

Supplementary Figure 1. *Ikkβ* was not deleted in aortic endothelial cells from *Ikkβ^{F/F}/Tie2-Cre* mice that survived to adults. **A.** Genomic DNA was prepared from *Ikkβ^{F/F}/Tie2-Cre* and *Ikkβ^{F/F}* aortic endothelial cells. Control DNA sample was prepared from *Ikkβ^{F/F}/Tie2-Cre* embryo. Normal PCR was performed to analyze the genotype. No knockout band was detected in *Ikkβ^{F/F}/Tie2-Cre* aortic endothelial cells. **B.** The level of IKKβ was measured by Western blot. These results are representative of three individual experiments.

Supplementary Figure 2. Fluorescence-activated cell sorting (FACS) High speed FACS analysis of endothelial cells with PECAM-1-PE antibody from E12.5 embryos. Green curve shows the total cell population. P1 population (approximately 5% of the total cells) is the PECAM-1 positive portion that was sorted and collected.

Supplementary Figure 3. Unaltered proliferation in other organs at E13.5 in *Ikkβ^{F/F}/Tie2-Cre* embryos. BrdU incorporation in hearts, lungs and kidneys of *Ikkβ^{F/F}/Tie2-Cre* embryos at E13.5 was normal compared to *Ikkβ^{F/F}* embryos. 40X, scale bar 50 μm.

Supplementary Figure 4. Apoptosis was less severe in *Ikkβ^{F/F}/Tie2-Cre* livers at E12.5 than at E13.5. Cleaved Caspase-3 (Asp175) antibody IHC staining of paraffin-embedded sections at E12.5. 40X, scale bar 50 μm.

Supplementary Table 1. Lethality of *Ikkβ^{F/F}/Tie2-Cre* mice

Embryonic Day	Total embryos	<i>Ikkβ^{F/F}/Tie2-Cre</i> embryos	Expected <i>Ikkβ^{F/F}/Tie2-Cre</i> embryos
E12.5	72	20	18
E13.5	68	11	17
E15.5	62	2	15.5
E17.5	79	2	19.75
P0	103	2	25.75

Footnote: Expected Mendelian ratio is 25%.

Viable: heartbeat can be detected at dissection.