Figure 1 (a)

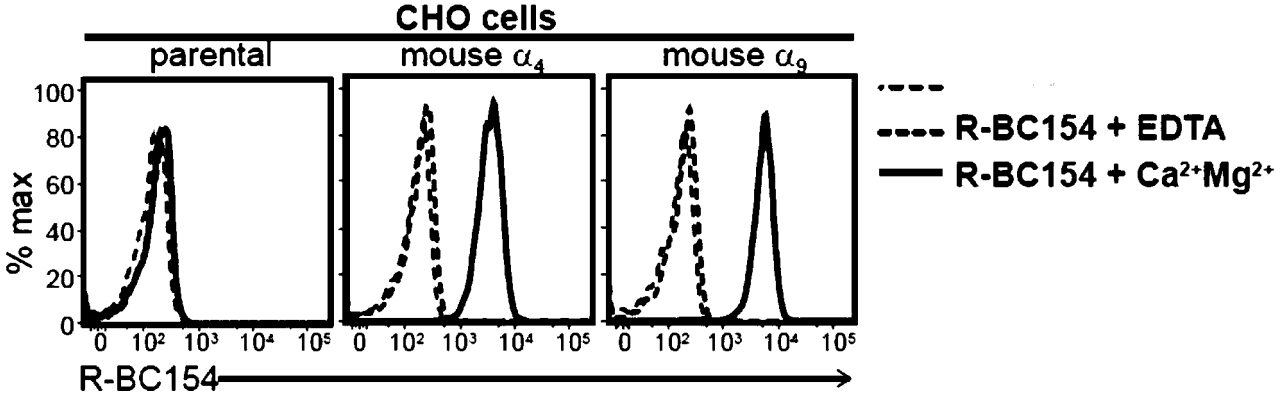


Figure 1 (b)

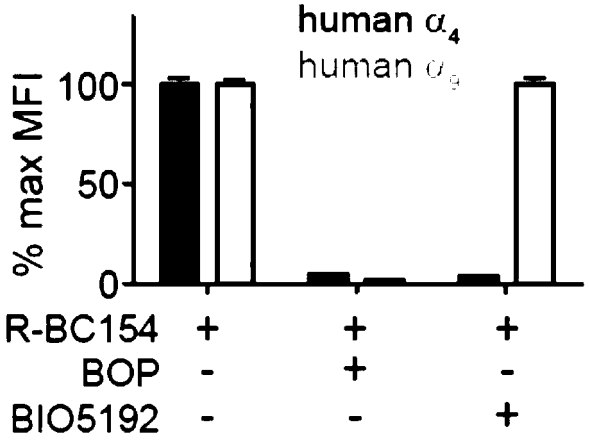


Figure 1 (c)

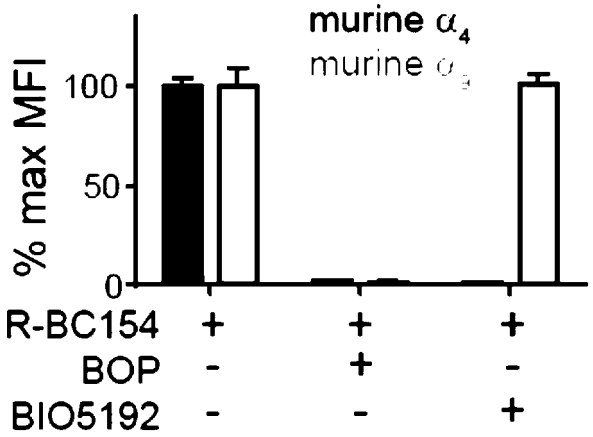


Figure 2 (a)

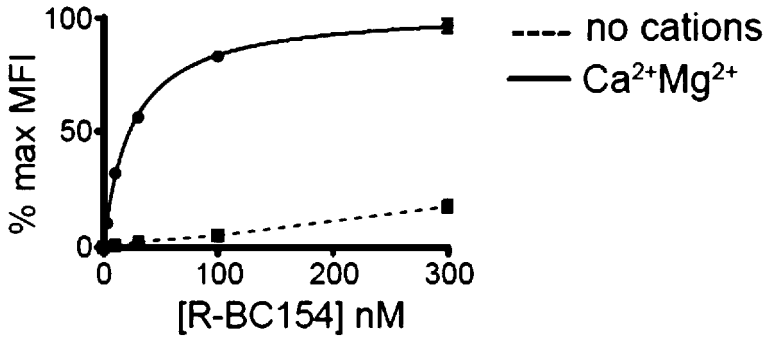


Figure 2 (b)

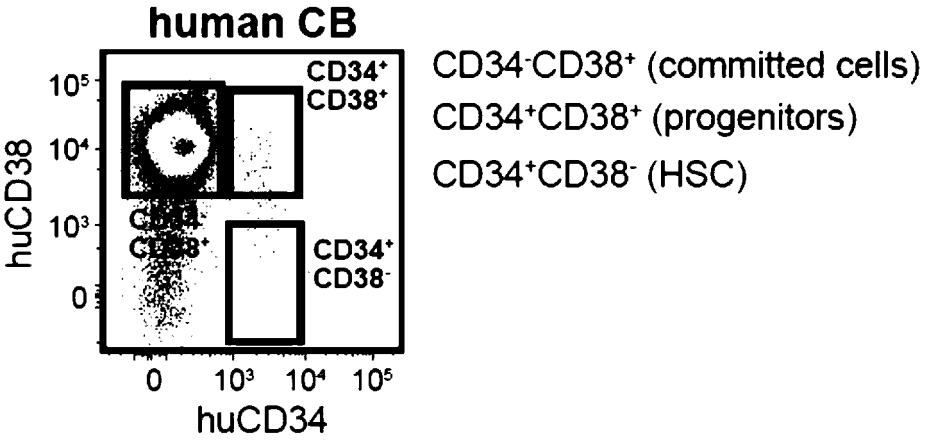


Figure 2 (c)

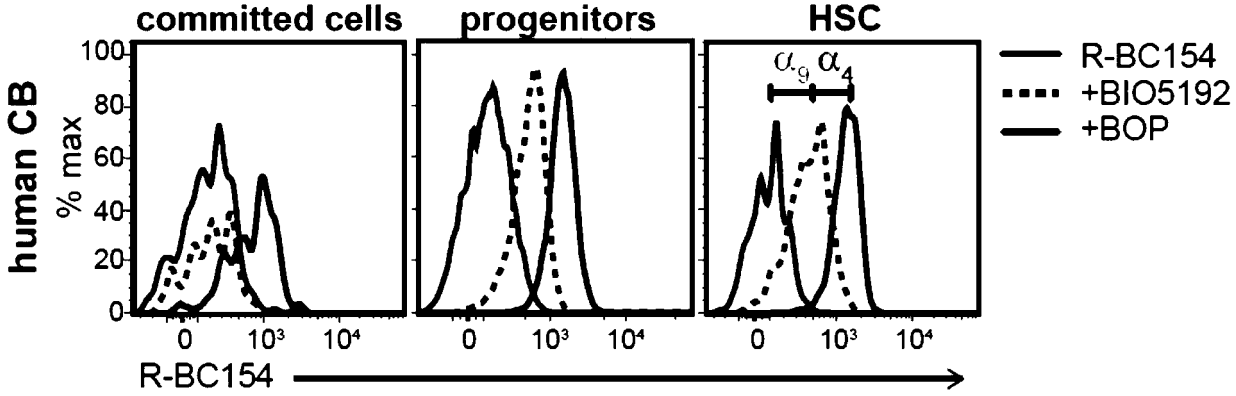


Figure 2 (d)

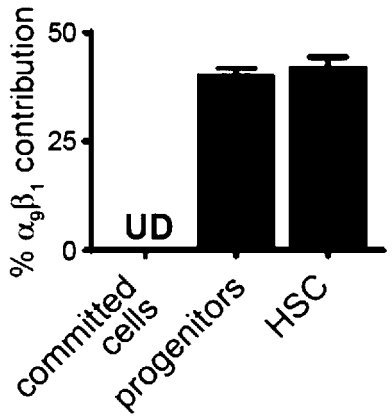


Figure 2 (e)

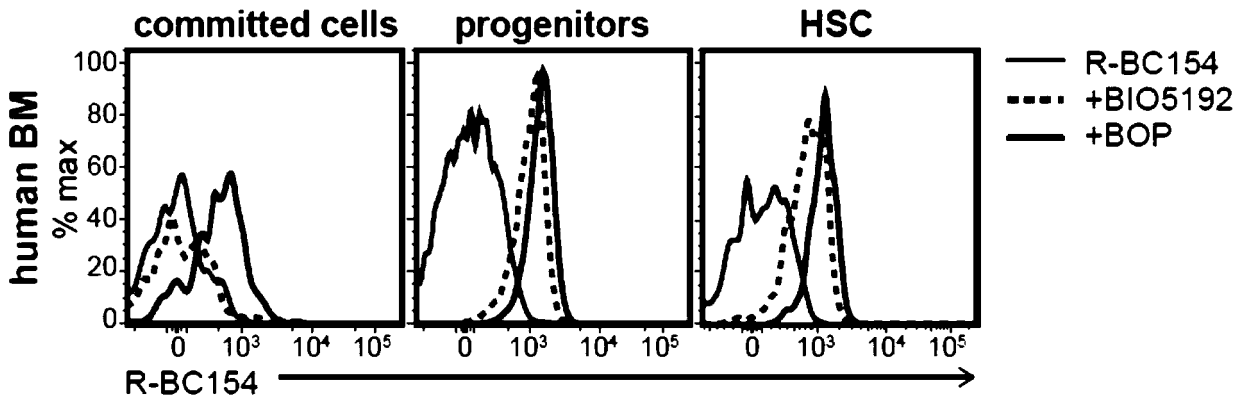


Figure 2 (f)

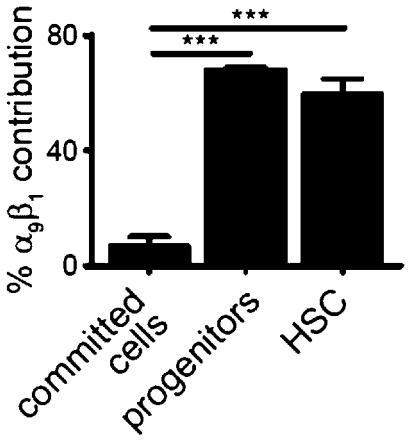


Figure 2 (g)

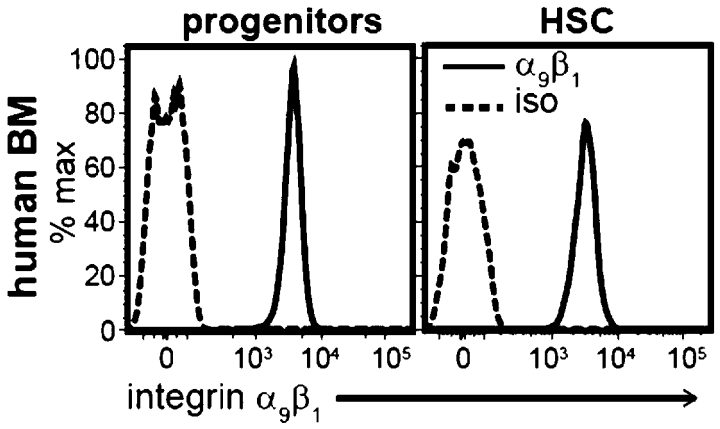


Figure 2 (h)

