

**Figure S1. Histological analysis of fetal heart and lungs of CKO mice**

H&E staining of E18.5 fetal heart (left panels) and lung (right panels) sections from control and CKO mice. Scale bars= 1 mm (left panels) and 200 $\mu$ m (right panels).

**Figure S2. Analysis of erythroid maturation in peripheral blood of CKO embryos**

(A) Representative FACS analysis of erythroid maturation in the peripheral blood of E18.5 control and CKO embryos. The cells were double labeled with anti-CD71 and anti-TER119 antibodies. R8 represents the most mature population defined as CD71<sup>low</sup>TER119<sup>+</sup>. (B, C) The cell frequency (B) and number (C) of R8 population in control and CKO embryos shown in (A). n=4-15, #p<0.01. Data are mean + SE.

**Figure S3. Representative FACS profile of peripheral blood leukocytes of recipient mice at 16<sup>th</sup> week after transplantation of CKO fetal liver cells**

Two-hundred thousand fetal liver cells from CD45.2<sup>+</sup> control or CKO mice were injected into lethally irradiated CD45.1<sup>+</sup> wild type recipients along with 500,000 CD45.1 bone marrow cells. (A) Overall chimerism. (B) Mac1<sup>+</sup> cell chimerism. (C) Gr1<sup>+</sup> cell chimerism. (D) B220<sup>+</sup> cell chimerism. (E) CD3<sup>+</sup> cell chimerism. The upper right quadrant of each graph represents the donor derived CD45.2<sup>+</sup> cells in that lineage. The number in each graph represents the percentage of that lineage cells derived from donor cells.

**Figure S4. Representative FACS profile of peripheral blood leukocytes of recipient mice at 18<sup>th</sup> week after transplantation of fetal liver cells from FIP200<sup>F/F</sup>;Mx1-Cre mice**

Two-hundred thousand fetal liver cells from CD45.2<sup>+</sup> control or FIP200<sup>F/F</sup>;Mx1-Cre mice were injected into lethally irradiated CD45.1<sup>+</sup> wild type recipients along with 500,000 CD45.1 bone marrow cells. Five pIpC injections were administered to recipients every other day beginning 5 days after transplantation. (A) Overall chimerism. (B) Mac1<sup>+</sup> cell chimerism. (C) Gr1<sup>+</sup> cell chimerism. (D) B220<sup>+</sup> cell chimerism. (E) CD3<sup>+</sup> cell chimerism. The upper right quadrant of each graph represents the donor derived CD45.2<sup>+</sup> cells in that lineage. The number in each graph represents the percentage of that lineage cells derived from donor cells.

**Figure S5. FIP200 deletion led to increased ROS in erythroid cells**

Relative ROS of different subpopulations of erythroid cells (R4-R8 population as defined in Fig. 1H) from E14.5 fetal liver was measured by mean fluorescent intensity (MFI) of DC-FDA staining. FL represents whole fetal liver cells. n=24-27, #p<0.05. Data are mean + SE.

