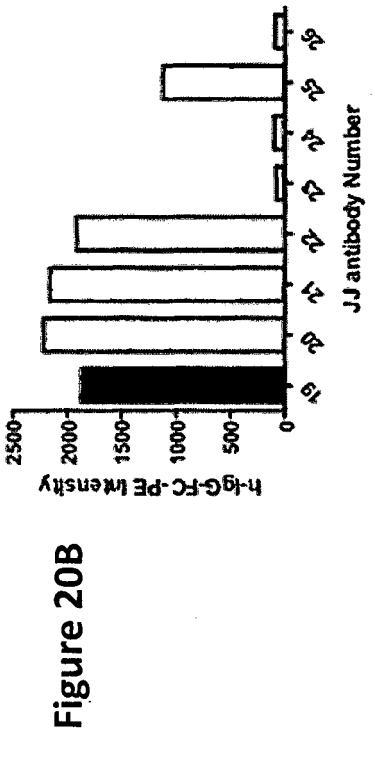


Figure 20B

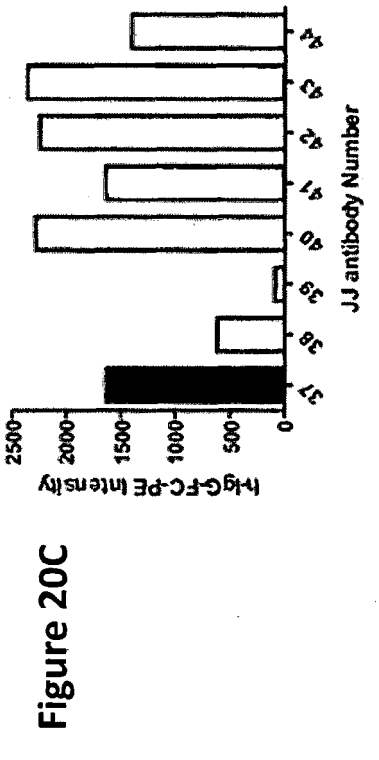


Figure 20C

Figure 21A

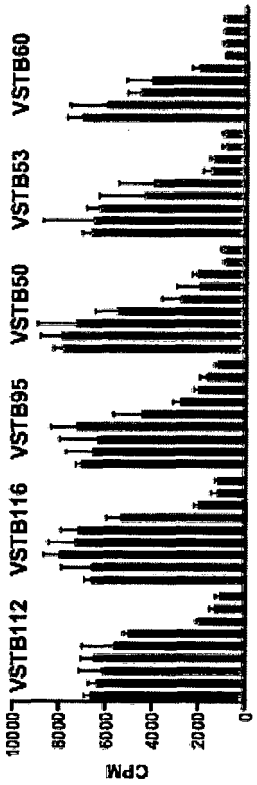


Figure 21B

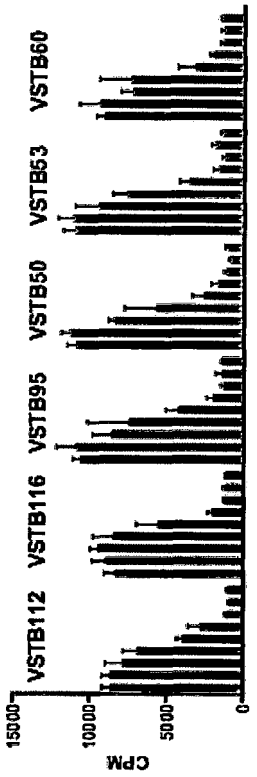


Figure 21C



Figure 21D

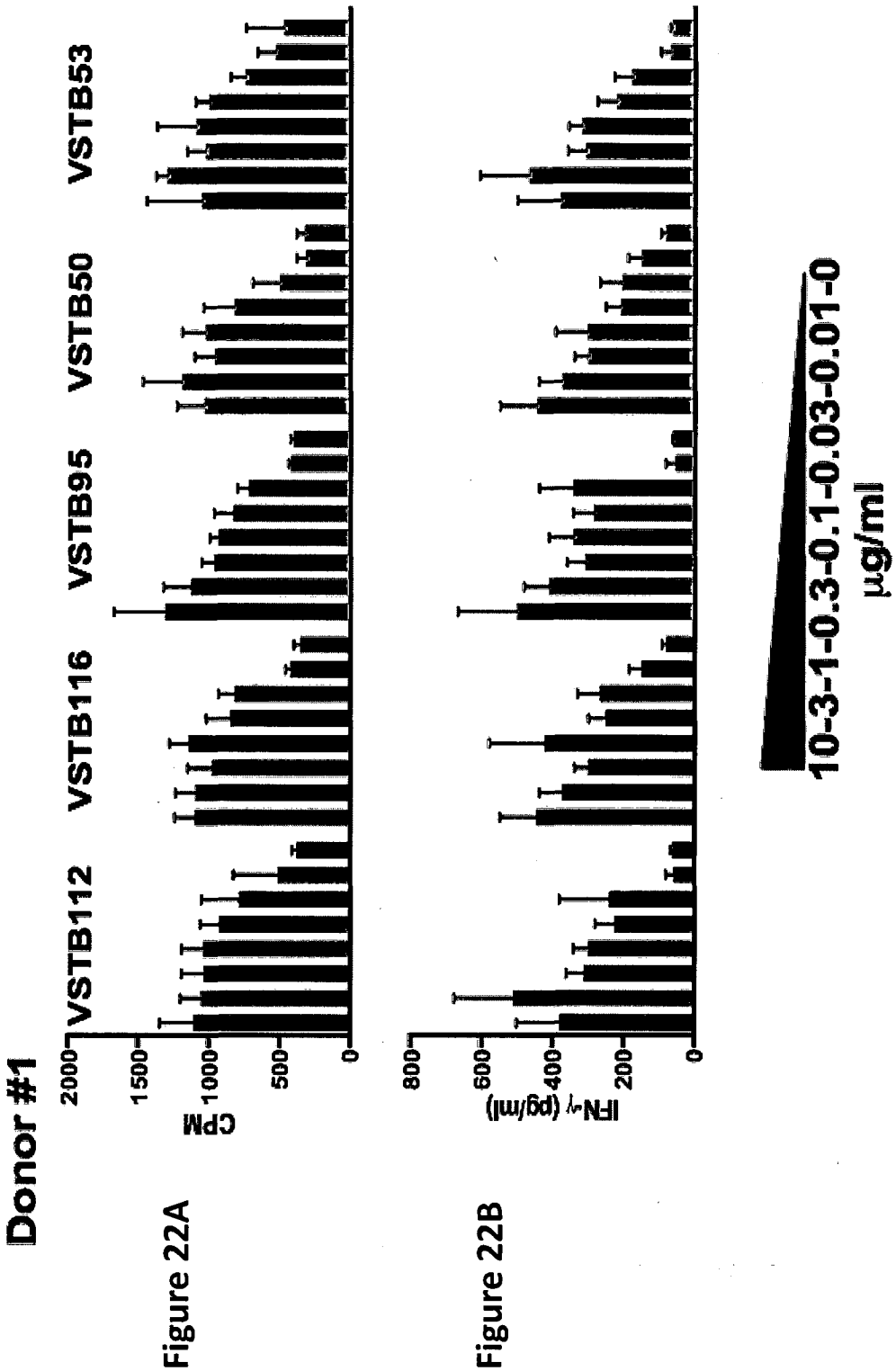


Figure 22A

Figure 22B

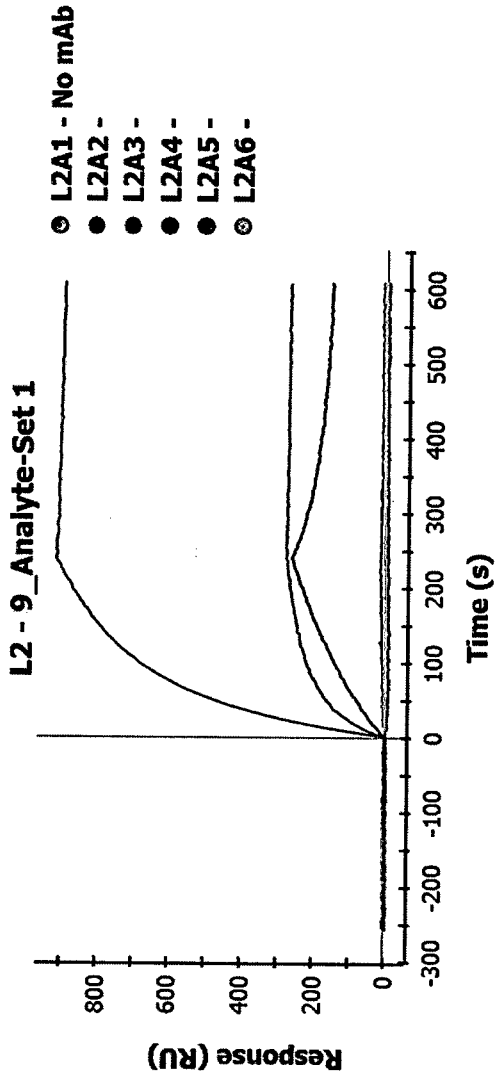

L2A1 - No mAb
L2A2 -
L2A3 -
L2A4 -
L2A5 -
L2A6 -
L2 - 9_Analyte-Set 1
Response (RU)
800
600
400
200
0
-300
-200
-100
0
100
200
300
400
500
600
Time (s)

Figure 23

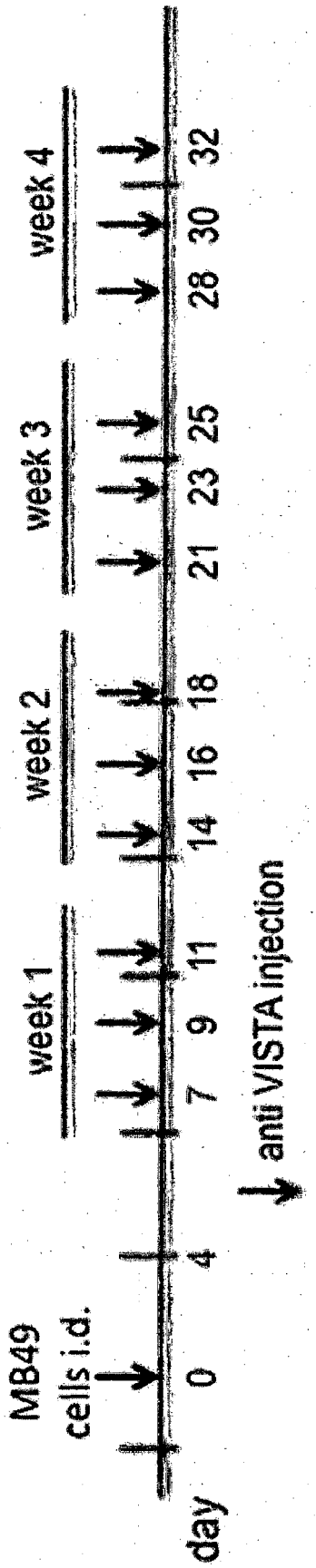

