## Supplementary figures and legends

## Supplementary Figure 1 A В WT MUT Relative BrdU positive cells ShR-sirt5 Relative cell viability BrdC 2 DAPI 2 Merge ŴТ MUT WT WT WT MUT ShR-sirt5 -ShR-sirt5 -C Relative migrated distance WT MUT ShR-sirt5 2-ŴТ WT MUT ShR-sirt5 -D WT MUT Relative migrated cells ShR-sirt5 3 2

**Supplementary Figure 1. CTBP1 succinylation promotes the viability, migration, invasion in HCC in Huh7 cells.** A-B. After SIRT5 knocking down along with transfection with CTBP1 WT or mutants, the CCK8 assay and BrdU staining were performed to detect cell viability. C-D. The wound healing assay and transwell assay were used to determine the migration and invasion of HCC cells.

WT

ShR-sirt5 -

WT

MUT

## **Supplementary Figure 2** С Α В Relative mRNA level of mat1a Relative mRNA level of sirt5 Relative level of SUCC-CTBP1 1.0 0.5 SHRAC wт МŪТ wт мūт ShR-sirt5 + ShR-sirt5 +

Supplementary Figure 2. Expression of key targets in tumor tissues from in vivo models. A. Validation of SIRT5 knockdown efficiency. B. Changes in CTBP1 succinylation levels in wild-type and mutant groups under SIRT5 knockdown conditions. C. Expression alterations of MAT1A in wild-type and mutant groups under SIRT5 knockdown conditions. \*\*P < 0.01; \*\*\*P < 0.001.