**Supplemental Material and Methods**

**Mouse Strains**

Endothelium-specific transgene expression was achieved using the mouse *Tie2* promoter. Potential transgenic founders were screened by PCR of genomic DNA from tail tips, using primers specific for murine *Tie2* promoter sequence (forward, 5’-GGGAAGTCGCAAA-GTTGTGAGTT-3’) and for human GTPCH (reverse, 5’-GAACCCATTGCTGCACCTGG-3’), producing a 150-bp PCR product (Supplemental Figure 1).

Supplemental Figure 1. Genomic DNA analysis of potential founders. The top panel shows PCR reactions performed on DNA isolated from tail biopsies. The expected 150-bp product (filled arrowhead) was identified in founder mouse 41, 42, 44, and 45; linearized pTie2-GTPCH I plasmid DNA was used as a positive control.



Supplemental Figure 2. Levels of GTPCH 1 in wild-type young and aged mice. Three samples per each group were used for the Western blot analysis, and representative images are shown. β-Actin were used as loading controls.