MB49
cells i.d.
anti VISTA injection
week 1
week 2
week 3
week 4
day
0
4
7
9
11
14
16
18
21
23
25
28
30
32

Figure 24

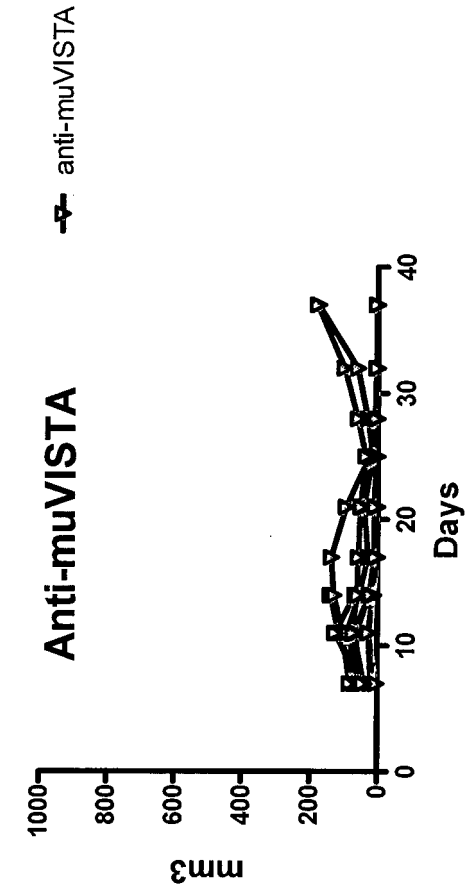


Figure 25B

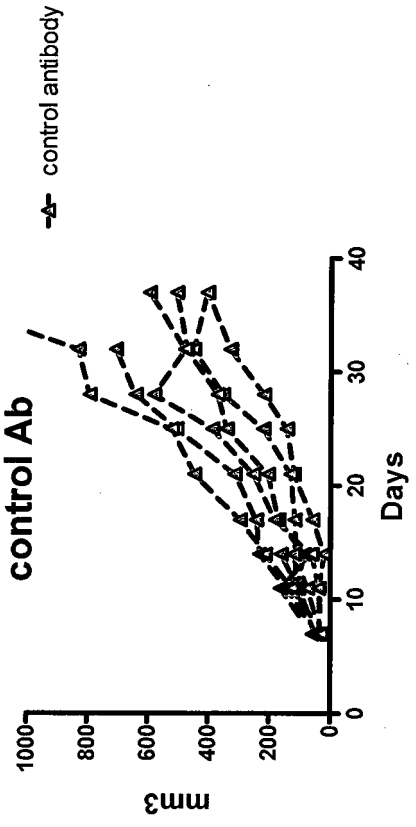


Figure 25A

MGVPTALEAGSWRWGSLLFALFLAASLGPVAAFKVATPYSLYVCP
EGQNVTLTCRLLGPVDKGHDVTFYKTWYRSSRGEVQTCSERRPI
RNLTFQDLHLHHGGHQAANTSHDLAQRHGLESASDHHGNFSIT
MRNLTLLDSGLYCCLVVEIRHHHSEHRVHGAMELQVQTGKDAPS
NCVVYPSSSQESENITAAALATGACIVGILCLPLILLLVYKQ
RQAASNRRAQELVRMDSNIQGIENPGFEASPPAQGIPEAKVRHP
LSYVAQRQPSESGRHLLSEPSTPLSPPGPGDVF (SEQ ID NO:46)

