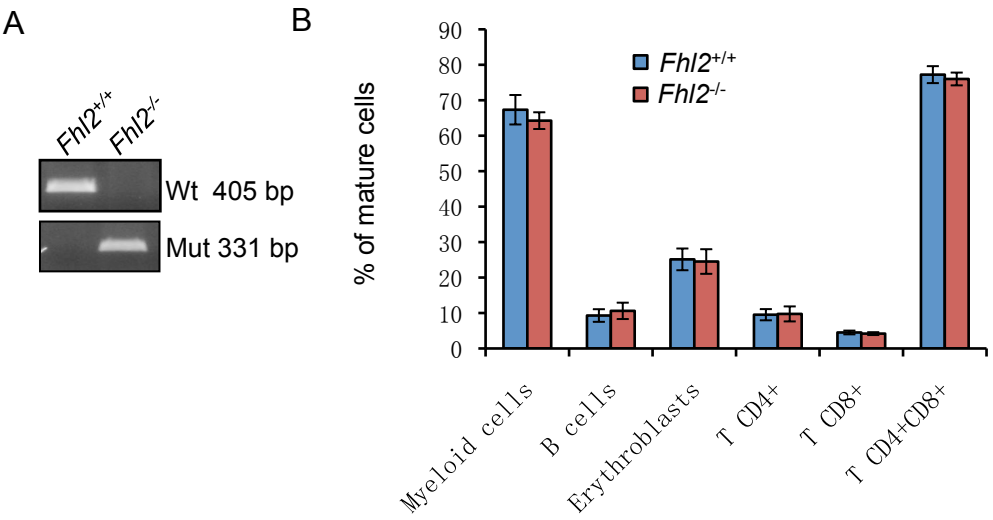
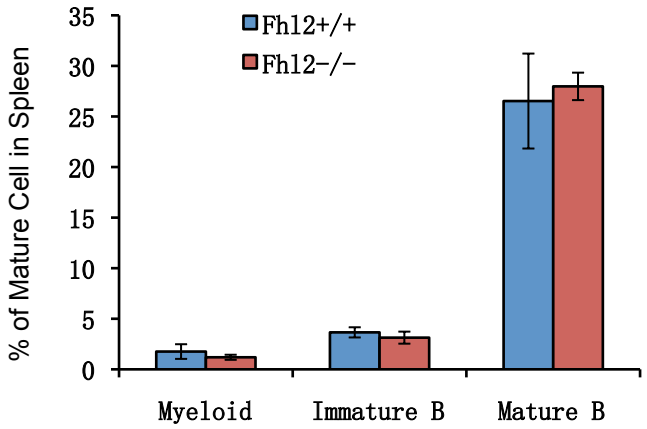


Supplementary Figure 1. The young *Fhl2*-deficient mice displayed a normal distribution of mature hematopoietic cells. (A) PCR analysis of genomic DNA isolated from *Fhl2*-deficient and control wildtype mice. (B) The frequency of myeloid cells (Mac-1$^+$Gr-1$^+$), mature B cells (B220$^+$), erythroblast cells (CD71$^+$Ter119$^+$) in BM and various types of T cells in Thymus from *Fhl2*-deficient and control mice (n=5) at age of 2 months.



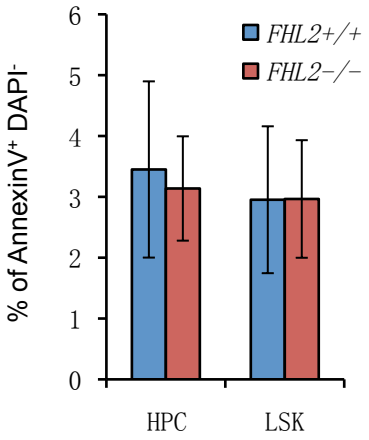
Supplementary Figure 2. Flow cytometric analysis of blood cells in spleen. The frequency of myeloid cells (Mac-1+Gr-1+), immature B cells (B220+IgM-) and mature B cells (B220+IgM+) in spleen were determined from primary *Fhl2*$^{+/+}$ and *Fhl2*$^{-/-}$ mice at age of 2-3 months (n=3-4).

