Supplemental Figure Legends

Supplemental Figure 1a. Anti-CD8β depletes αβCD8$^+$ T cells but not ααCD8$^+$ dendritic cells. ProGP-1 pre-treated splenocytes were labelled with anti-CD8β followed by magnetic depletion as described in Methods. Staining with anti-CD3-FITC and anti-CD8α-PE or anti-CD11c-FITC and anti-CD8α-PE confirmed depletion of CD8αβ$^+$ T cells but not CD8αα$^+$ DCs.

Supplemental Figure 1b. CD8$^+$ T cell reconstitution is not impaired in recipients of wild-type grafts depleted of CD4$^+$ T cells or Jα18$^{-/-}$ grafts. Irradiated B6D2F1 mice received grafts consisting of whole spleen, CD4$^+$ depleted spleen, CD8β$^+$ depleted spleen or CD4$^+$ and CD8β$^+$ depleted spleen from wild-type donors. Additional cohorts received whole spleen from NKT cell deficient donors (Jα18$^{-/-}$) or CD4$^+$ depleted spleen from wild-type donors supplemented with purified CD4$^+$ T cells from wild-type or Jα18$^{-/-}$ donors. All donors were mobilized with ProGP-1. Total number of CD8$^+$ T cells per spleen were determined at day +13 after SCT (WT whole spleen, n=9; Jα18$^{-/-}$ whole spleen, n=9; WT CD4 depleted spleen, n=9; WT CD8β depleted spleen, n=4; WT CD4 depleted spleen plus WT CD4$^+$ T cells, n=5; WT CD4 depleted spleen + Jα18$^{-/-}$ CD4$^+$ T cells, n=5). Combined data from 2 experiments. *P < 0.05 vs WT whole spleen.

Supplemental Figure 1c. Donor CD4$^+$ T cells do not exert direct cytotoxicity against class II$^+$ LPS blasts. Whole splenocytes from B6D2F1 (host-type) or C57BL6 (donor-type) mice were cultured with LPS at a final concentration of 25μg/ml. After 72 hours > 60% of cells recovered were B220$^+$ Class II$^+$. Irradiated B6D2F1 mice received whole spleen from wild-type donors mobilized with control diluent or ProGP-1. CD4$^+$ T cells were sort-purified at day +13 and utilized as

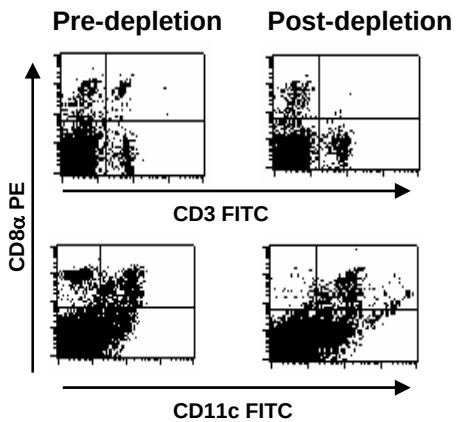
effectors in ^{51}Cr release CTL assays; Class II^+ LPS blast target population (ProGP-1 anti-host, n=4; ProGP-1 anti-donor, n=4; G-CSF anti-host, n=4; G-CSF anti-donor n=4).

Supplemental Figure 1d. G-CSF plus Flt-3L expands donor DCs. Wild-type donors were mobilized with G-CSF alone, G-CSF plus Flt-3L or ProGP-1 and absolute numbers of $CD11c^+$ class II^+ DCs per donor spleen determined (G-CSF, n=3: G-CSF + Flt-3L, n=3: ProGP-1 n=3). *P < 0.05 vs G-CSF.

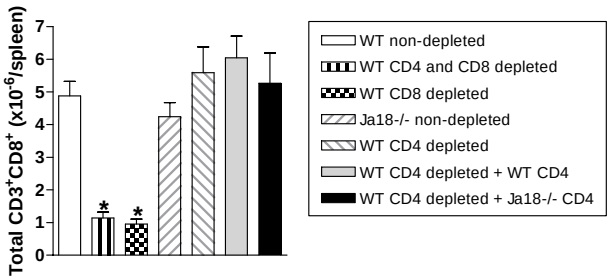
Supplemental Figure 1e. Stem cell mobilization with Peg-G-CSF improves overall survival. Irradiated B6D2F1 mice received whole spleen from wild-type donors mobilized with G-CSF or Peg-G-CSF. At the time of transplant, mice also received a leukemic challenge of 5 $x10^4$ P815. Overall survival by Kaplan-Meier analysis (G-CSF, n=18; Peg-G-CSF, n=18). *P = 0.0007 G-CSF vs Peg-G-CSF

Supplemental Figures

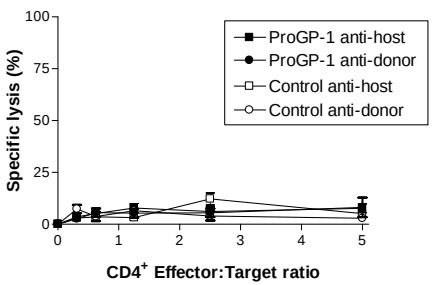
Supplemental Figure 1a



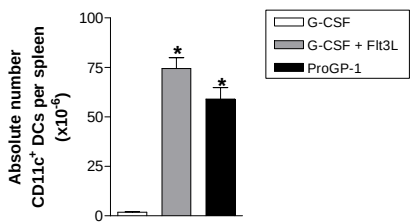
Supplemental Figure 1b



Supplemental Figure 1c



Supplemental Figure 1d



Supplemental Figure 1e