Figure 26

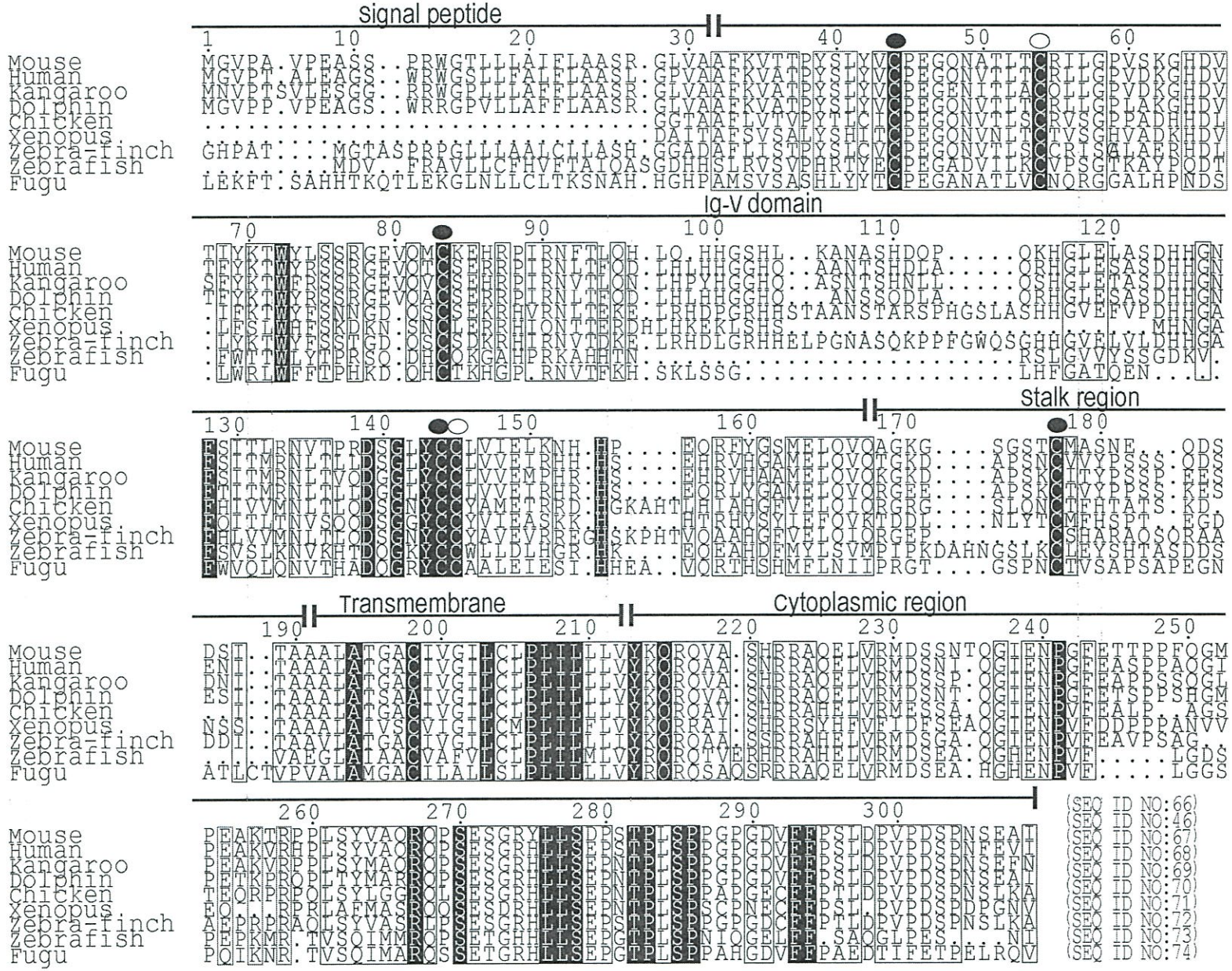

signal peptide
Ig-V domain
Stalk region
Transmembrane
Cytoplasmic region
Mouse
Human
Kangaroo
Dolphin
Chicken
Xenopus
Zebra-finch
Zebrafish
Fugu
(SEQ ID NO:66)
(SEQ ID NO:46)
(SEQ ID NO:67)
(SEQ ID NO:68)
(SEQ ID NO:69)
(SEQ ID NO:70)
(SEQ ID NO:71)
(SEQ ID NO:72)
(SEQ ID NO:73)
(SEQ ID NO:74)