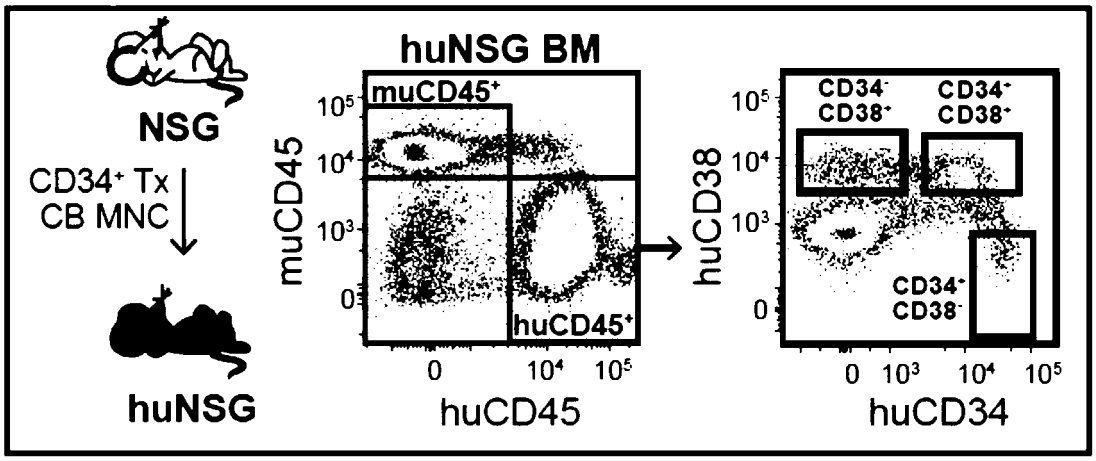


Figure 2 (i)

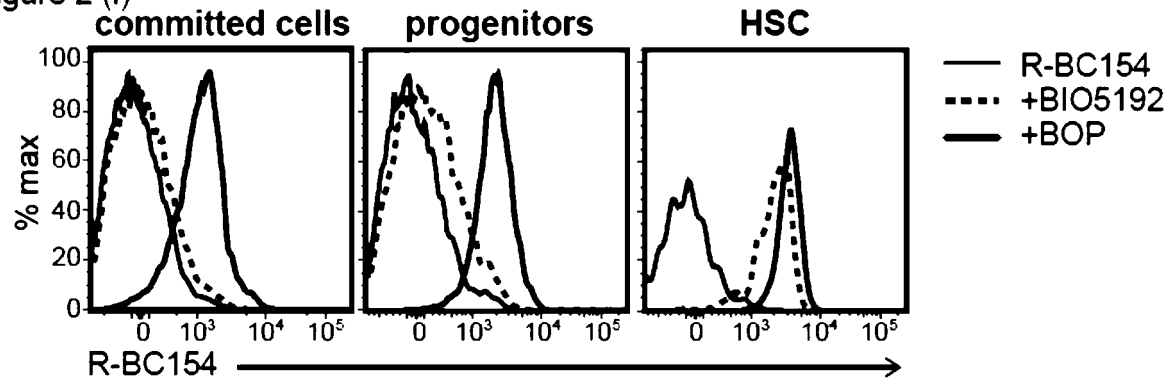


Figure 2 (j)

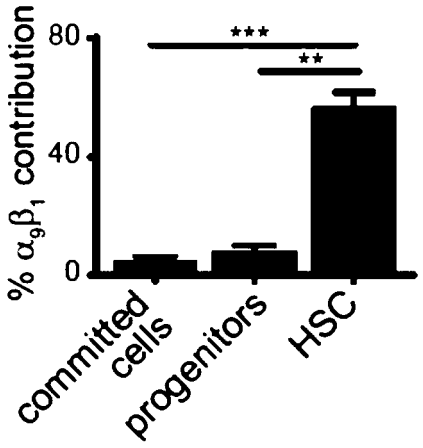


Figure 2 (k)

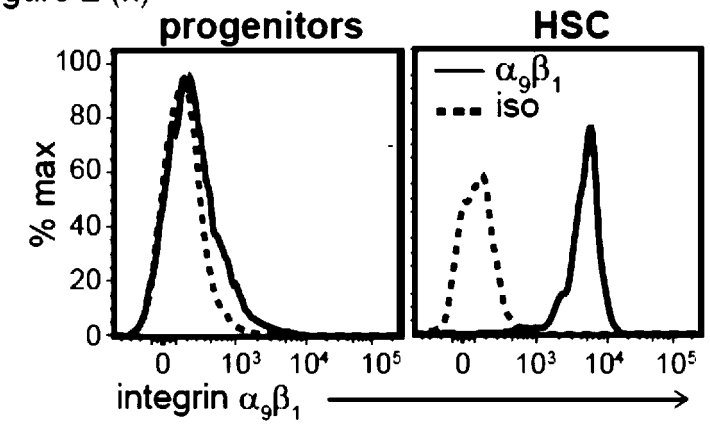


Figure 2 (l)

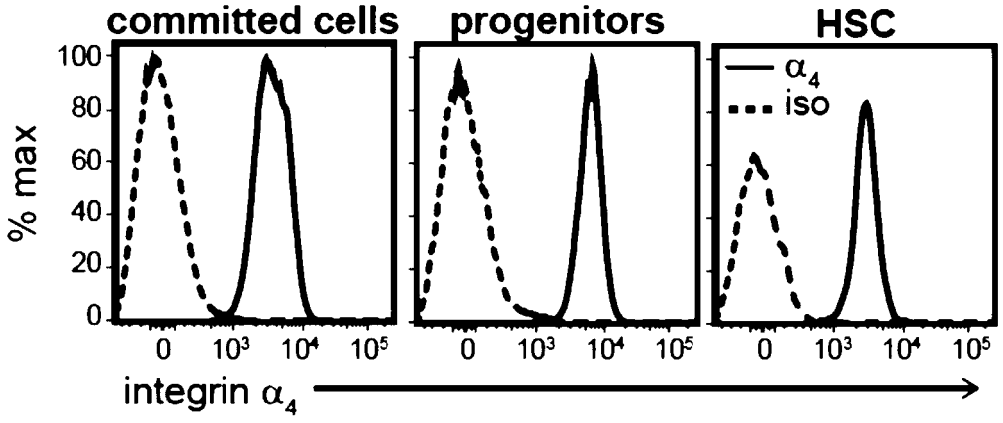


Figure 2 (m)

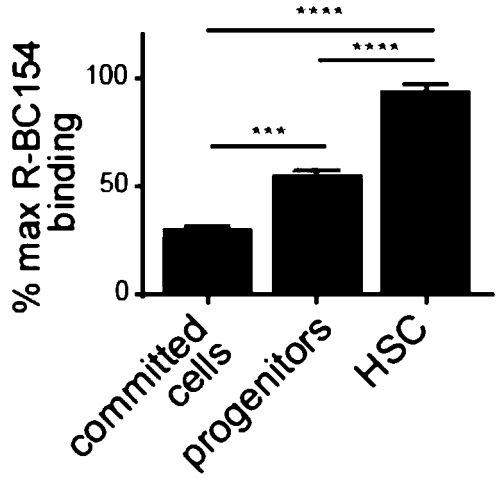

****
****
***
100
50
0
% max R-BC154 binding
committed cells
progenitors
HSC

Figure 3 (a)

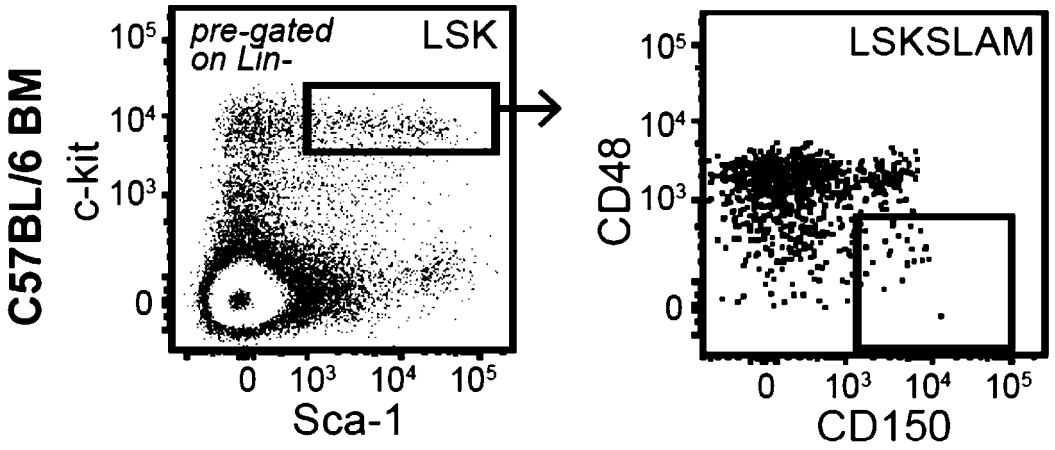
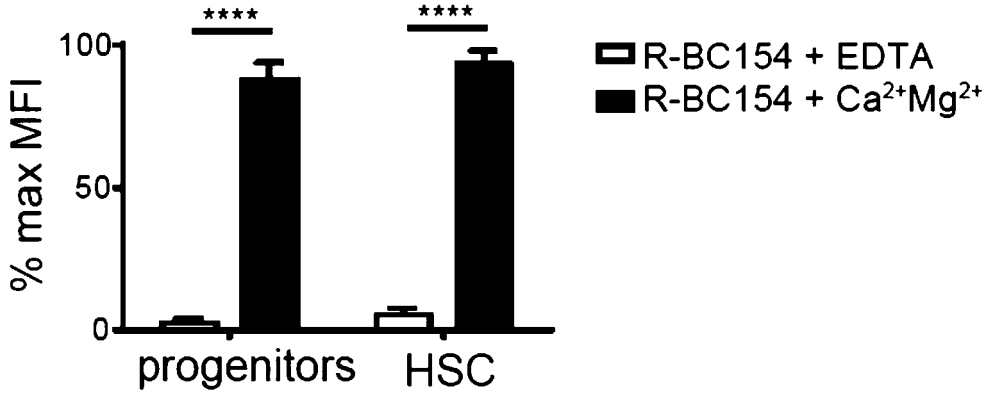
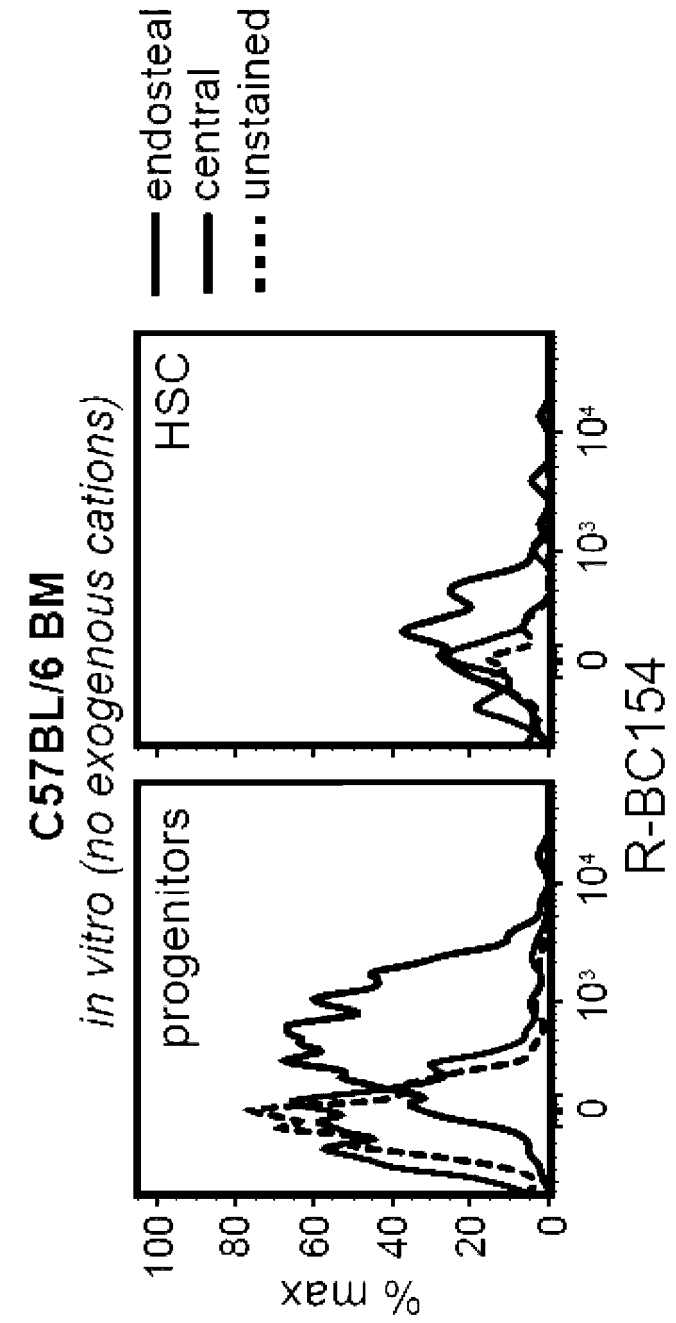