Table1. Blood Cell counts in 9-Week-Old *Fhl2*$^{+/+}$ and *Fhl2*$^{-/-}$ Mice

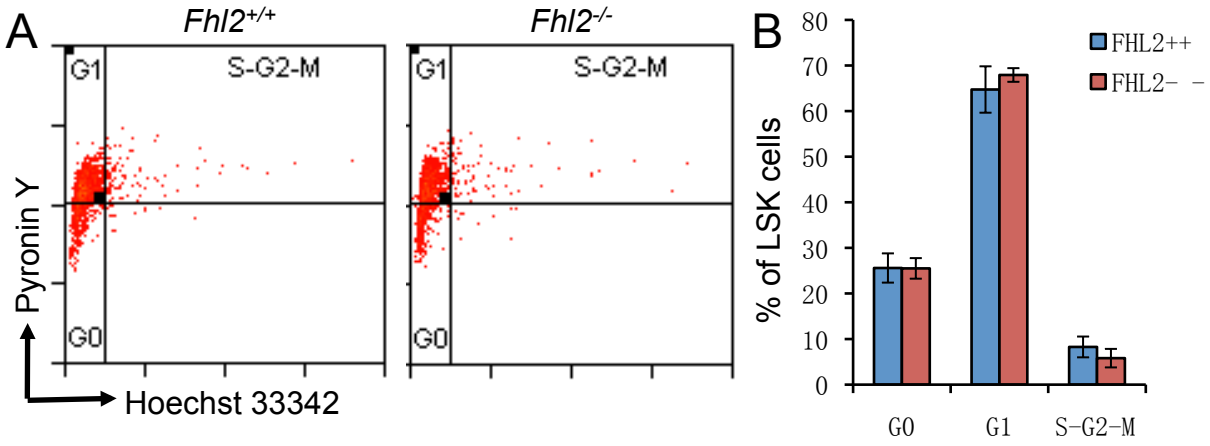
	Fhl2$^{+/+}$	*Fhl2*$^{-/-}$	P Value
WBC(K/μL)	13.99±2.97	15.03±4.00	NS
NE(K/μL)	3.22±0.57	3.24±0.97	NS
LY(K/μL)	9.62±2.42	10.71±2.76	NS
MO(K/μL)	0.86±0.2	0.85±0.35	NS
EO(K/μL)	0.21±0.18	0.17±0.25	NS
BA(K/μL)	0.08±0.08	0.07±0.11	NS
RBC(M/μL)	9.93±1.74	10.45±0.54	NS
Hb(g/dL)	12.90±2.19	13.85±1.24	NS
HCT(%)	42.88±7.47	44.38±3.23	NS
MCV(fL)	43.20±1.02	42.45±1.52	NS
MCH(pg)	13.03±0.22	13.25±0.54	NS
PLT(K/μL)	924.00±381	1071.25±259	NS

Values shown are the mean ± SD for 5 mice per genotype. WBC, white blood cell; NE, neutrophils; LY, lymphocytes; MO, monocytes; EO, eosinophils; BA, basophils; RBC, red blood cell; Hb, hemoglobin; HCT, hematocrit; MCV, mean corpuscular volume; MCH, mean corpuscular hemoglobin; PLT, platelet; NS, not significant.

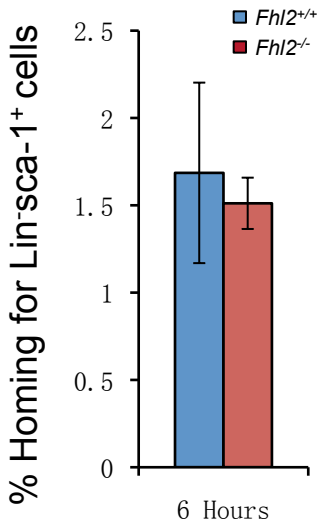
Supplementary Table1. Young *Fhl2*-deficient mice displayed normal hematological parameters. Complete Blood Count (CBC) analysis of Peripheral Blood (PB) from 9-week-old *Fhl2*$^{+/+}$ and *Fhl2*$^{-/-}$ mice (n=5).