FIG. 27

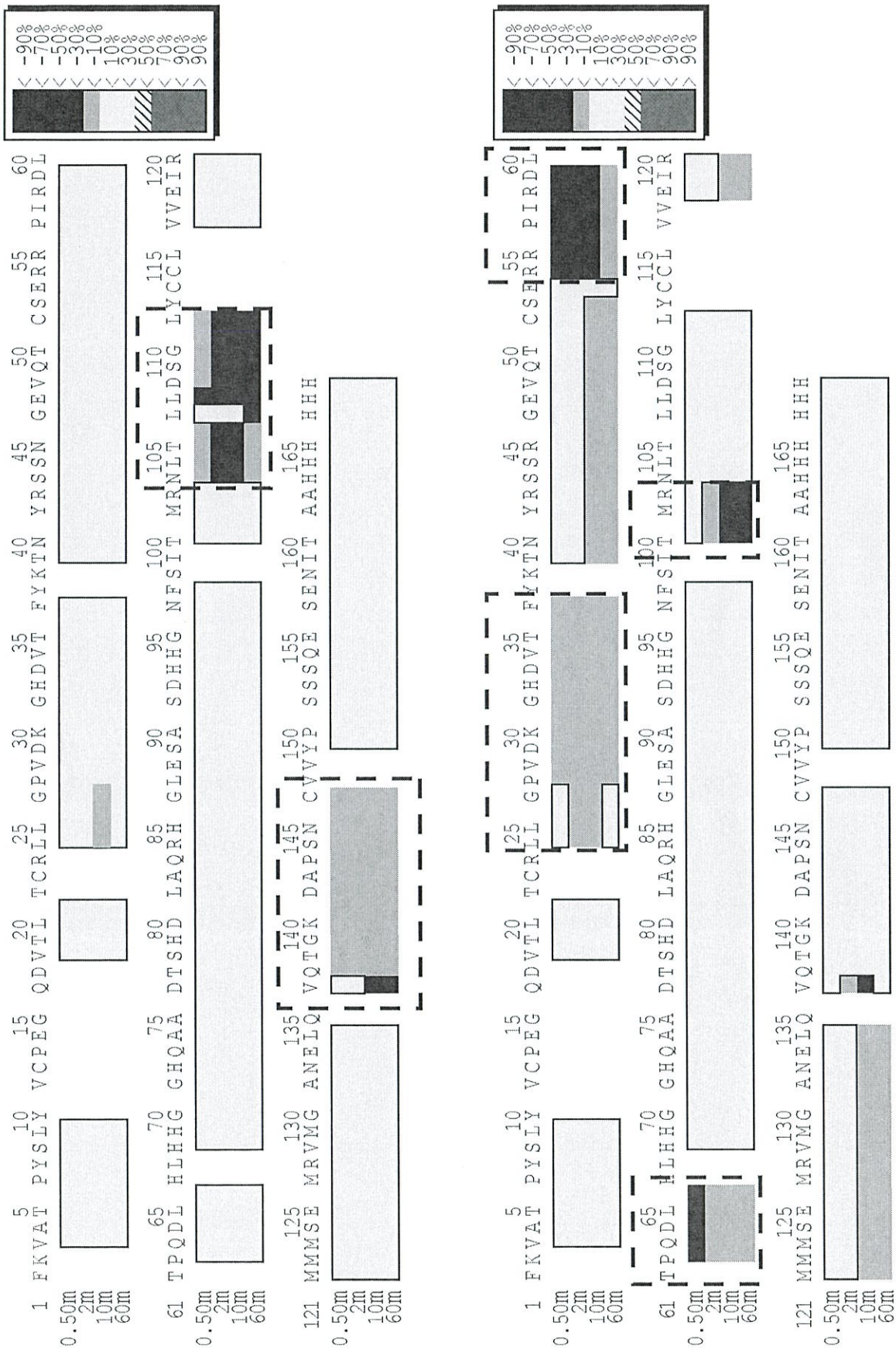

-90%
-70%
-50%
-30%
-10%
10%
30%
50%
70%
90%
>90%
1 FKVAT PYSLY VCPEG QDVTL TCRLL GPVDK GHDVT FYKTN YRSSN GEVQT CSERR PIRDL
61 TPQDL HLHHG GHQAA DTSHD LAQRH GLESA SDHHG NFSIT MRNLT LLDSG LYCCL VVEIR
121 MMMSE MRVMG ANELQ VQTGK DAPSN CVVYP SSSQE SENIT AAHHH HHH
0.50m
2m
10m
60m

FIG. 28

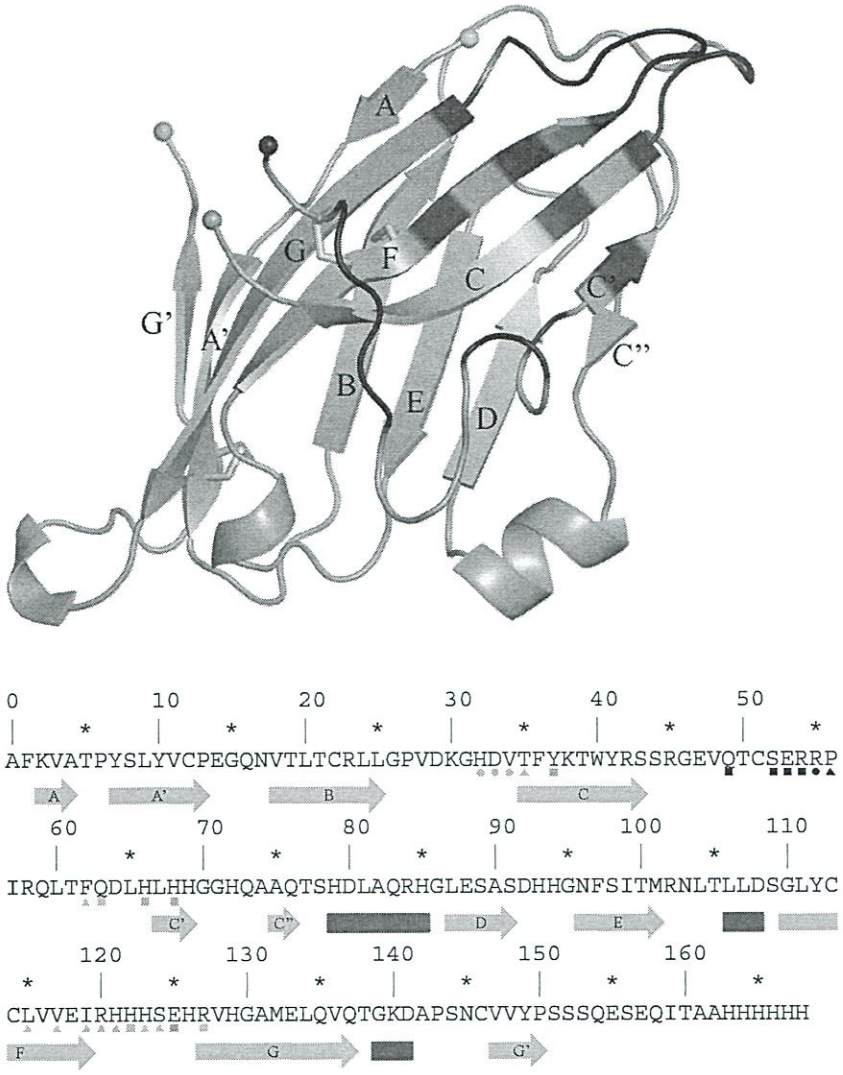
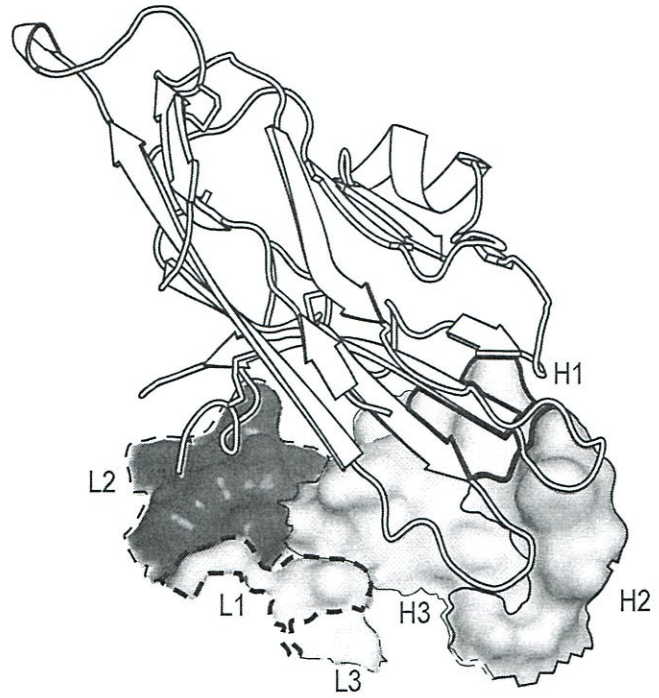

A
G
F
C
C'
G'
A'
C''
B
E
D
0 10 20 30 40 50
AFKVATPYSLYVCPEGQNVTLTCRLLGPVDKGHDVTFYKTWYRSSRGEVQTCSERRP
A
A'
B
C
60 70 80 90 100 110
IRQLTFQDLHLHHGGHQAAQTSHDLAQRHGLESASDHHGNFSITMRNLTLLDSGLYC
C'
C"
D
E
120 130 140 150 160
CLVVEIRHHHSEHRVHGAMELQVQTGKDAPSNCVVYPSSSQESEQITAAHHHHHH
F
G
G'

Figure 29



LC

```
          10        20        30        40        50        60
     *    |    *    |    *    |    *    |    *    |    *    |
DIQMTQSPSSLSASVGDRVTITCRASQSIDTRLNWYQQKPGKAPKLLIYSASSLQSGVPS

          70        80        90       100       110       120
     *    |    *    |    *    |    *    |    *    |    *    |
RFSGSGSGTDFTLTISSLQPEDFATYYCQQSAYNPITFGQGTKVEIKRTVAAPSVFIFPP
```

HC

```
          10        20        30        40        50        60
     *    |    *    |    *    |    *    |    *    |    *    |
QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY

          70        80        90       100       110       120
     *    |    *    |    *    |    *    |    *    |    *    |
AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARSSYGWSYEFDYWGQGTLVTVSS
```

