

Table S1. Primers used for qRT-PCR in this study.

| Targets | | Sequences (5'-3') |
|----------------|---------|----------------------------|
| MYH3 | Forward | ACACGGATCAGAGAGCTGGA |
| | Reverse | CCTTAACACGCCGCTCATAAC |
| myogenin | Forward | CCTTGCTCAGCTCCCTCA |
| | Reverse | TGGGAGTTGCATTCACTGG |
| HSPB8 | Forward | ATGAAGAGAAGCAGCAGGAAGGTG |
| | Reverse | TGGTTGTCTTGAGGAAGCTCGTTG |
| HSPB5 | Forward | CGGACTCTCAGAGATGCGTT |
| | Reverse | TGGGATCCGGTACTTCCTGT |
| HSP70 | Forward | AGACTGTTGAGTTCTTTGTGTTTGGA |
| | Reverse | GAAGGACCCGACACAAGCAT |
| CTGF | Forward | CACAGAGTGGAGCGCCTGTTC |
| | Reverse | GATGCACTTTTTGCCCTTCTTAATG |
| CYR61 | Forward | GATGACCTCCTCGGACTCGAT |
| | Reverse | GGTTCGGTGCCAAAGACAGG |
| ANKRD1 | Forward | CCTGCGAGGCTGATCTCAAT |
| | Reverse | GGTCTTCCCAGCACAGTTCTT |
| GAPDH | Forward | GGTGTGAACGGATTTGGCCGTATT |
| | Reverse | GGCCTTGACTGTGCCGTTGAATTT |

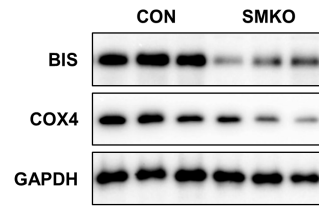


Figure S1. Expression of COX4 in the diaphragm of control and *Bis*-SMKO mice. Expression of BIS, COX4 and GAPDH in the diaphragm of control and *Bis*-SMKO mice was analyzed by western blotting. CON, control; SMKO, *Bis*-SMKO.

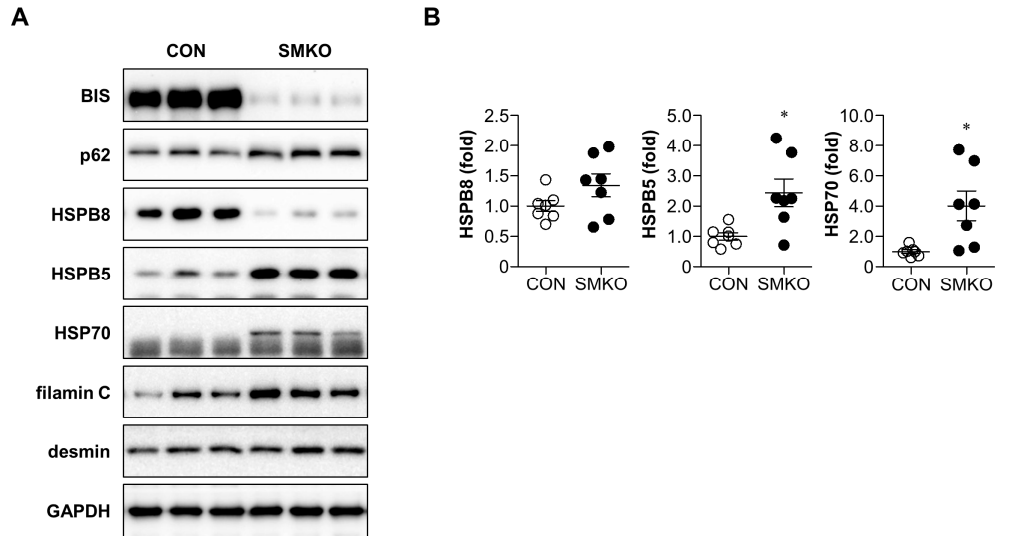


Figure S2. Protein and mRNA expression in the quadriceps of control and *Bis*-SMKO mice. **(A)** Expression of BIS, p62, HSPB8, HSPB5, HSP70, filamin C, desmin and GAPDH in the quadriceps of control and *Bis*-SMKO mice was analyzed by western blotting. **(B)** mRNA expression of HSPB8, HSPB5 and HSP70 in the quadriceps of control and *Bis*-SMKO mice was analyzed by qRT-PCR (N = 7 for both groups) as shown in Figure 2C. CON, control; SMKO, *Bis*-SMKO. Data are presented as mean \pm SEM. * $p < 0.05$ compared to control.

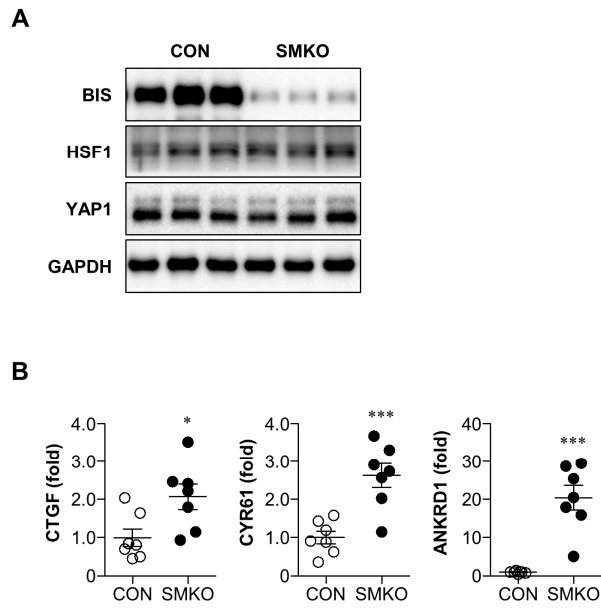


Figure S3. Enhanced YAP1 downstream signaling in the quadriceps of control and *Bis*-SMKO mice. **(A)** Expression of BIS, HSF1, YAP1 and GAPDH in the quadriceps of control and *Bis*-SMKO mice was accessed by western blotting. **(B)** mRNA expression of downstream targets of YAP1 including CTGF, CYR61 and ANKRD1 in the quadriceps of control and *Bis*-SMKO mice was analyzed by qRT-PCR (N = 7 for both groups) as shown in Figure 2C. CON, control; SMKO, *Bis*-SMKO. Data are presented as mean \pm SEM. * $p < 0.05$ and *** $p < 0.001$ compared to control.