Figure 3 (b)




endosteal
central
unstained
C57BL/6 BM
in vitro (no exogenous cations)
progenitors
HSC
% max
100
80
60
40
20
0
0
10³
10⁴
R-BC154

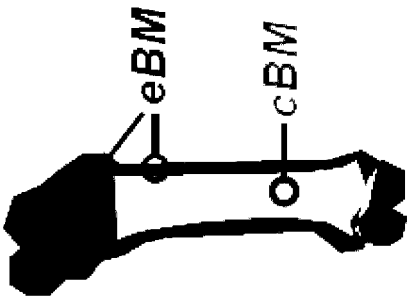

eBM
cBM

Figure 3 (c)

Figure 3 (d)

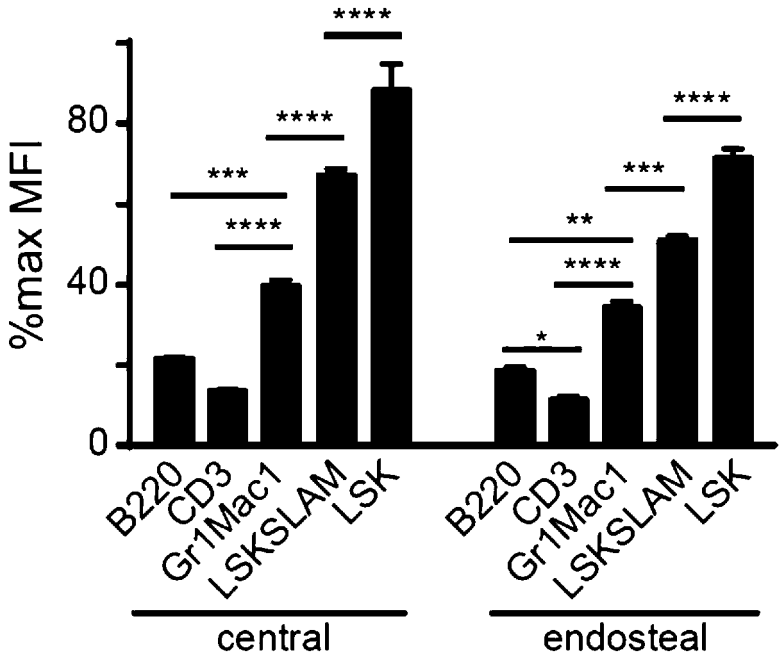
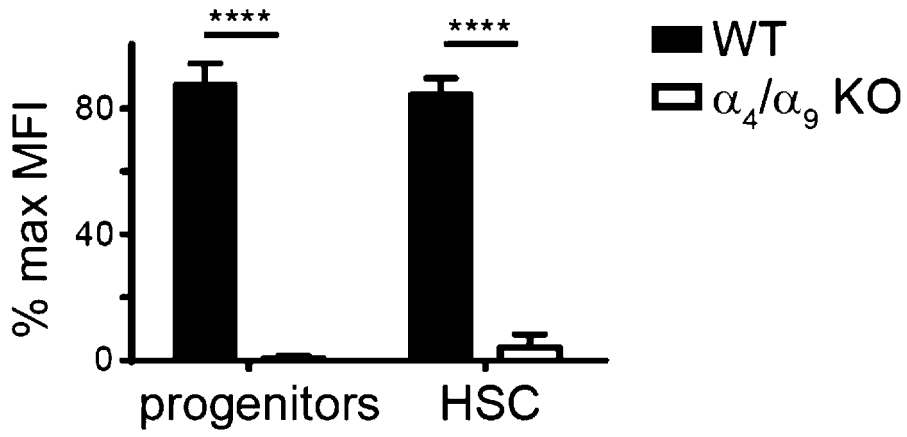


Figure 3 (e)



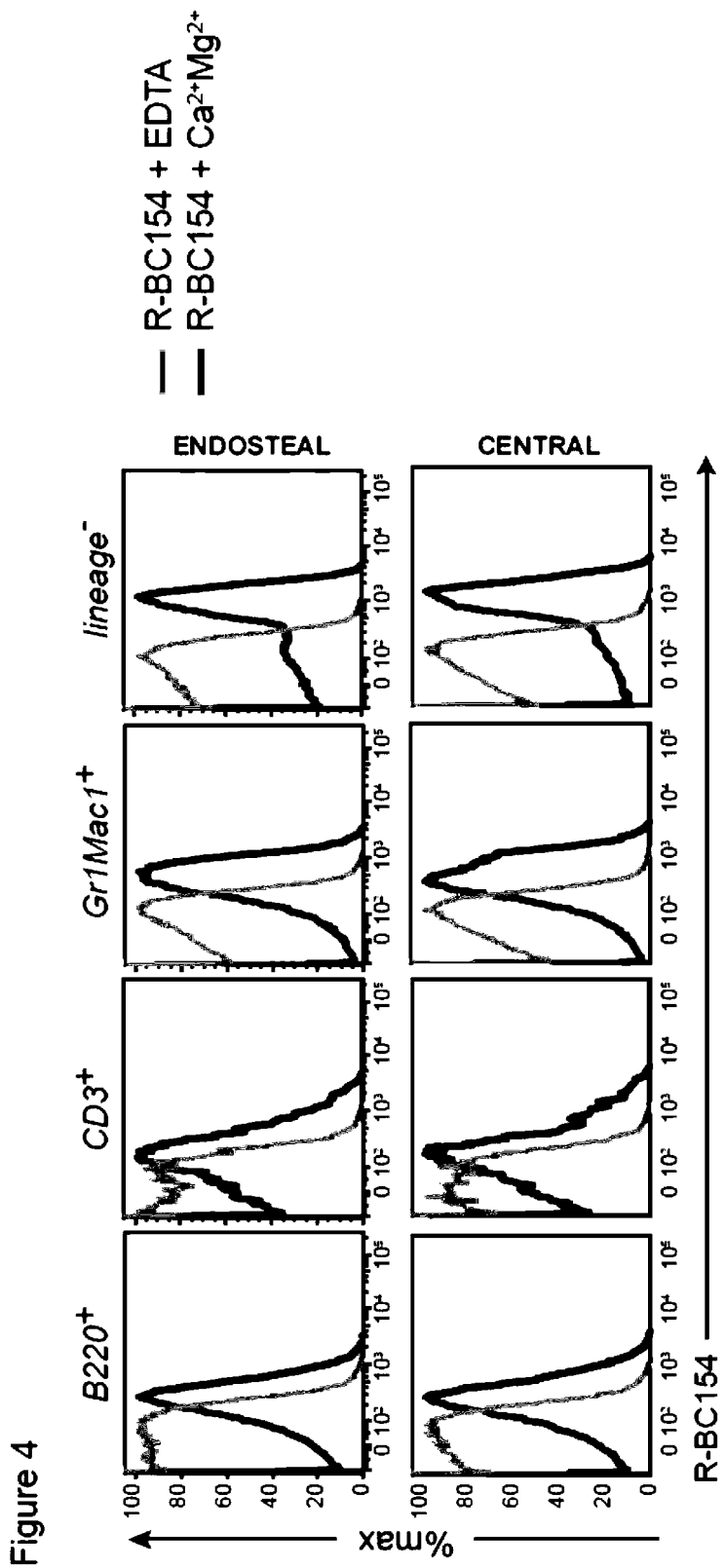

R-BC154 + EDTA
R-BC154 + Ca2+Mg2+
ENDOSTEAL
CENTRAL
lineage-
Gr1Mac1+
CD3+
B220+
%max
R-BC154

Figure 4

Figure 5 (a)

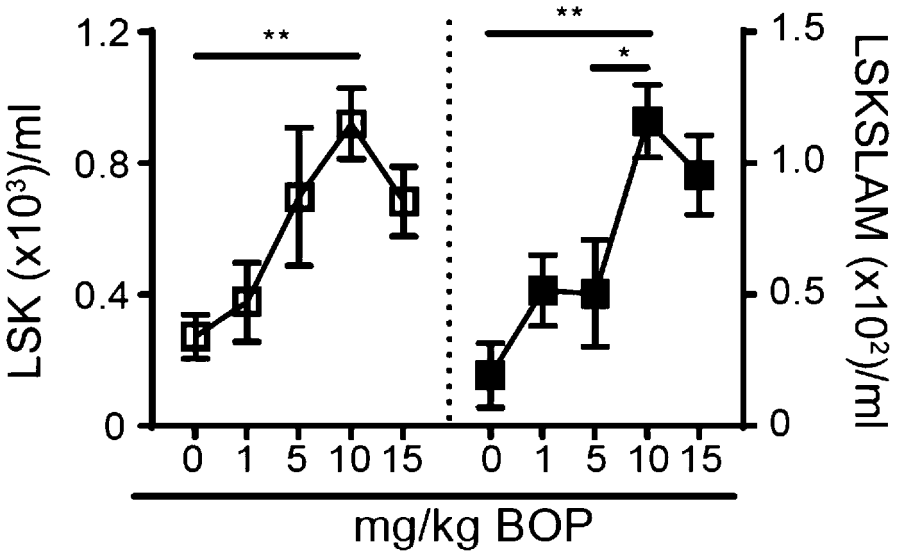


Figure 5 (b)