FIG. 30

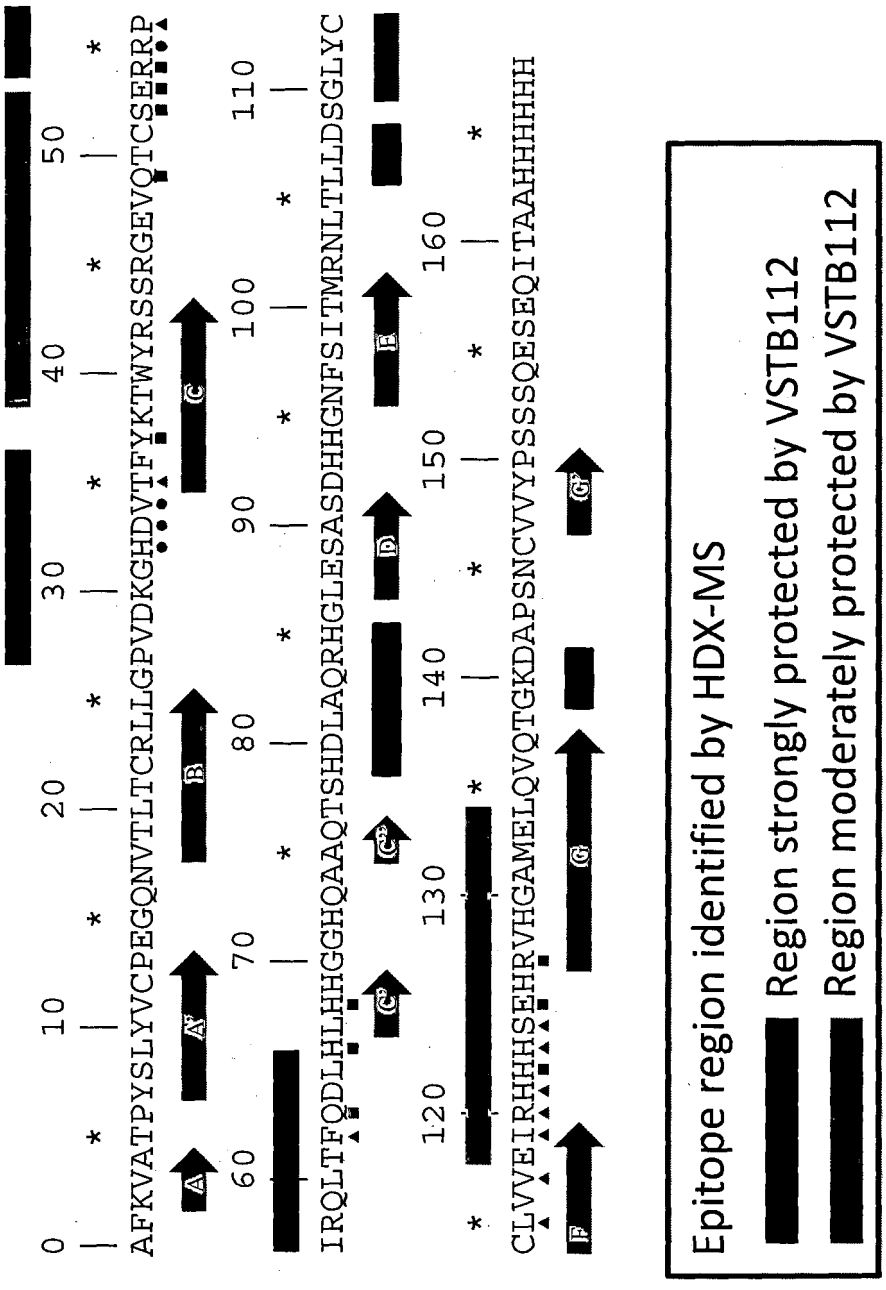

0
10
20
30
40
50
AFKVATPYSLYVCPEGQNVTLTCRLLGPVDKGHDVTFYKTWYRSSRGEVQTCSERRP
60
70
80
90
100
110
IRQLTFQDLHLHHGGHQAAQTSHDLAQRHGLESASDHHGNFSITMRNLTLLDSGLYC
120
130
140
150
160
CLVVEIRHHHSEHRVHGAMELQVQTGKDAPSNCVVYPSSSQESEQITAAHHHHHH
A
A'
B
C
C'
C''
D
E
F
G
G'
Epitope region identified by HDX-MS
Region strongly protected by VSTB112
Region moderately protected by VSTB112

Figure 31

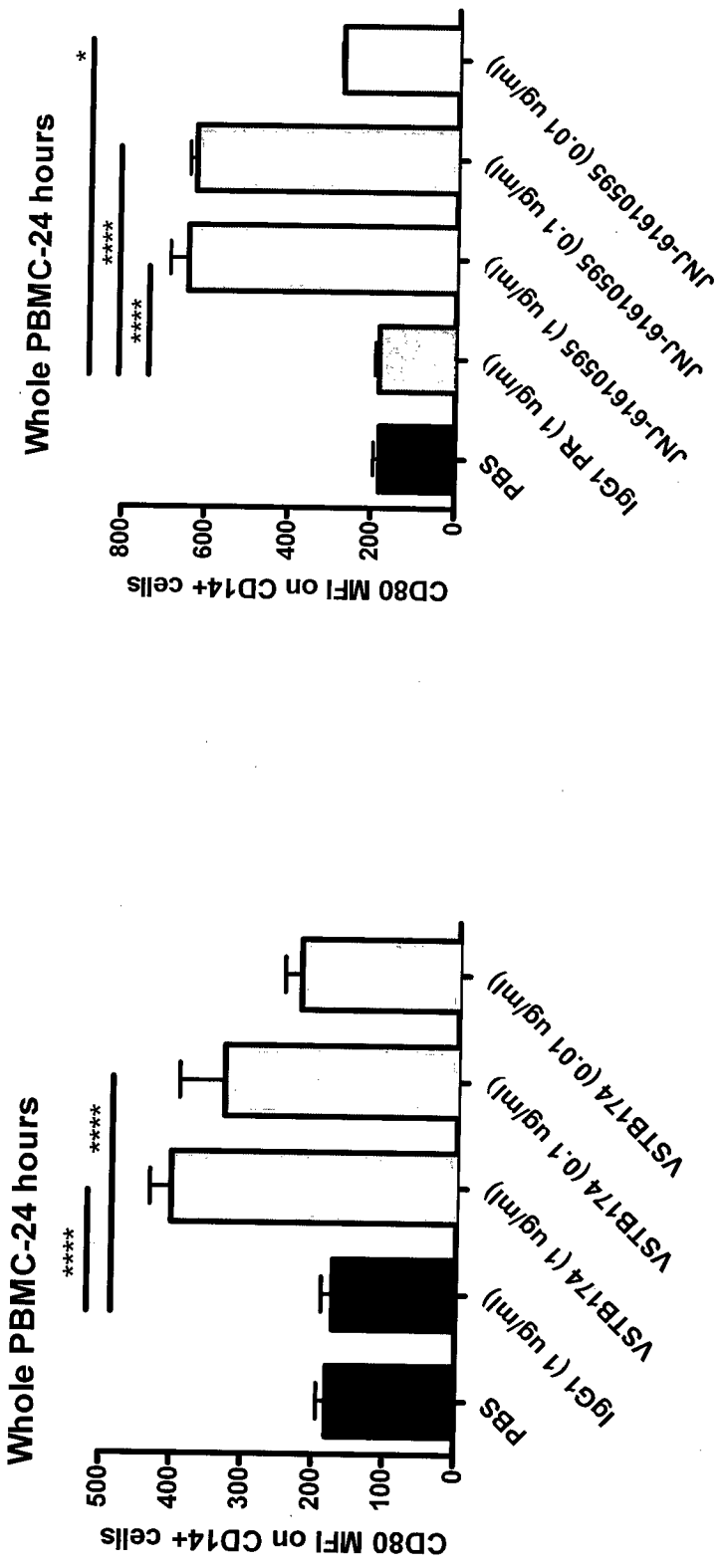

Whole PBMC-24 hours
CD80 MFI on CD14+ cells
0
100
200
300
400
500
****
****
PBS
IgG1 (1 ug/ml)
VSTB174 (1 ug/ml)
VSTB174 (0.1 ug/ml)
VSTB174 (0.01 ug/ml)
Whole PBMC-24 hours
CD80 MFI on CD14+ cells
0
200
400
600
800
*
****
****
PBS
IgG1 PR (1 ug/ml)
JNJ-61610595 (1 ug/ml)
JNJ-61610595 (0.1 ug/ml)
JNJ-61610595 (0.01 ug/ml)