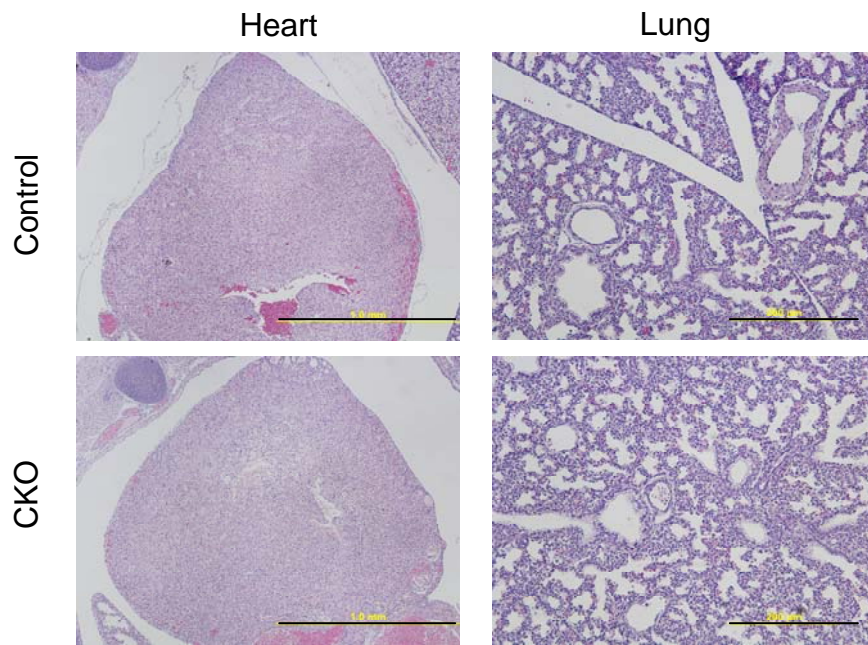


Figure S1

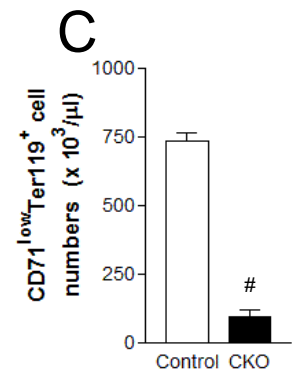
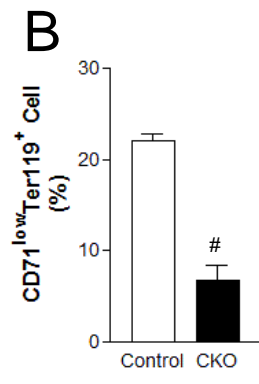
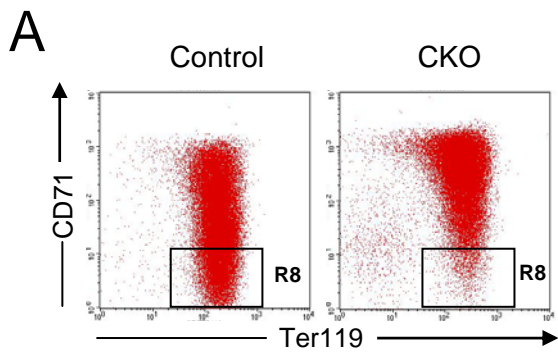