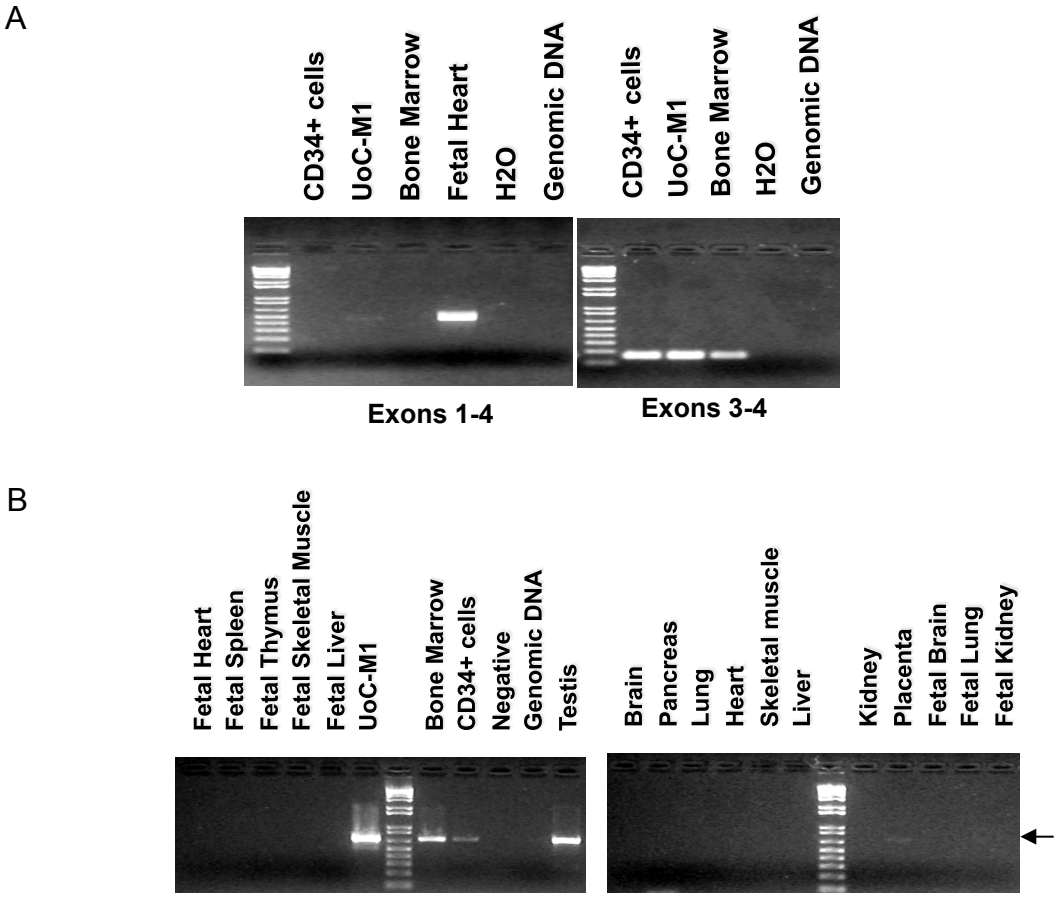
Supplementary Figure 3. Comparable frequency of apoptosis in LSKs and HPCs. The histograms depicting mean frequency of early apoptotic cells (AnnexinV$^+$ DAPI$^-$) in HPCs and LSKs in BM from primary *Fhl2*$^{+/+}$ and *Fhl2*$^{-/-}$ mice (n=5) at age of 2 months. LSKs are defined as Lin$^-$Sca-1$^+$c-Kit$^+$.



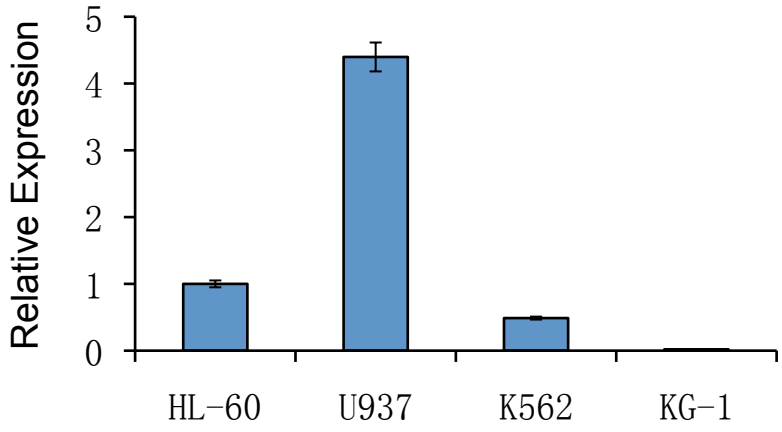
Supplementary Figure 4. Analysis of quiescent cells (G0) in stem cell enriched LSKs. (A) Representative flow cytometric analysis of LSKs stained with Hoechst 33342 and Pyronin staining . (B) The histogram shows the distribution of LSKs in G0, G1 and S-G2-M phase. The cells were isolated from *Fhl2*$^{-/-}$ and *Fhl2*$^{+/+}$ mice at age of 2-3 months (n=6).



Supplementary Figure 5. Homing ability of Lin$^-$Sca-1$^+$ hematopoietic progenitor cells from *FHL2*$^{+/+}$ and *FHL2*$^{-/-}$ mice. Histograms showing the percentage of the recovered CFSE$^+$ Lin$^-$Sca-1$^+$ in the BM 6 hours after transplantation. The results are calculated based on the formula described in methods (mean ± SD; *n* = 5).



Supplementary Figure 6. Tissue distribution of *B-FHL2* expression. (A) Amplification of exons 1-4, and exons 3-4 of *FHL2* transcript from cDNA from human bone marrow cells, CD34+ cells, fetal heart cells, and the UoC-M1 cell line. The results indicate that exons 1-4 of *FHL2* can be amplified only from fetal heart cells, and weakly from UoC-M1, but not from human bone marrow and CD34+ cells, whereas exons 3-4 of *FHL2* can be amplified from bone marrow, CD34+ cells, and the UoC-M1 cells. (B) Amplification of exons 1-4 of *B-FHL2* transcript (arrow) from a multiple human tissue cDNA panel (BD Biosciences), and cDNAs from CD34+ hematopoietic progenitor cells, and the UoC-M1 cell line (UoC-M1 is a cell line established from the malignant cells of a patient with AML *de novo* characterized by a del(5q).



Supplementary Figure 7. qRT- PCR analysis of *FHL2* expression in human leukemia cell lines. β-actin gene was used for sample normalization.