Figure 32

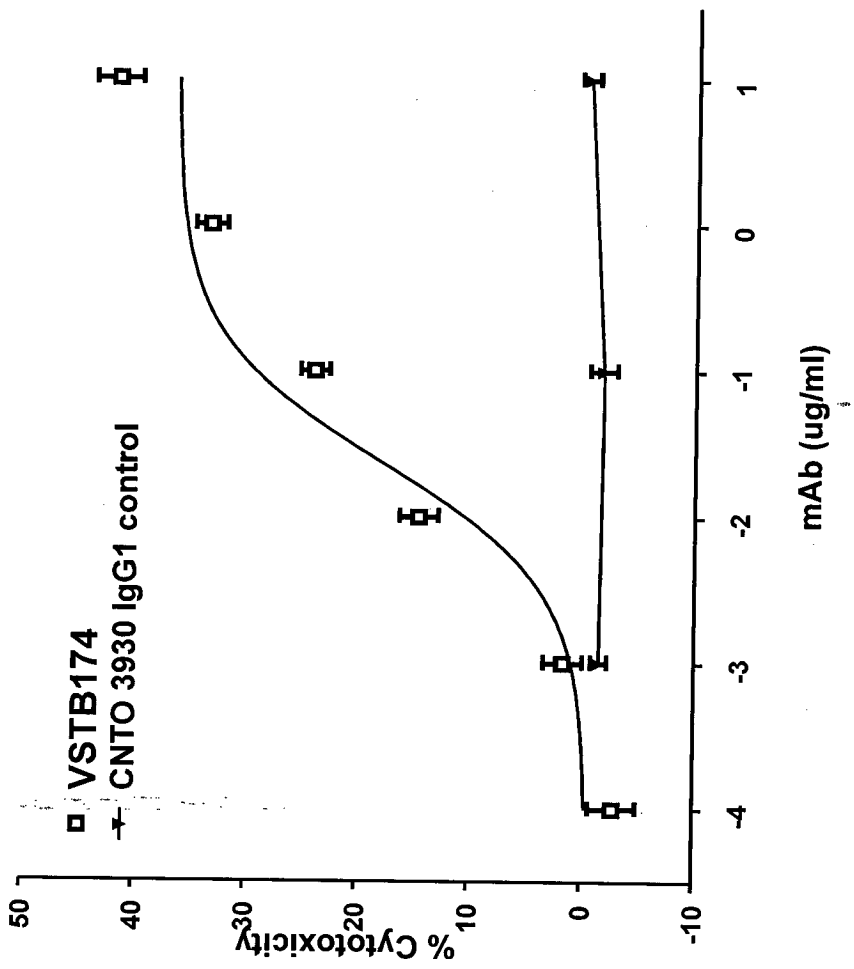

VSTB174
CNTO 3930 IgG1 control
% Cytotoxicity
50
40
30
20
10
0
-10
-4
-3
-2
-1
0
1
mAb (ug/ml)

Figure 33

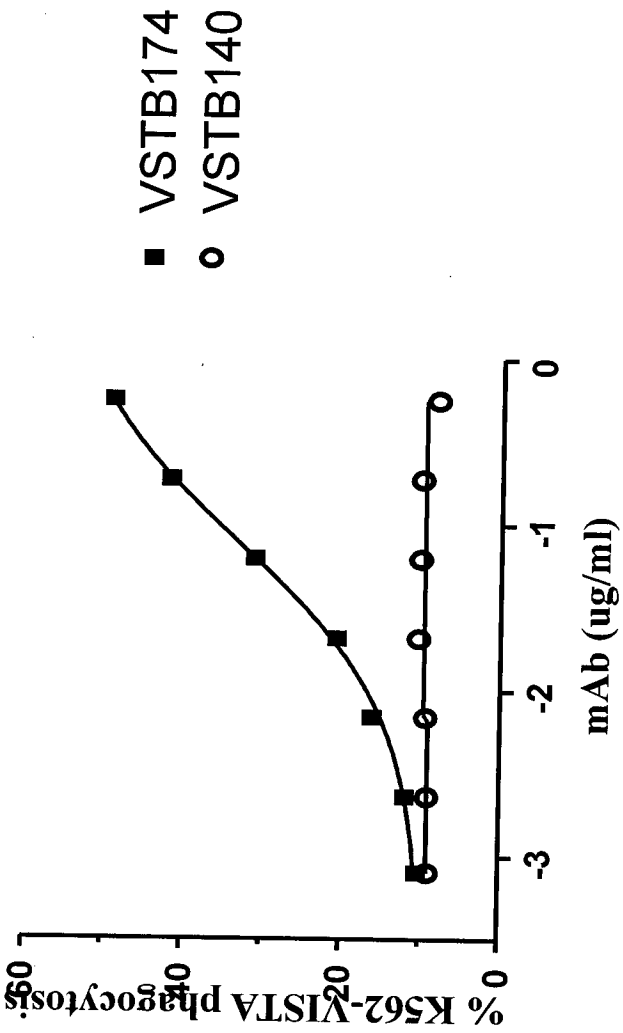

VSTB174
VSTB140
% K562-VISTA phagocytosis
0
20
40
60
0
-1
-2
-3
mAb (ug/ml)