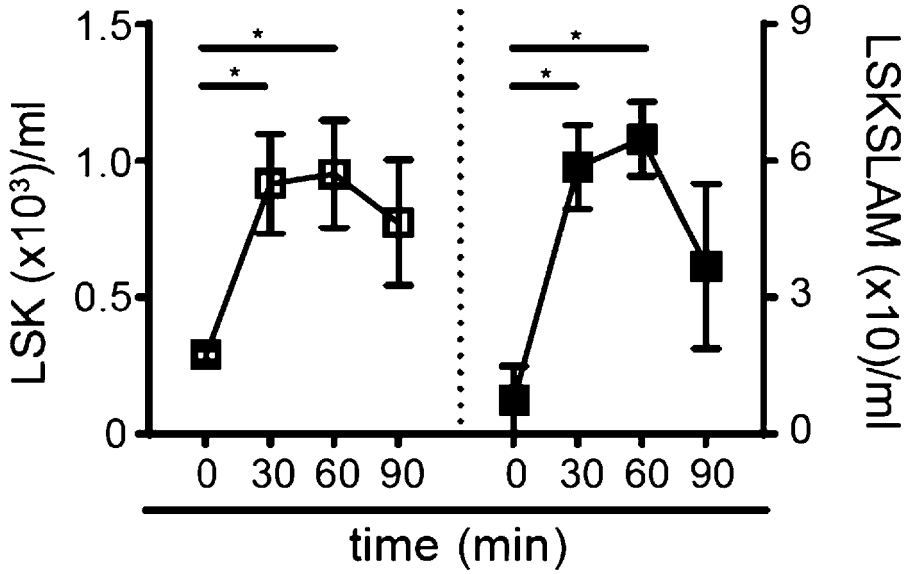


Figure 6 (a)

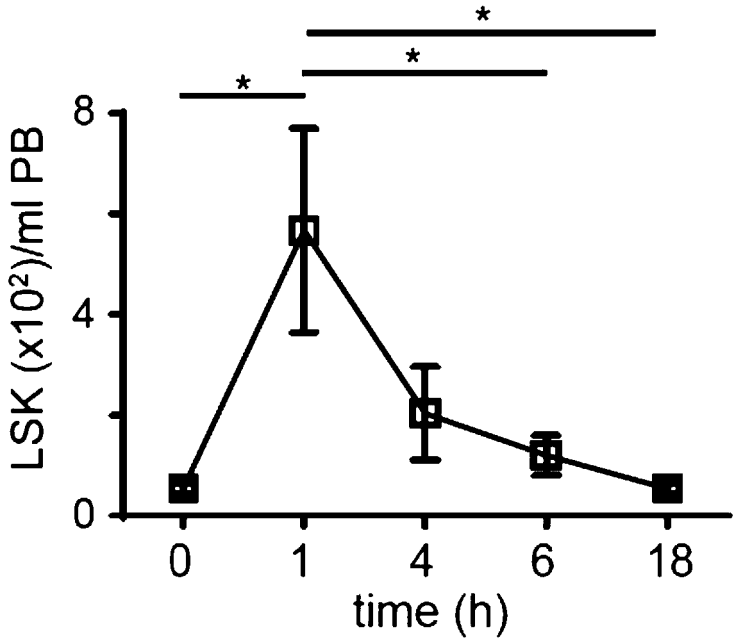


Figure 6 (b)

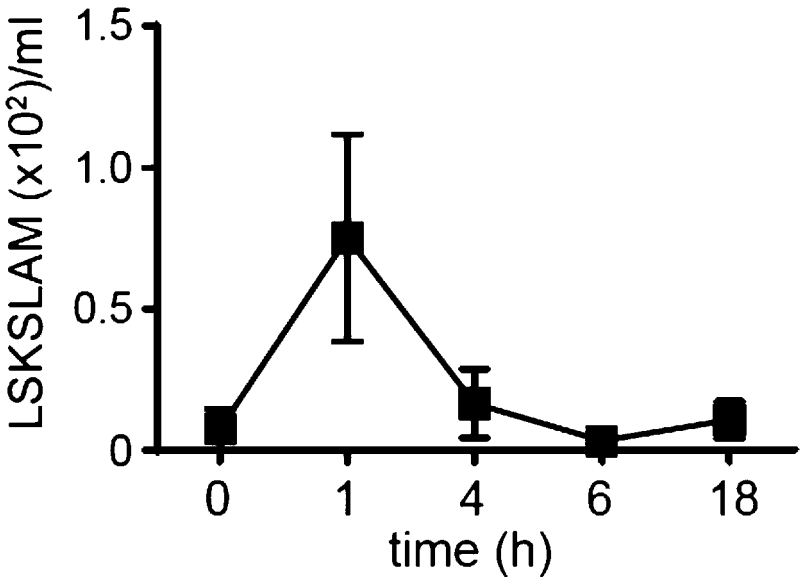


Figure 6 (c)

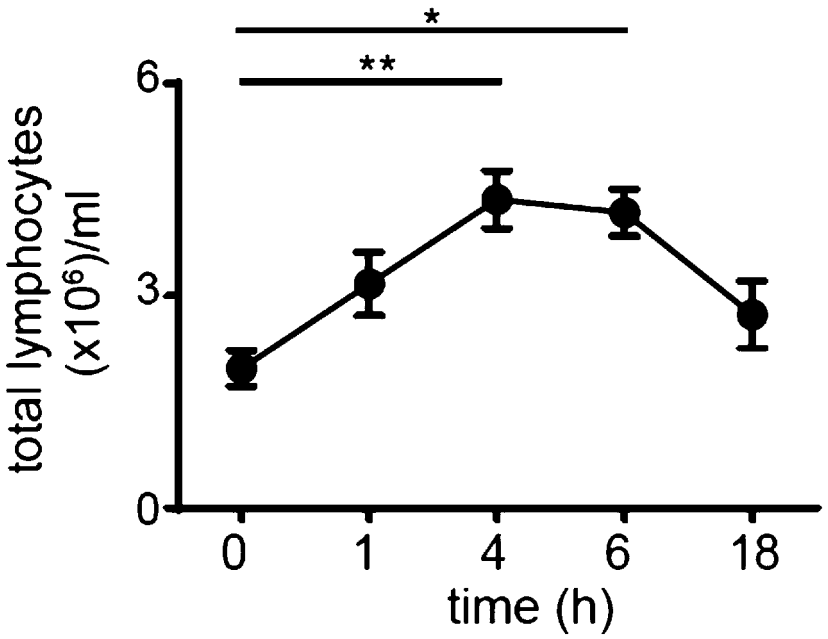
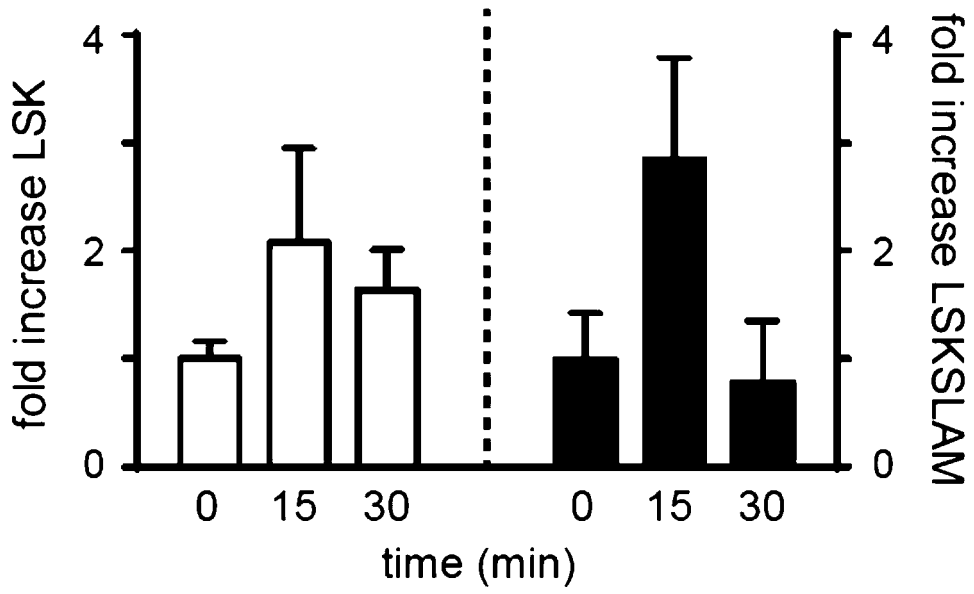
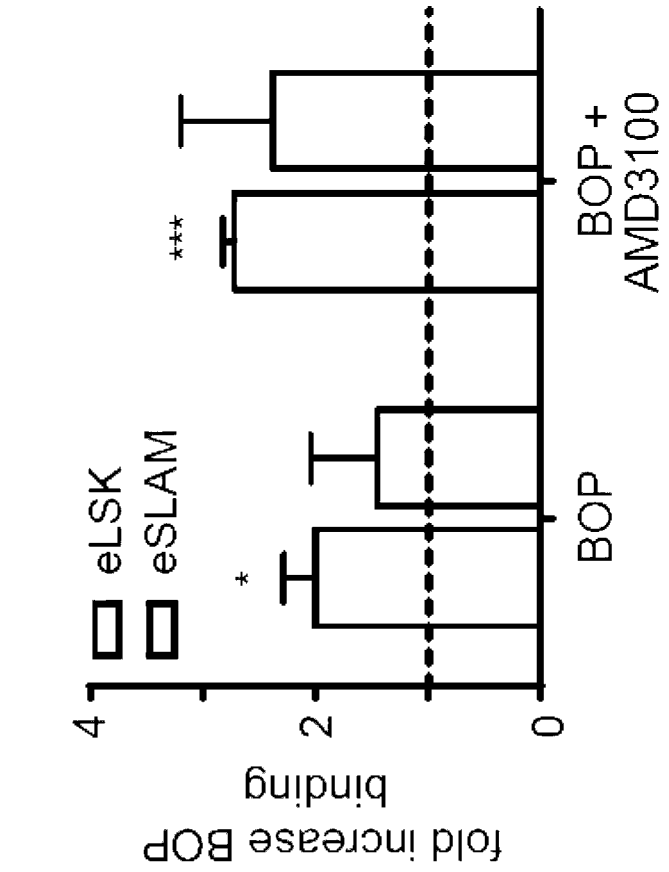


