**Supplementary Materials**

**Methods**

***Cell culture***

Human hepatoma cell lines HepG2 and HuH-7 were grown in Dulbecco's Modified Eagle Medium high-glucose medium (Sigma-Aldrich, St. Louis, MO, USA) supplemented with 10% fetal calf serum (PAN Biotech, Aidenbach, Germany). Cells were incubated at 37°C in a humified 5% CO2 atmosphere.

***Cell fractionation and real-time PCR***

Total RNA was extracted from the cultured cells. Nuclear and cytoplasmic fractions were extracted using the Ambion® PARISTM kit (Thermo Fisher, Waltham, MA, USA), according to the manufacturer’s instructions. Reverse transcription of total RNA (1 µg) was performed with ReverTraAce qPCR RT Master Mix with gDNA Remover (Toyobo, Osaka, Japan). A portion of the resultant cDNA was subjected to quantitative LightCycler® 480 Real-Time PCR with LightCycler® 480 SYBR-Green I Master (Roche Diagnostics, Basel, Switzerland). The primer sequences were: SNHG4 forward primer 5´-CAGGTGACAGTCTGCATGTG-3´ and SNHG4 reverse primer 5´-TGGGACCTACATGACAAGAAGA-3´.