Figure 34

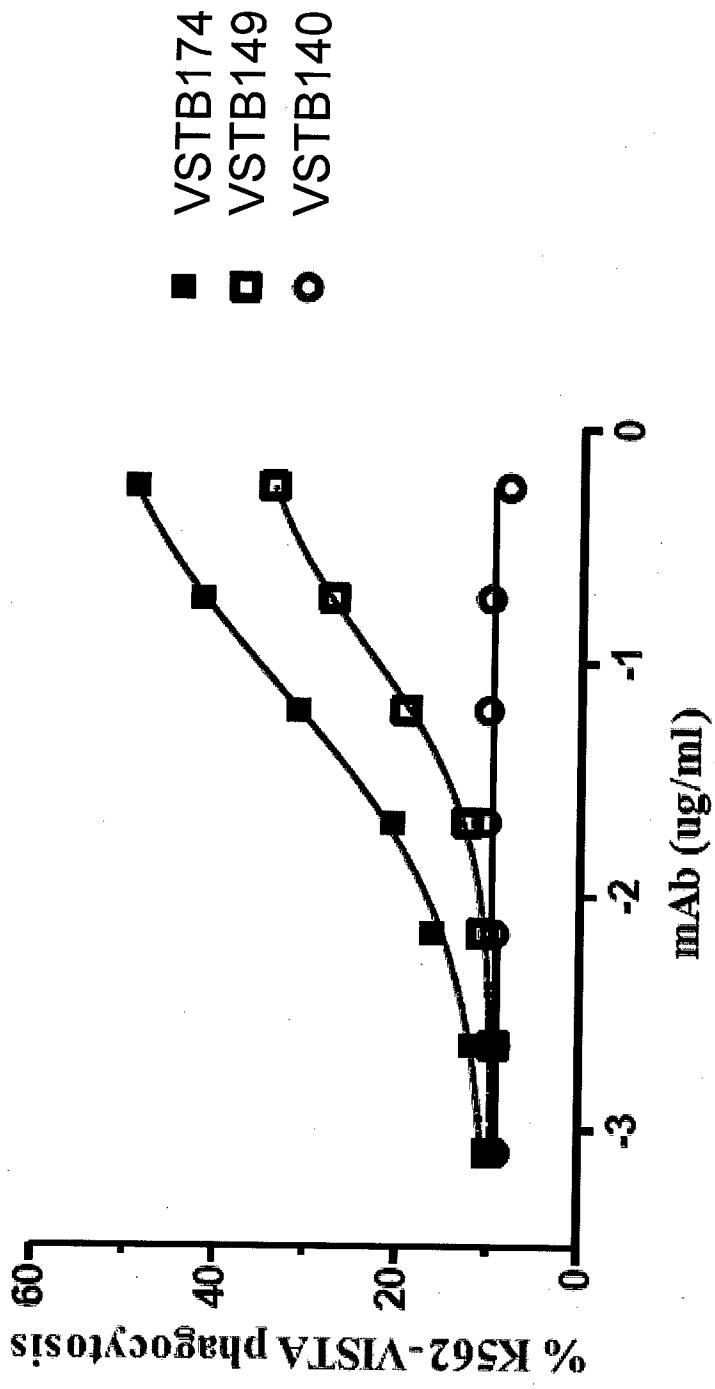

VSTB174
VSTB149
VSTB140
% K562-VISTA phagocytosis
60
40
20
0
0
-1
-2
-3
mAb (ug/ml)

Figure 35

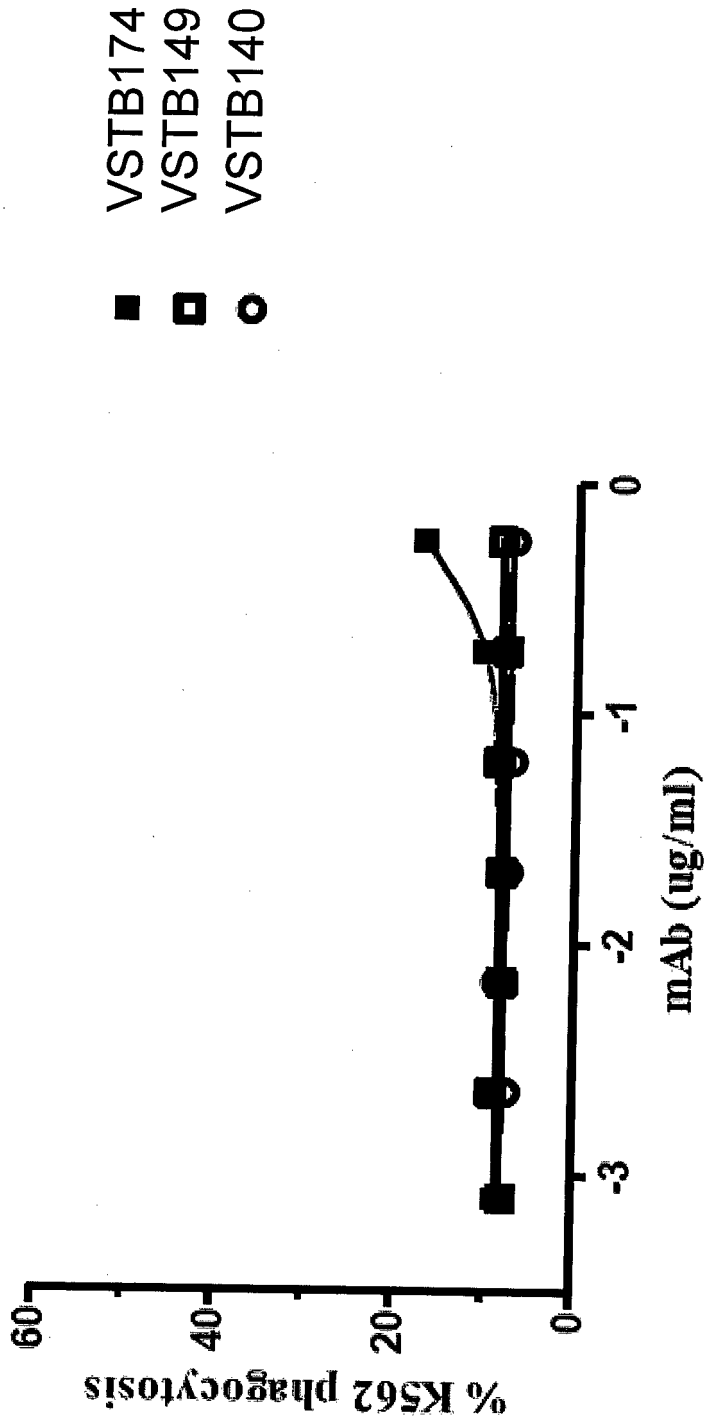

VSTB174
VSTB149
VSTB140
% K562 phagocytosis
60
40
20
0
0
-1
-2
-3
mAb (ug/ml)