Figure 6 (d)




fold increase BOP binding
4
2
0
eLSK
eSLAM
*
***
BOP
BOP + AMD3100

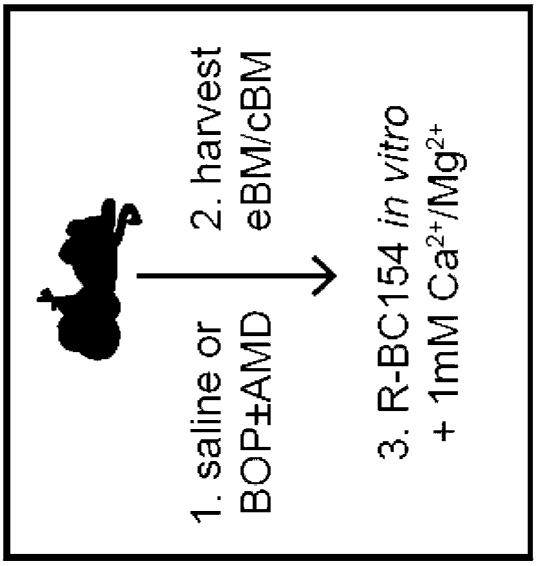
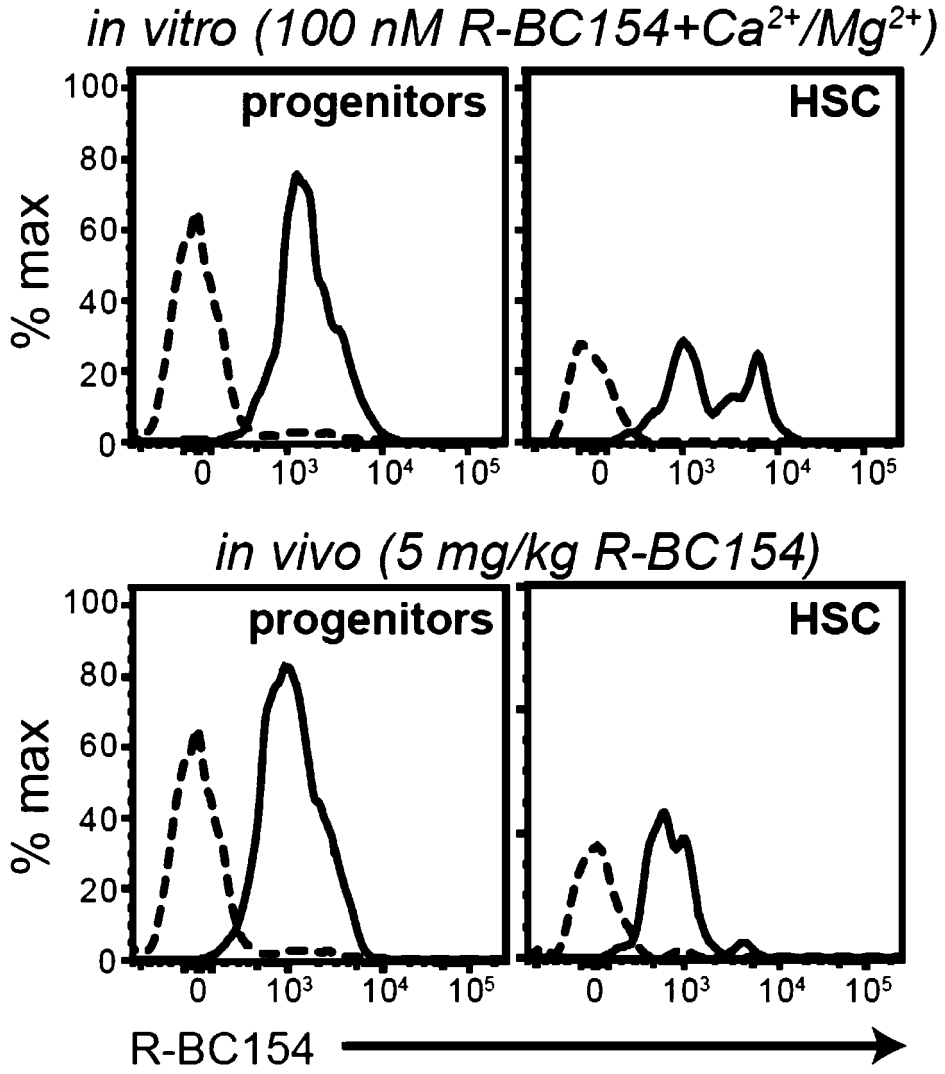

1. saline or BOP±AMD
2. harvest eBM/cBM
3. R-BC154 *in vitro* + 1mM Ca^{2+}/Mg^{2+}

Figure 6 (e)

Figure 7


in vitro (100 nM R-BC154+Ca2+/Mg2+)
progenitors
HSC
% max
100
80
60
40
20
0
0
10³
10⁴
10⁵
in vivo (5 mg/kg R-BC154)
R-BC154

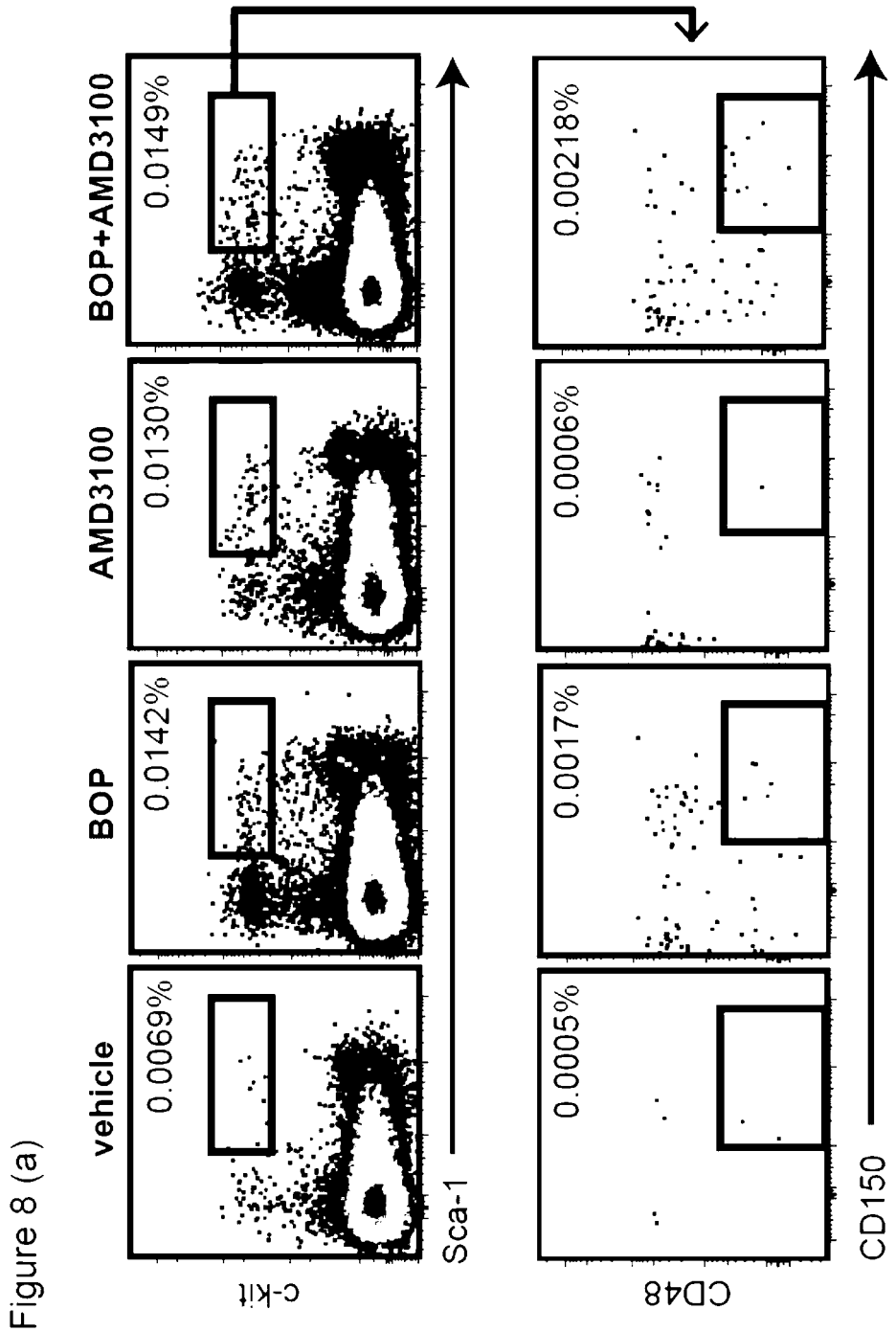

vehicle
BOP
AMD3100
BOP+AMD3100
0.0069%
0.0142%
0.0130%
0.0149%
0.0005%
0.0017%
0.0006%
0.00218%
c-kit
Sca-1
CD48
CD150

Figure 8 (a)

Figure 8 (b)

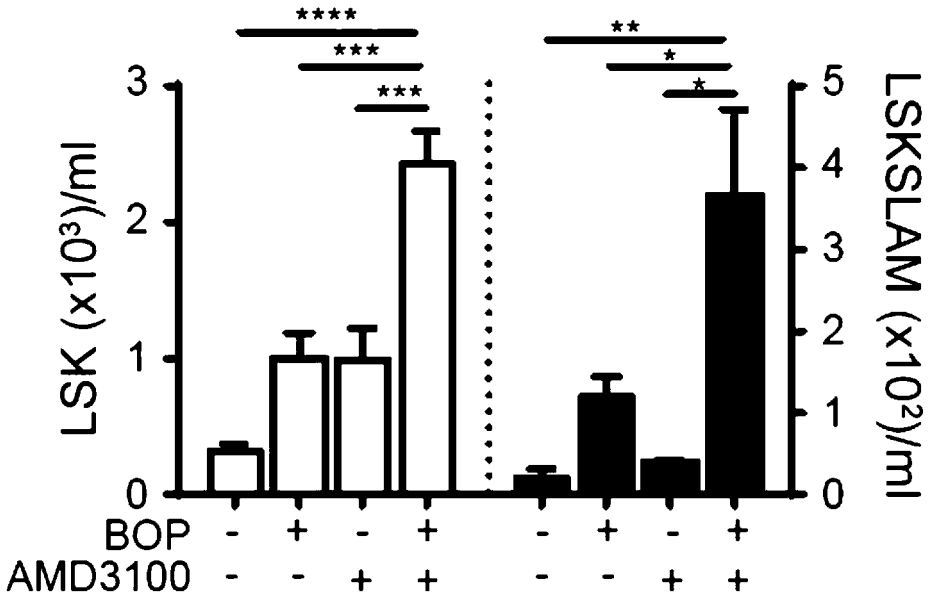


Figure 8 (c)

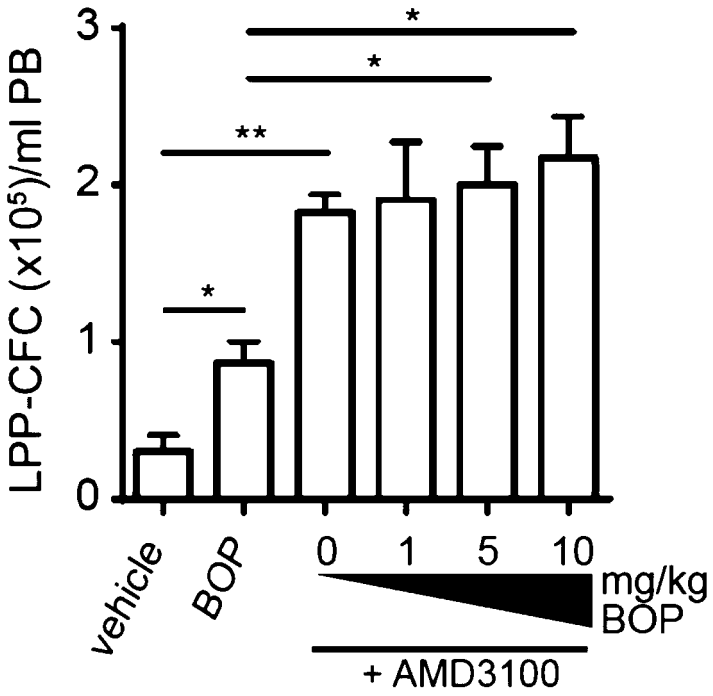


Figure 8 (d)

