**Supplementary Material and Methods**

**Protein and RNA isolation**

Frozen liver tissues (10–20 mg) were lysed in the mammalian cell lysis buffer (Thermo Fisher Scientific, Waltham, MA, USA) containing protease and phosphatase inhibitor cocktail (Pierce, Thermo Fisher Scientific, Waltham, Massachusetts, USA). Total protein was extracted in a bullet blender (Next Advance, Inc, Troy, NY, USA) using Zirconium oxide beads (0.5 mm; Next Advance, Inc) in polypropylene microcentrifuge tubes as per the manufacturer’s instructions. Post homogenization, the samples were centrifuged at 13,000 rpm for 10 m at 4°C. The supernatant containing total cellular protein was collected and quantified with a bicinchoninic acid assay kit (Thermo Fisher Scientific, Waltham, Massachusetts, USA) using FLUOstar Omega microplate reader (BMG Labtech, Ortenberg, Germany).

RNA was isolated from tissue samples (5–10 mg) with a total RNA purification kit (Jena Biosciences, Jena, Germany) as per the manufacturer’s instructions. The tissues were homogenized in in RNAse/DNAse-free microcentrifuge tubes with RNA extraction buffer provided in the kit and using the bullet blender as described above. The RNA was quantified using a Nanodrop 8000 (Thermo Fisher Scientific, Waltham, Massachusetts, USA).

**Western blotting**

For western blotting, 20–40 μg of protein were separated on 8–12% SDS-PAGE and transferred to a PVDF membrane (Immobilon-FL; Merck, Rahway, NJ, USA). After transfer, the proteins were visualized with a reversible Ponceau-S stain (Sigma-Aldrich, St Louis, MO, USA). The membranes were then blocked at room temperature for 1 h by incubating them in Intercept Tris-buffered saline (LI-COR Biosciences, Inc, Lincoln, NE, USA). After blocking, the membranes were incubated overnight at 4°C with primary antibodies (Table 1) in blocking buffer. After washing three times in TBST, the membranes were incubated with the IR-Dye secondary antibodies (Supplementary Table 2) (LI-COR Biosciences, Bad Homburg, Germany) and scanned with an Odyssey CLx Imager (LI-COR Biosciences, Bad Homburg, Germany).

**cDNA synthesis and qRT-PCR**

cDNA was synthesized from purified RNA with a cDNA synthesis kit (Thermo Fisher Scientific) as per the manufacturer’s instructions. SYBR-based qPCR was performed in a Corbett Rotor-Gene 6000 real-time PCR cycler (Qiagen, Hilden, Germany) using a Sensi-FAST SYBR No-ROX Kit (Bioline, London, UK) with forward and reverse primers. Relative gene expression was normalized to an 18S rRNA housekeeping gene. All amplifications were performed independently two times, and each time in triplicate with a nontemplate control. The primer sequences are shown in (Supplementary Table 3). The relative gene expression was determined by the comparative CT (2−ΔΔCT) method as described by Schmittgen et al.1

**References**

1. Schmittge, T, Livak K. Analyzing real-time PCR data by the comparative CT method. Nat Protoc 2008;3;1101-1108. doi: 10.1038/nprot.2008.73.