Figure 36

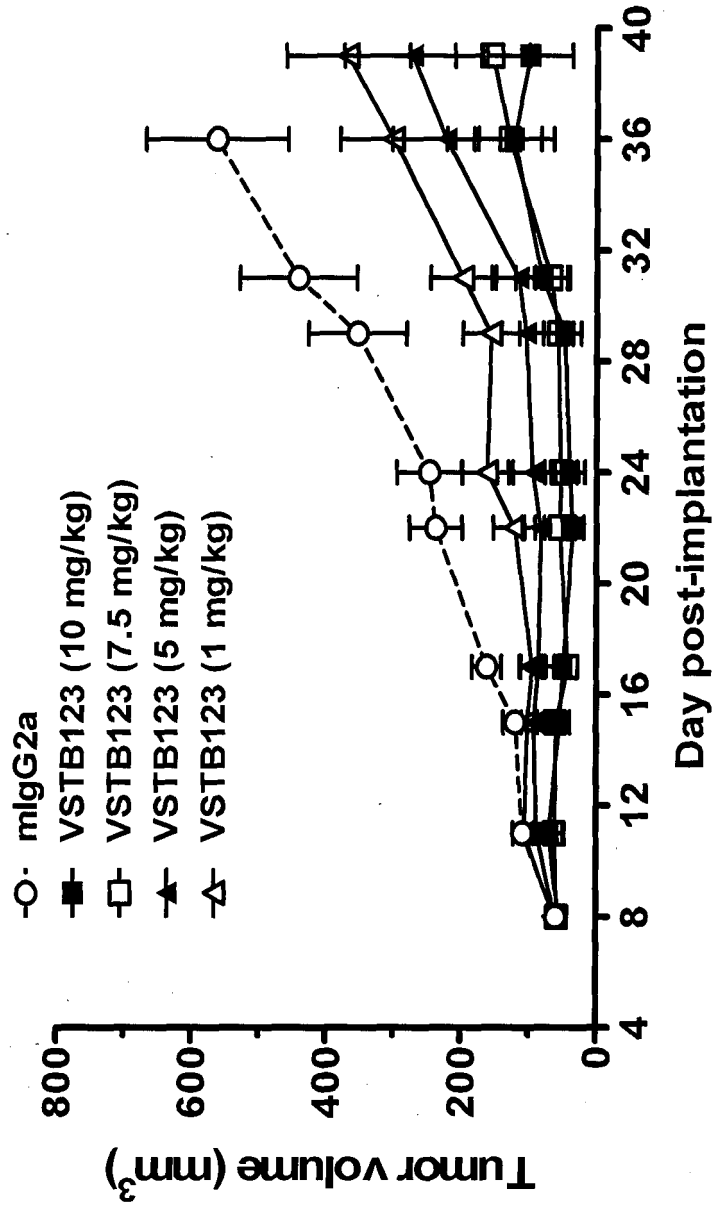

Tumor volume (mm³)
800
600
400
200
0
4
8
12
16
20
24
28
32
36
40
Day post-implantation
mIgG2a
VSTB123 (10 mg/kg)
VSTB123 (7.5 mg/kg)
VSTB123 (5 mg/kg)
VSTB123 (1 mg/kg)

Figure 37

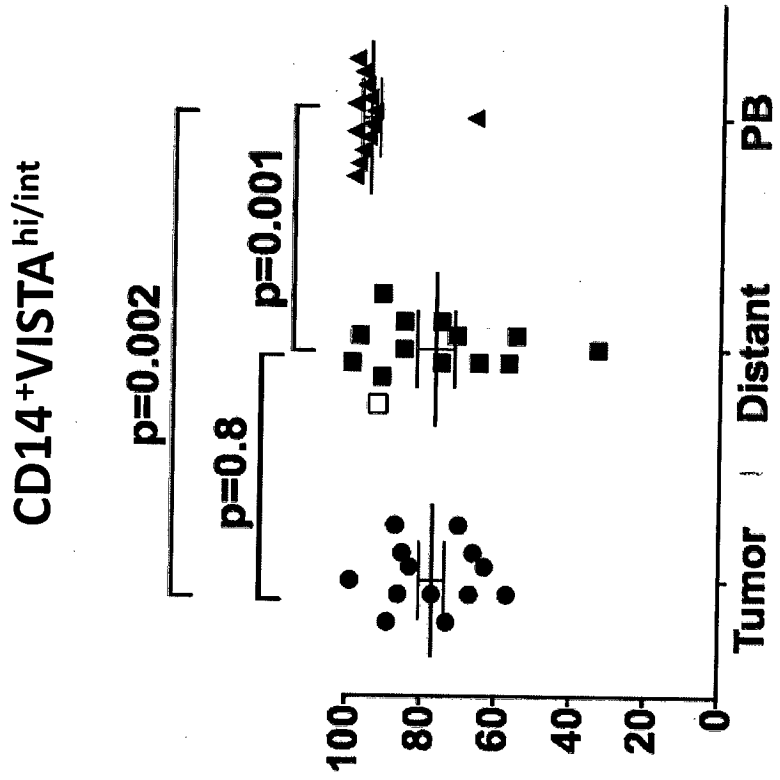

CD14+VISTA hi/int
p=0.002
p=0.8
p=0.001
100
80
60
40
20
0
Tumor
Distant
PB

Figure 38

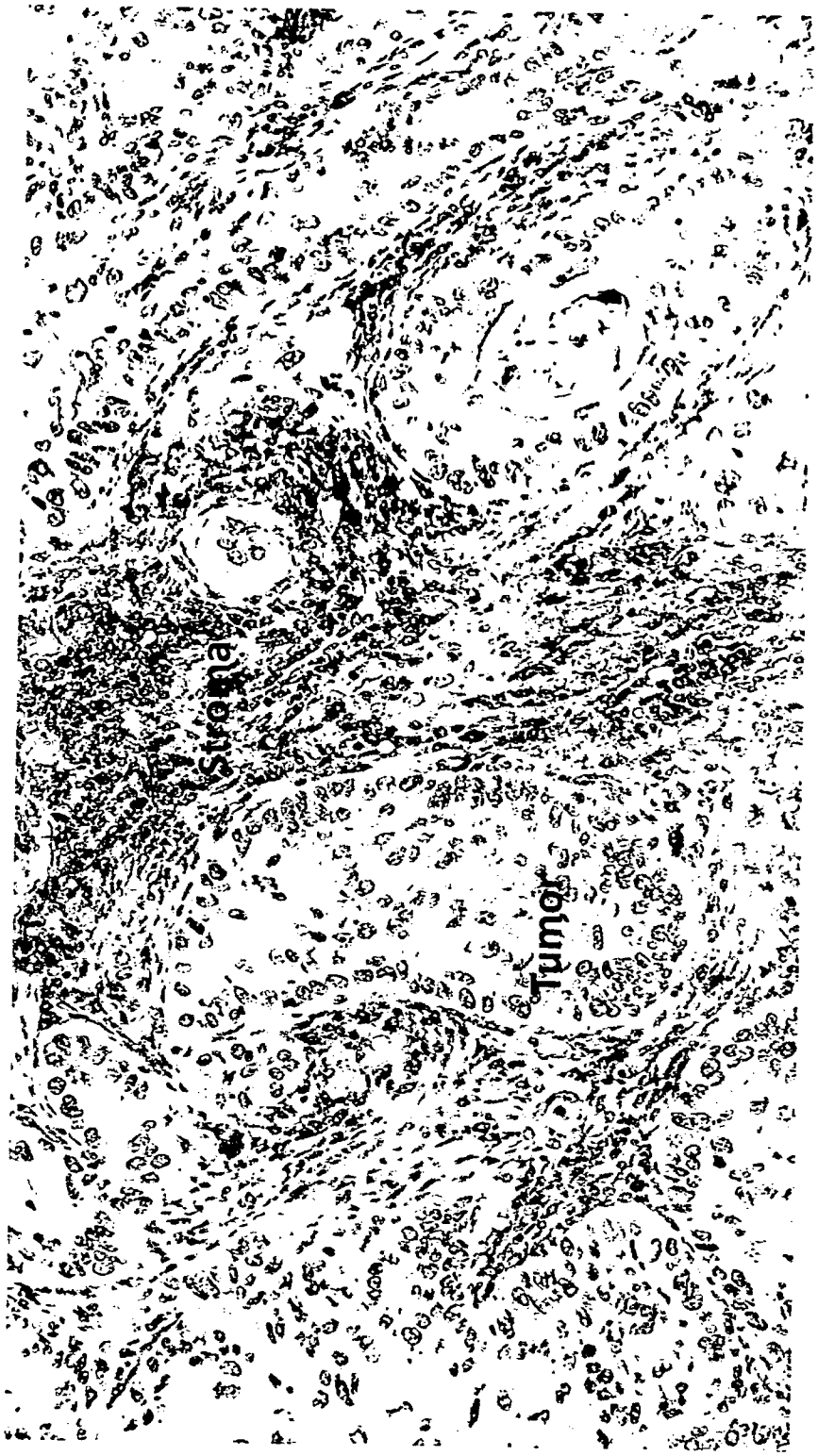


Figure 39