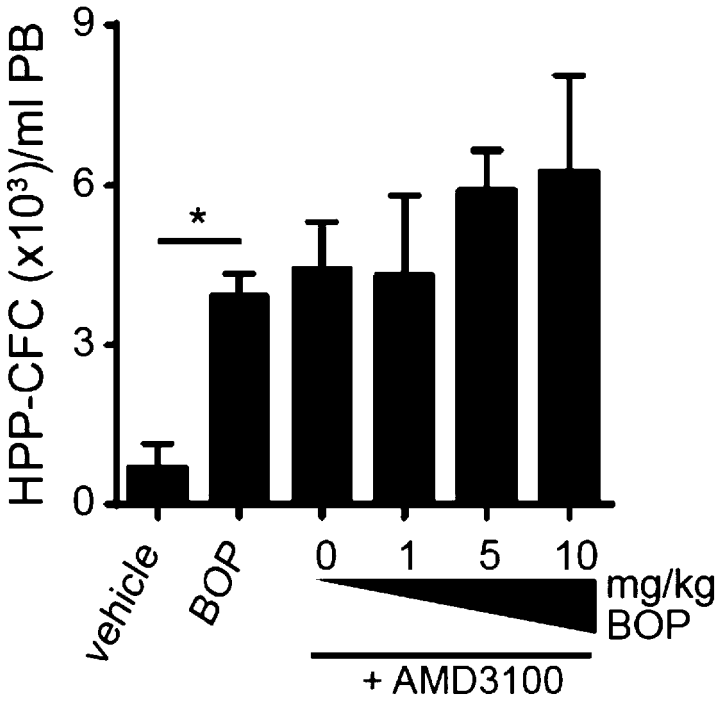
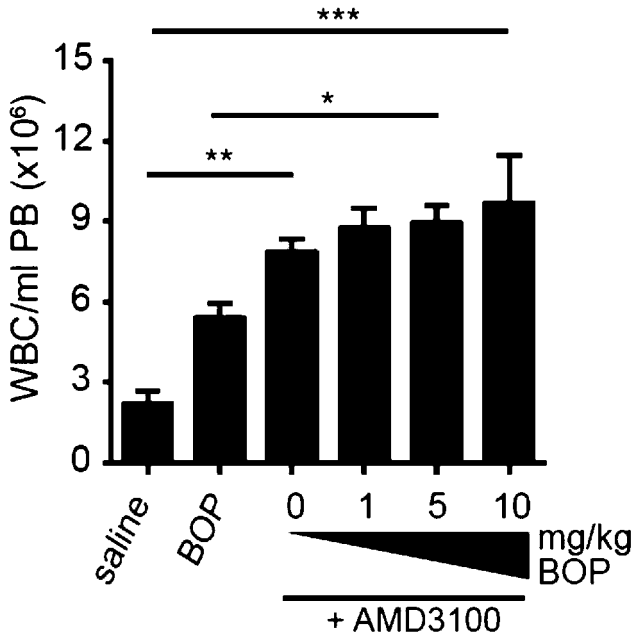


Figure 8 (e)



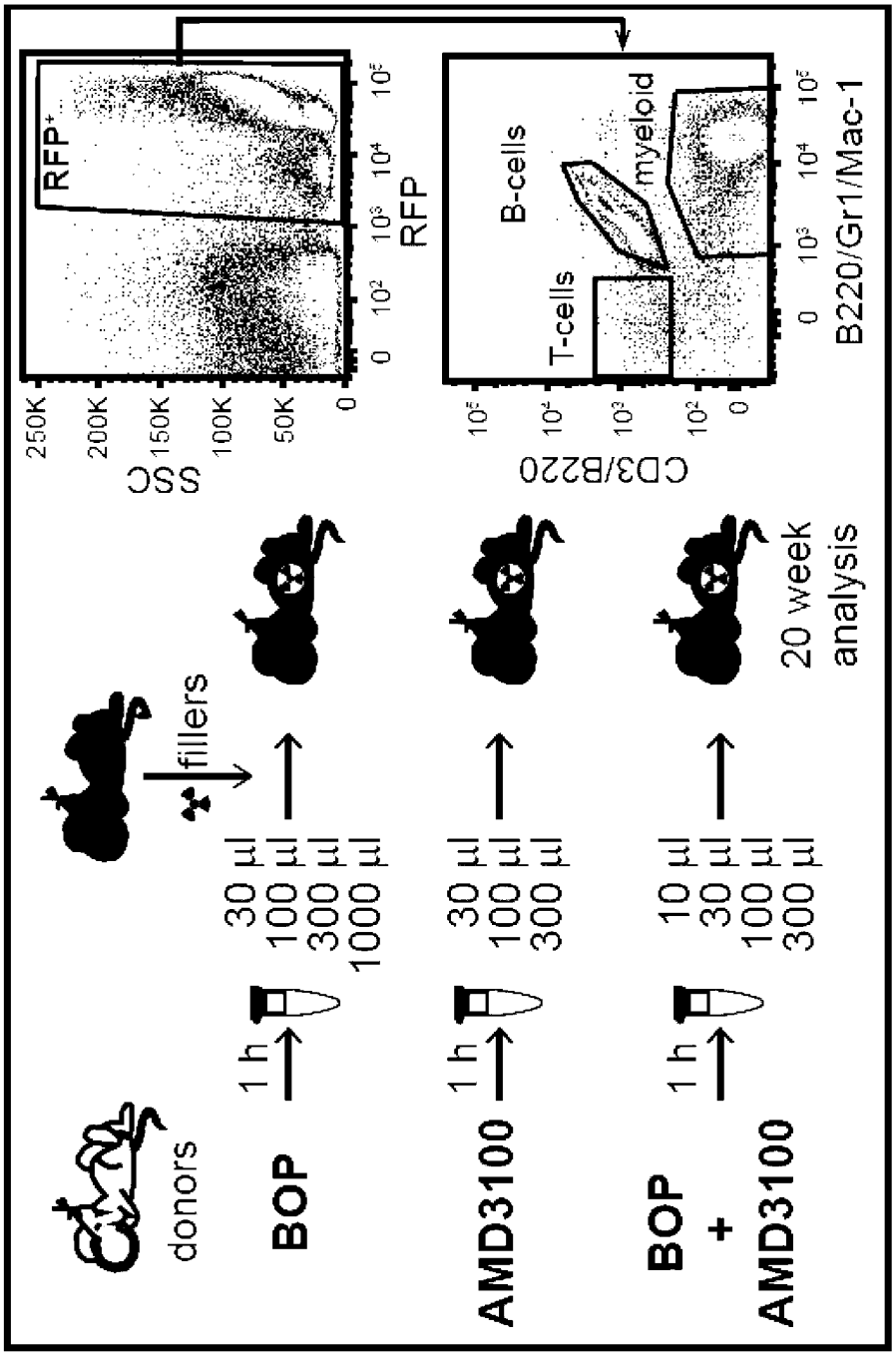

donors
BOP
1 h
30 µl
100 µl
300 µl
1000 µl
fillers
AMD3100
1 h
30 µl
100 µl
300 µl
BOP
+
AMD3100
1 h
10 µl
30 µl
100 µl
300 µl
20 week
analysis
SSC
RFP
RFP+
CD3/B220
B220/Gr1/Mac-1
B-cells
T-cells
myeloid

Figure 8 (f)

Figure 8 (g)

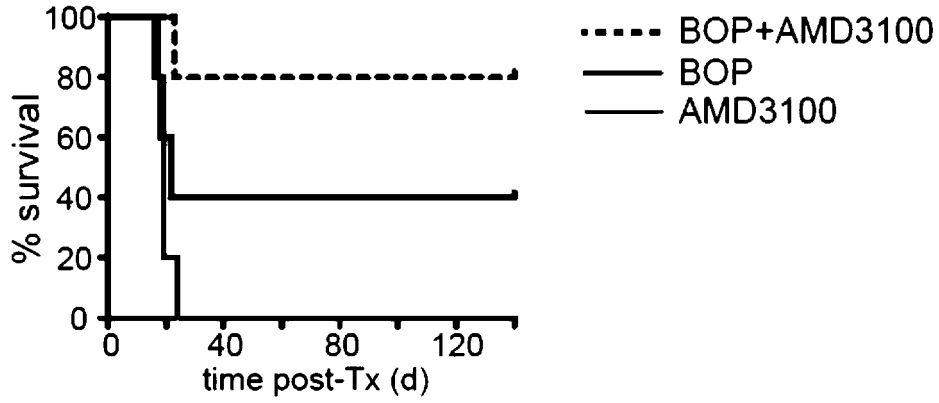


Figure 8 (h)

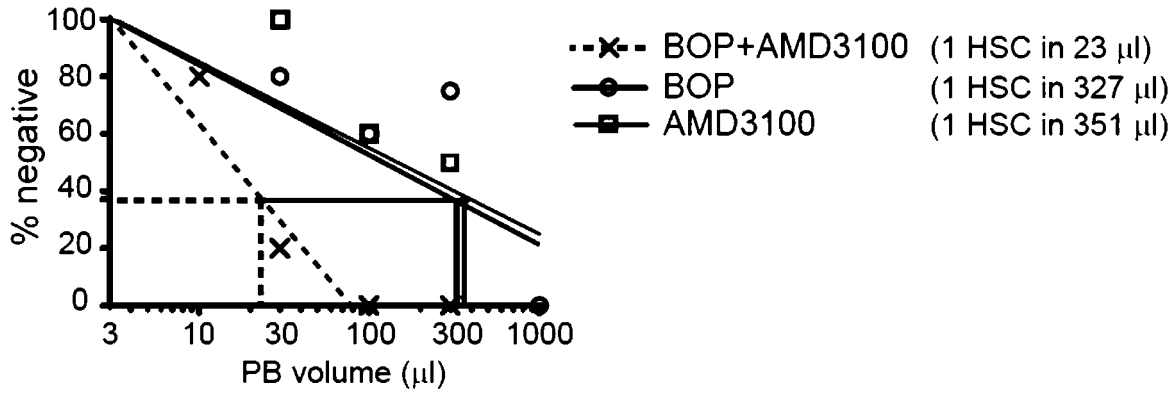


Figure 9 (a)

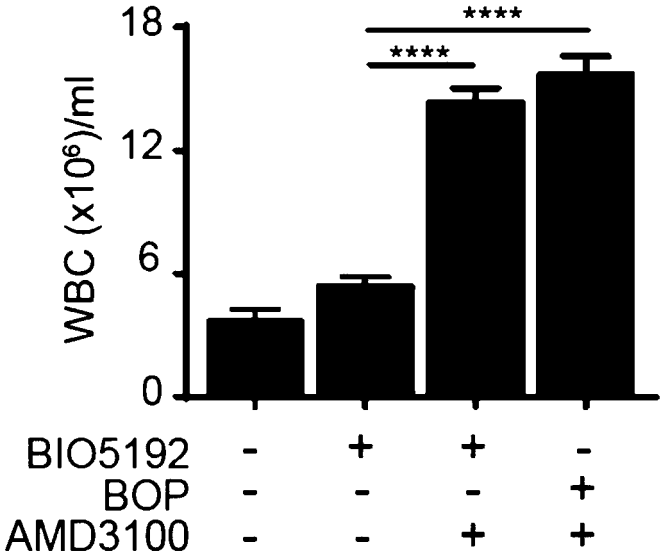


Figure 9 (b)

