Supplementary Figure legends

**Supplementary Figure 1.** Peripheral blood cell counts are not disturbed and the number of sideroblasts is not also increased in aged *Sf3b1*+/− mice.
(A) The timepoint analysis of peripheral blood counts in *Sf3b1*+/+ and *Sf3b1*+/− mice.
(B) Peripheral blood counts in *Sf3b1*+/+ and *Sf3b1*+/− mice at 54 weeks.
(C) The number of sideroblasts in *Sf3b1*+/+ and *Sf3b1*+/− mice at 54 weeks.
n=2 mice per genotype. Data represent the mean ± SD.

**Supplementary Figure 2.** Splenic B cell populations are not changed between *Sf3b1*+/+ and *Sf3b1*+/− mice.
(A) Representative flow cytometric plot of splenic B cell populations. Transitional type 1 B cells (T1) are defined as CD23−IgM−CD21−. Transitional type 2 B cells (T2) are defined as CD23−IgM+IgD+. Follicular B cells (FL) are defined as CD23−IgD−IgMint. Marginal zone B cells (MZ) are defined as CD23−IgM+CD21−.
(B) Frequency of splenic B cell populations. Data are the mean ± SD; n=3 per genotype. * p<0.05. N.S. means not significant.

**Supplementary Figure 3.** The effect of *Sf3b1* haploinsufficiency on gene expression.
(A) MA plot demonstrates the differential expressed genes. The x-axis is the average expression defined as (log2 (FPKM *Sf3b1*+/+) + log2 (FPKM *Sf3b1*+/−))/2 and the y-axis is the Mean log2 (FPKM) difference defined as log2 (FPKM *Sf3b1*+/−)-log2 (FPKM *Sf3b1*+/+). Blue dots means upregulated genes and red dots means downregulated genes in HSCs derived from *Sf3b1*+/− compared to those from *Sf3b1*+/+
(B) Expression of *Sf3b1* and *HOX* mRNA.
Relative mRNA expression (*Sf3b1*+/− / *Sf3b1*+/+) determined by RNA sequencing (■) and quantitative RT-PCR (□) were exhibited. The expression levels of mRNA determined by quantitative RT-PCR were normalized to Gapdh mRNA.