Figure S2

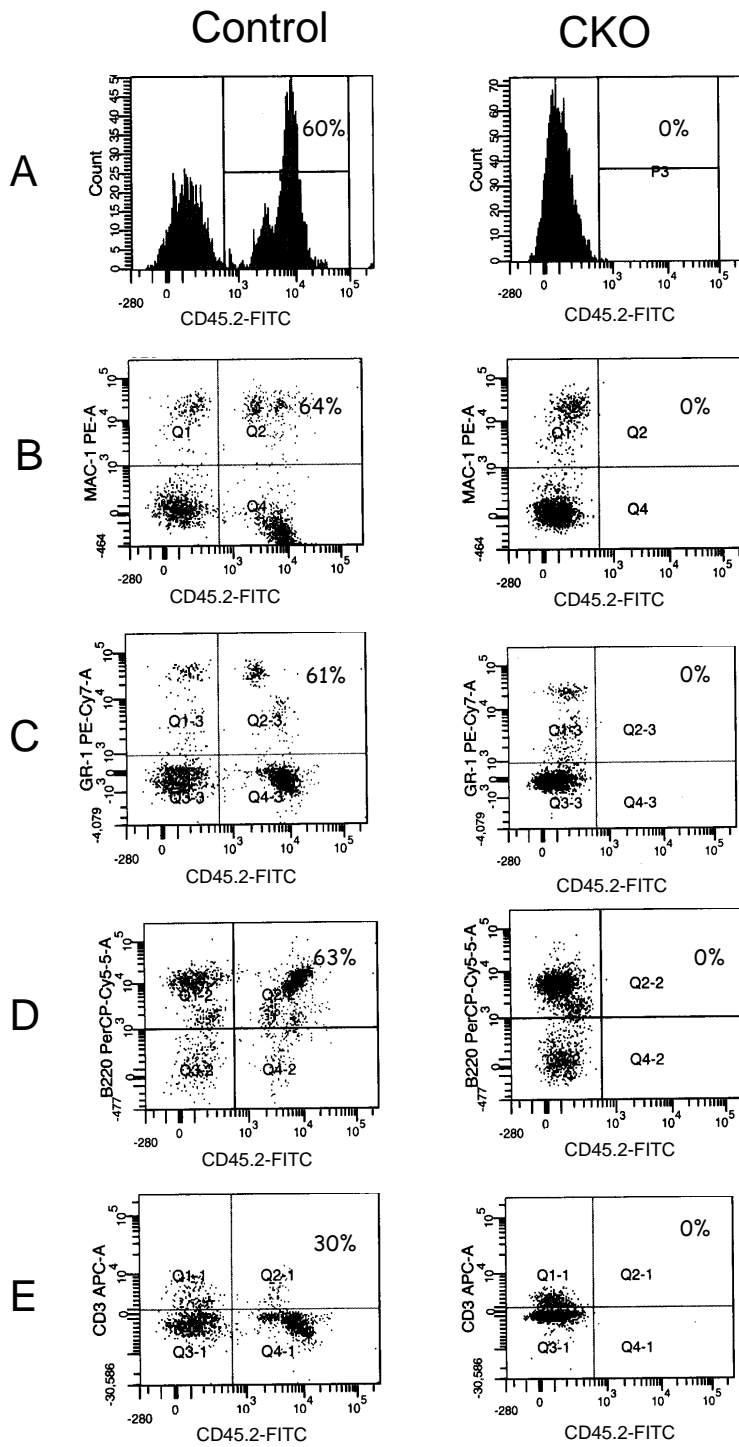


Figure S3

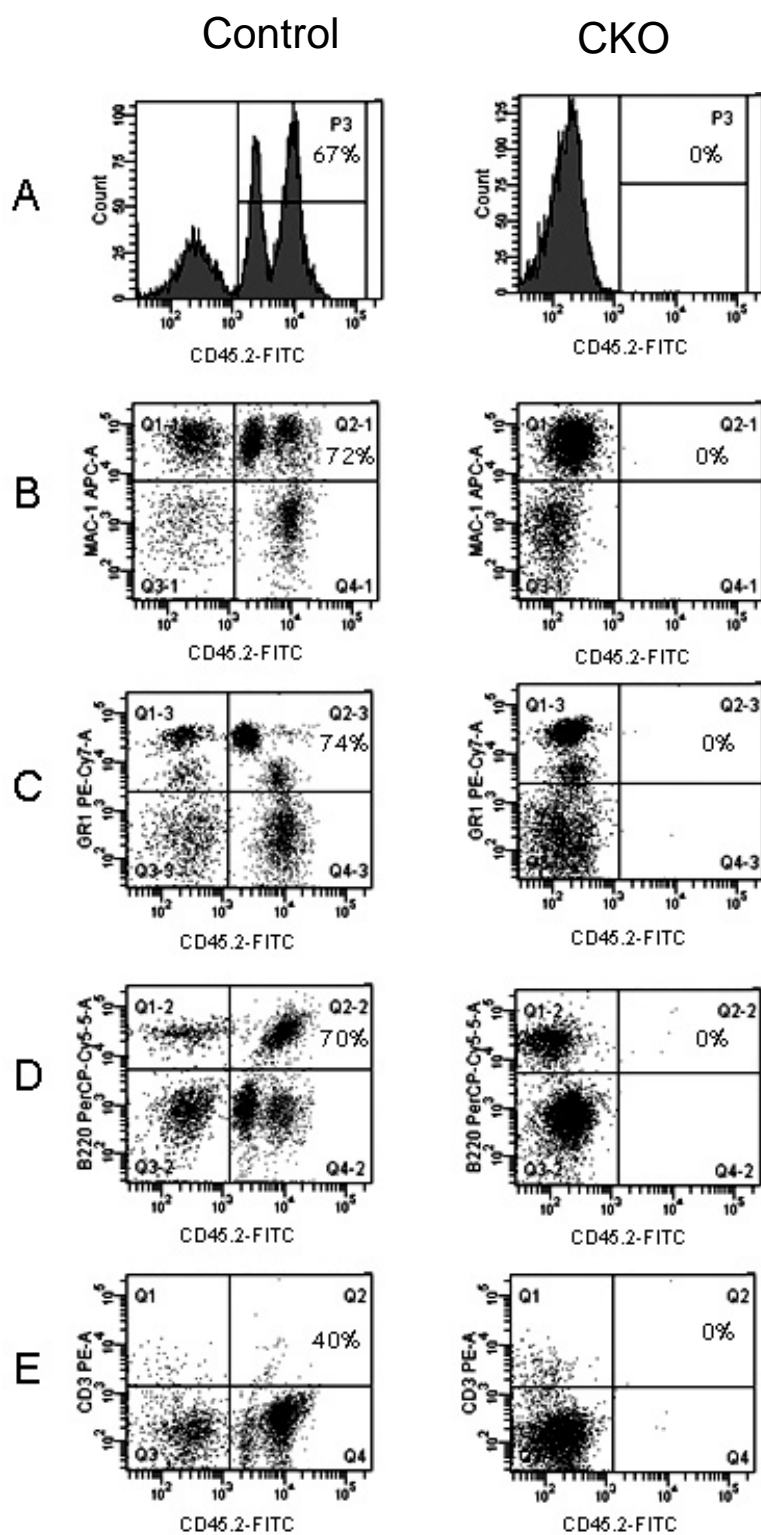


Figure S4

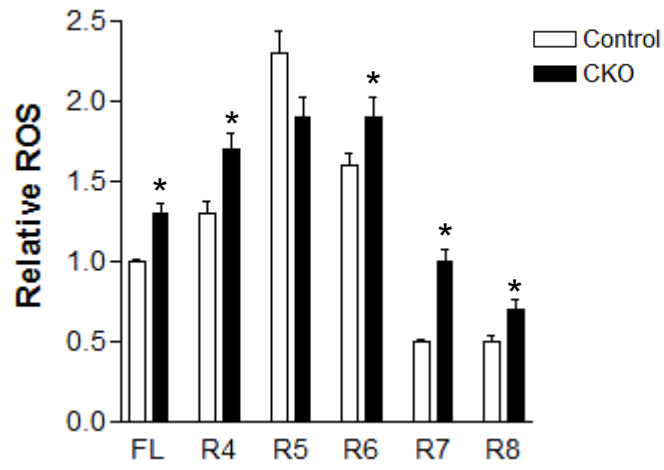


Figure S5