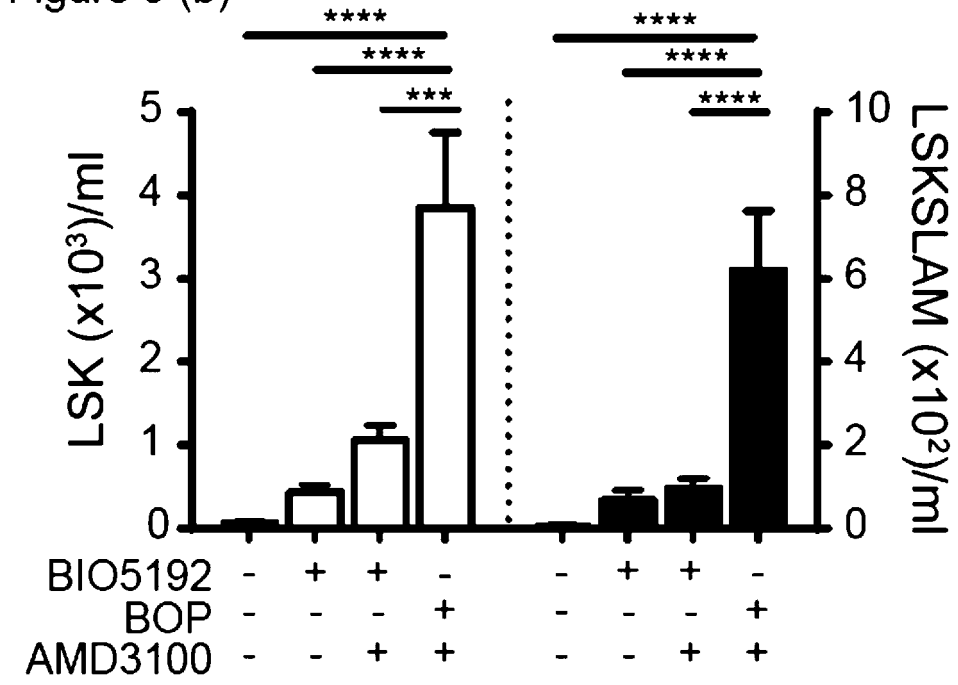


Figure 10 (a)

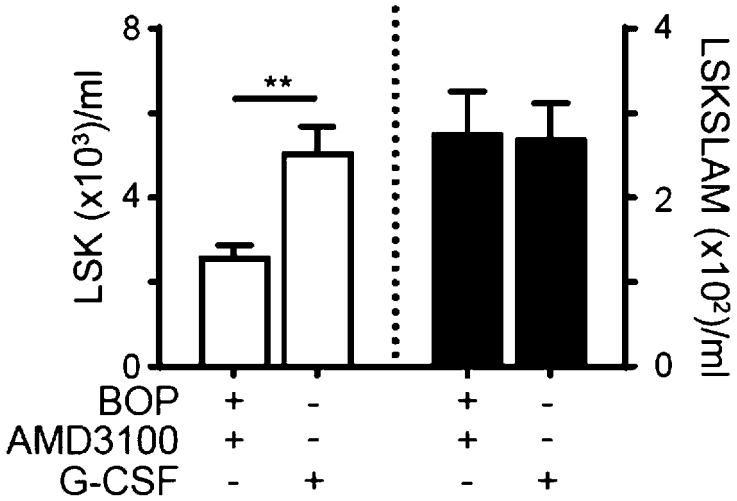


Figure 10 (b)

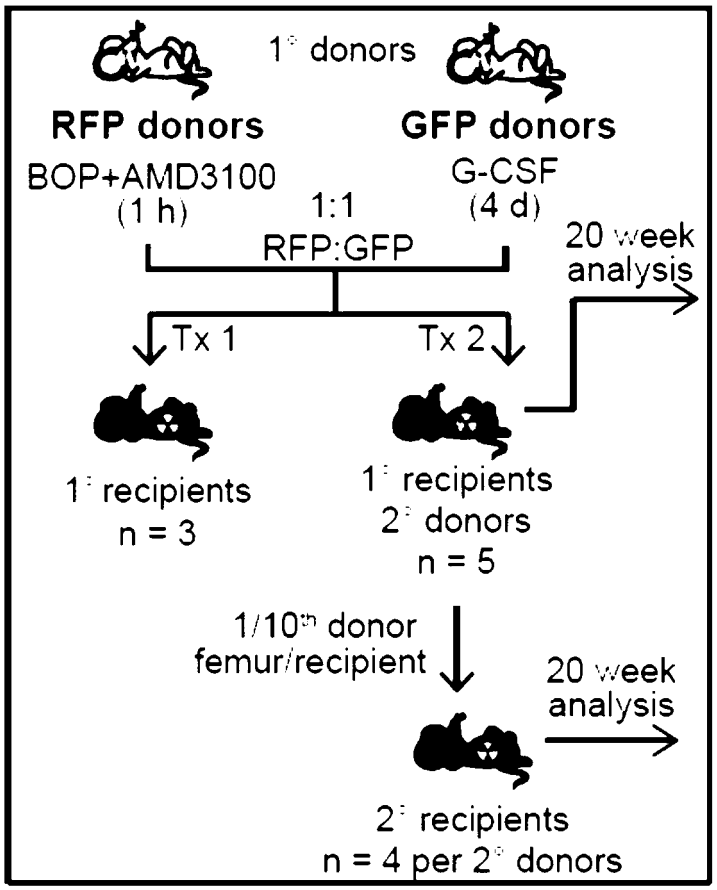


Figure 10 (c)

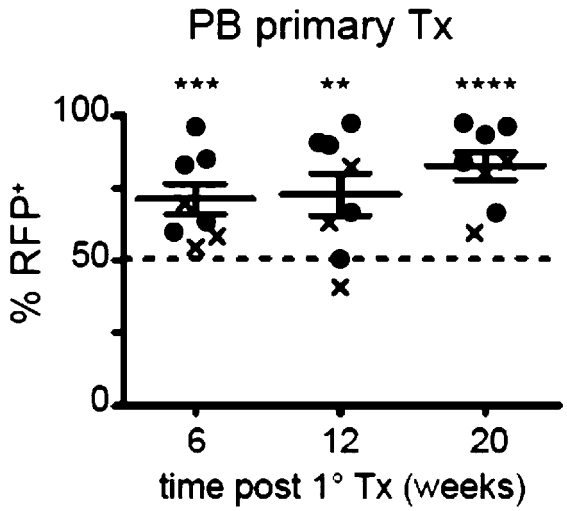


Figure 10 (d)

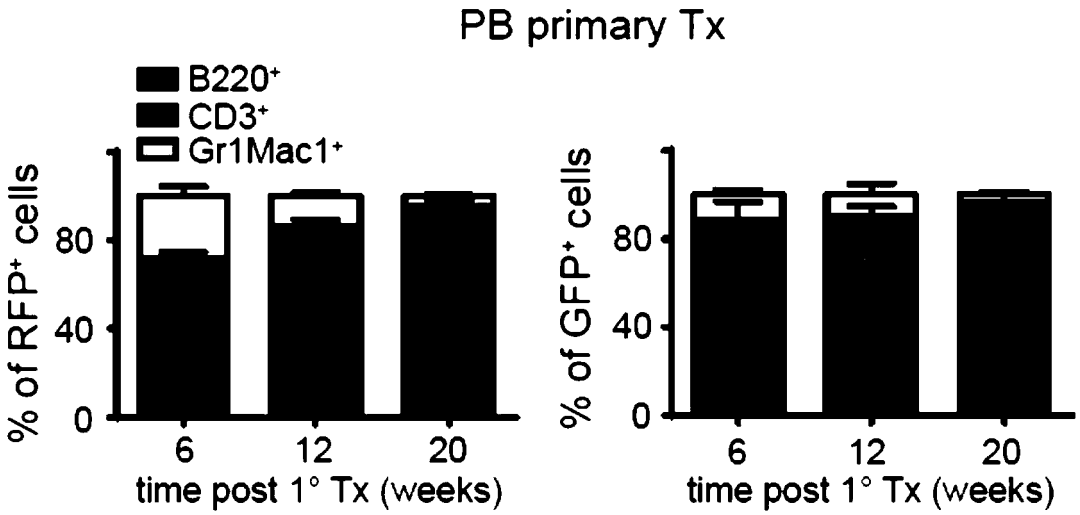


Figure 10 (e)

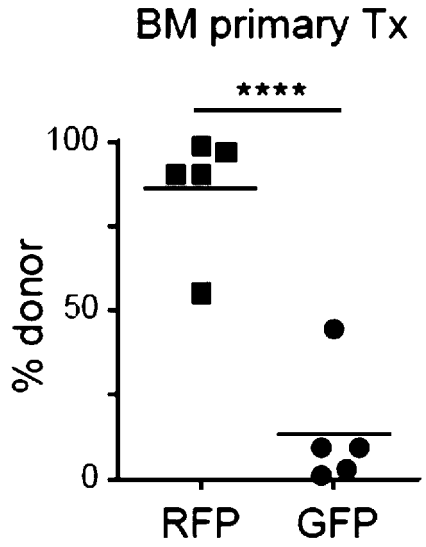


Figure 10 (f)

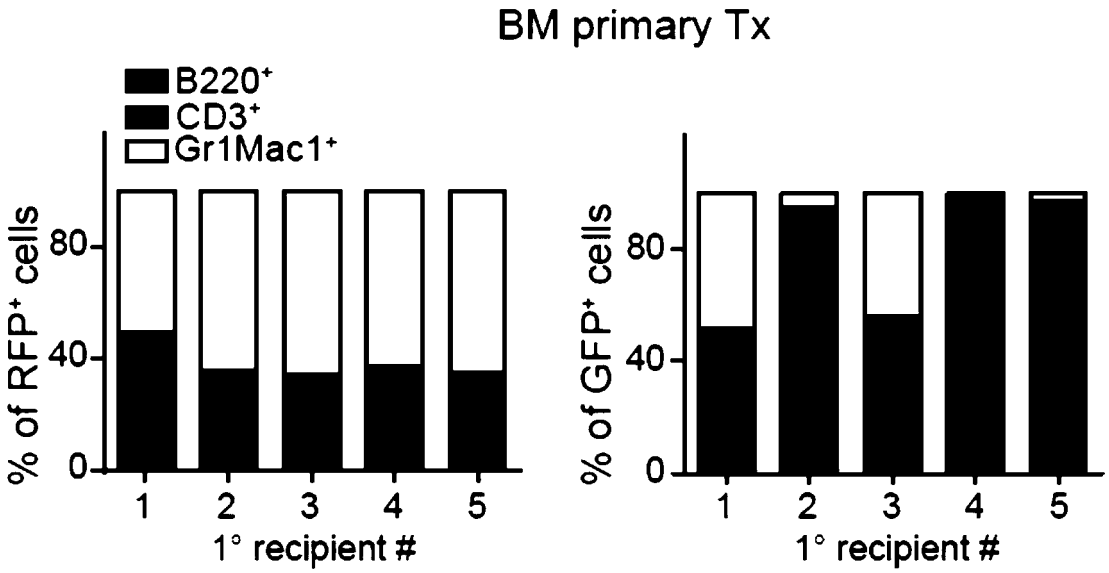


Figure 10 (g)

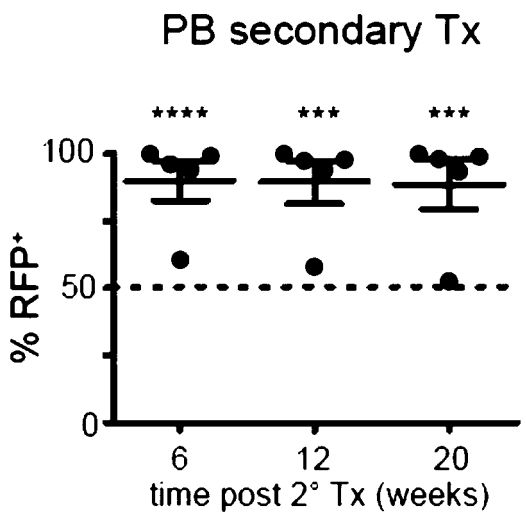


Figure 10 (h)

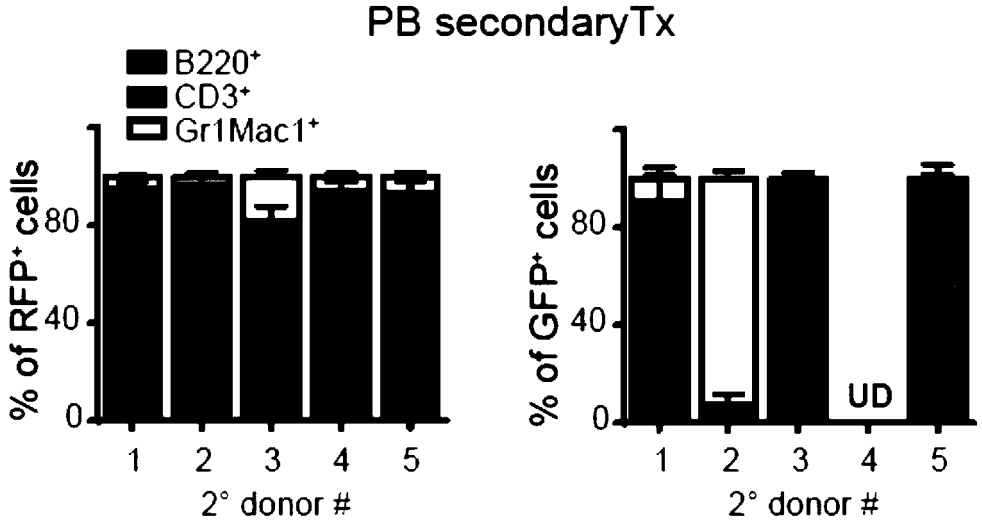


Figure 10 (i)

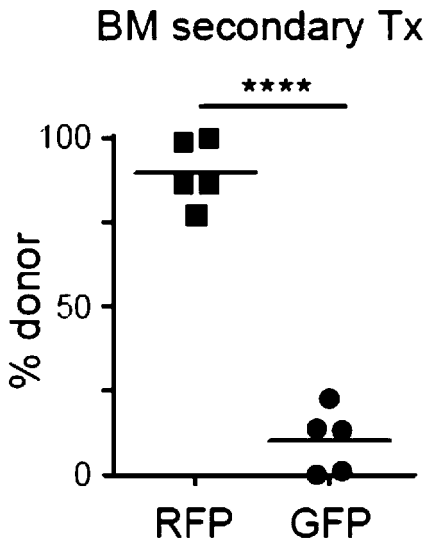


Figure 10 (j)

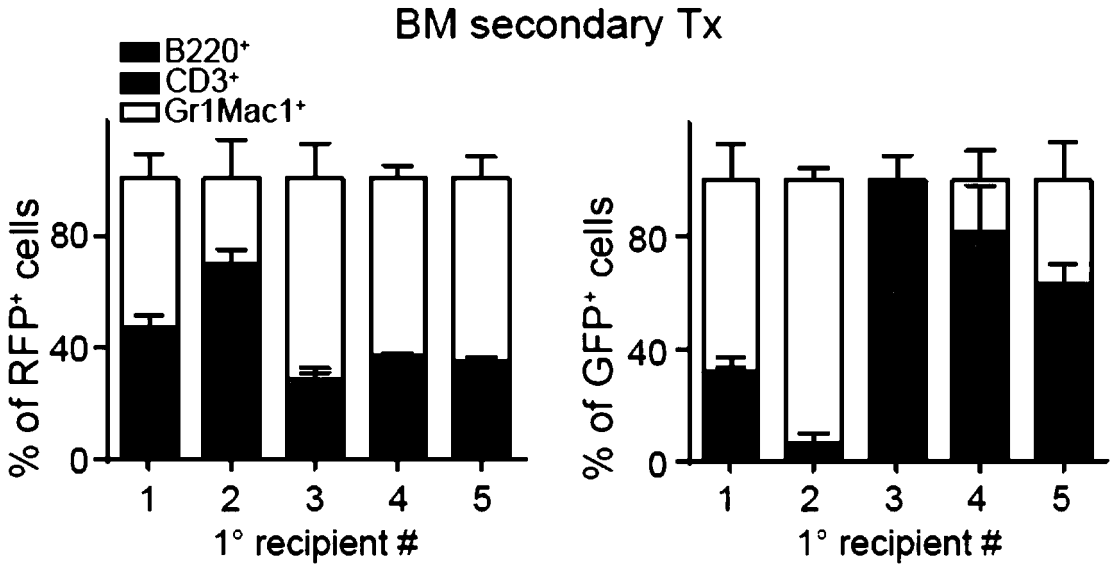


Figure 11

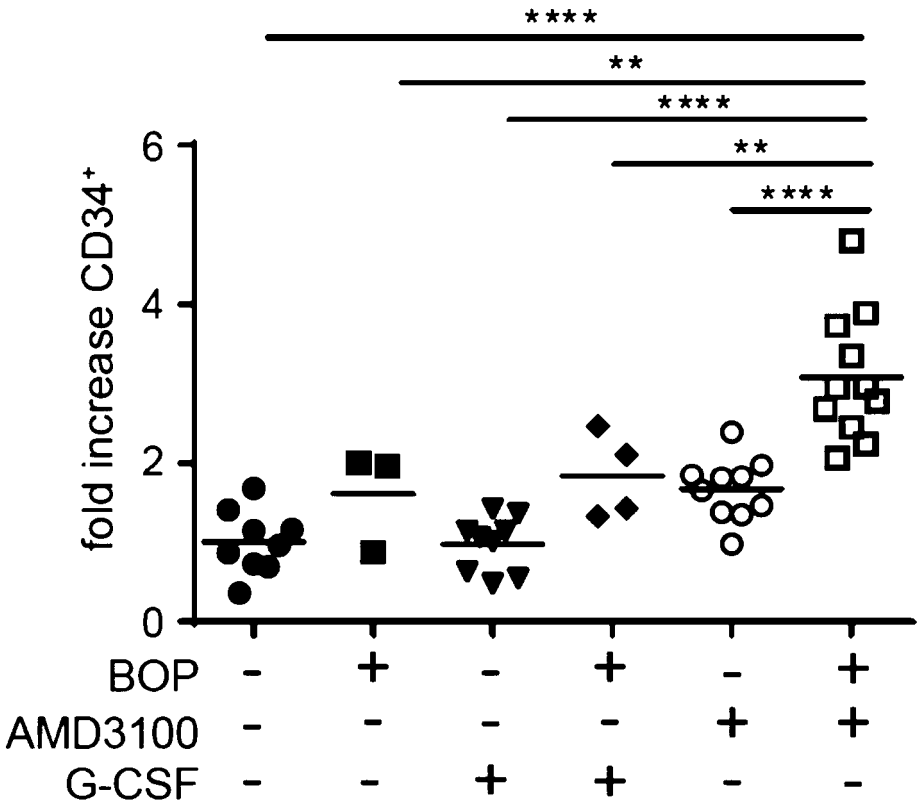


Figure 12 (a)

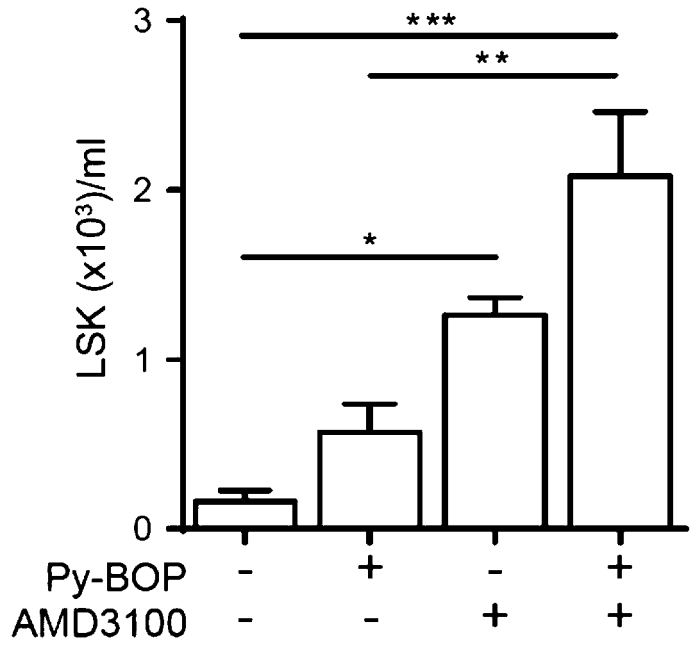


Figure 12 (b)

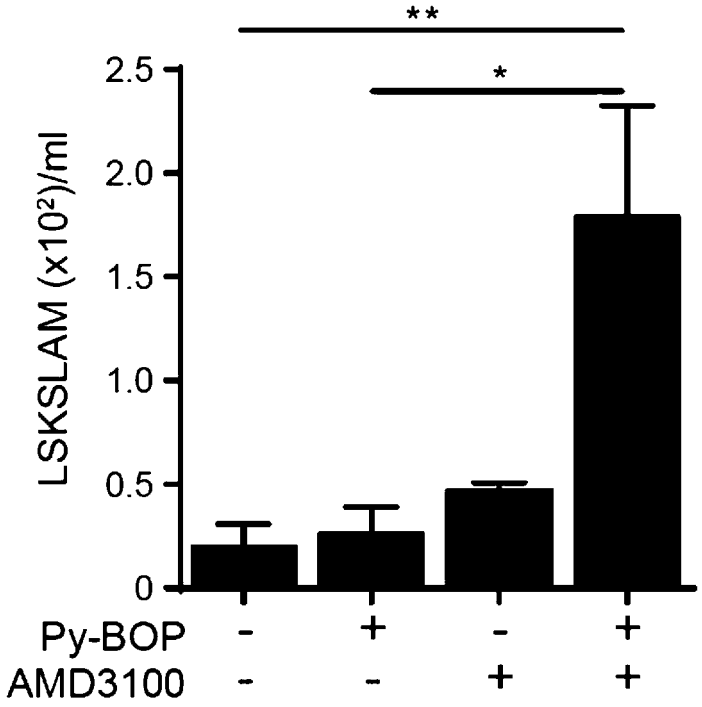


Figure 13 (a)

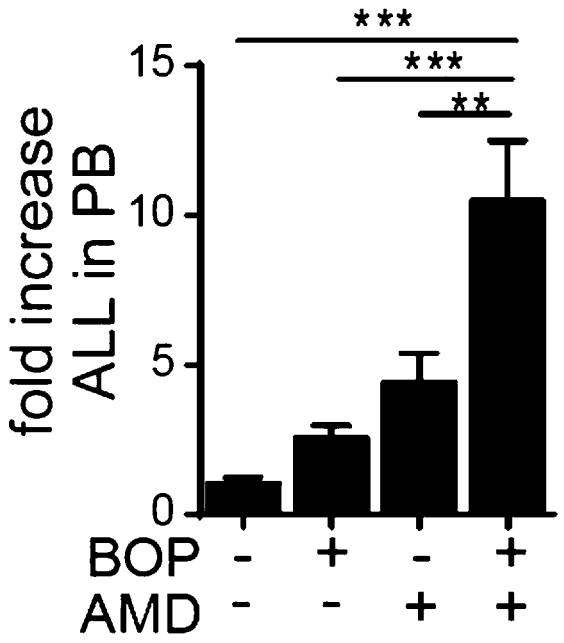


Figure 13 (b)

