

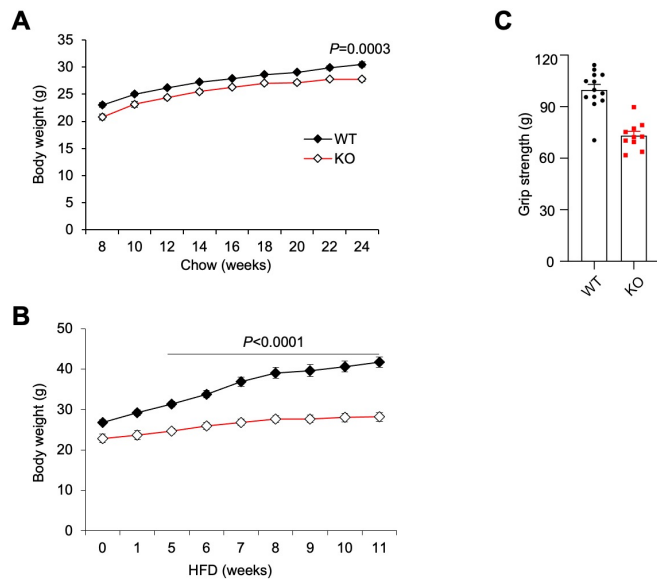


Figure S1. Growth curve and grip strength.

(A) Growth curve of WT (n=8) and TSK KO (n=10) mice fed standard rodent chow. **(B)** Growth curve of WT (n=8) and TSK KO (n=7) mice fed HFD. **(C)** Grip strength in a second cohort of WT (n=13) and TSK KO (n=10) mice. Data represent mean $\pm$ SEM and were analyzed by two-tailed unpaired Student's *t*-test.

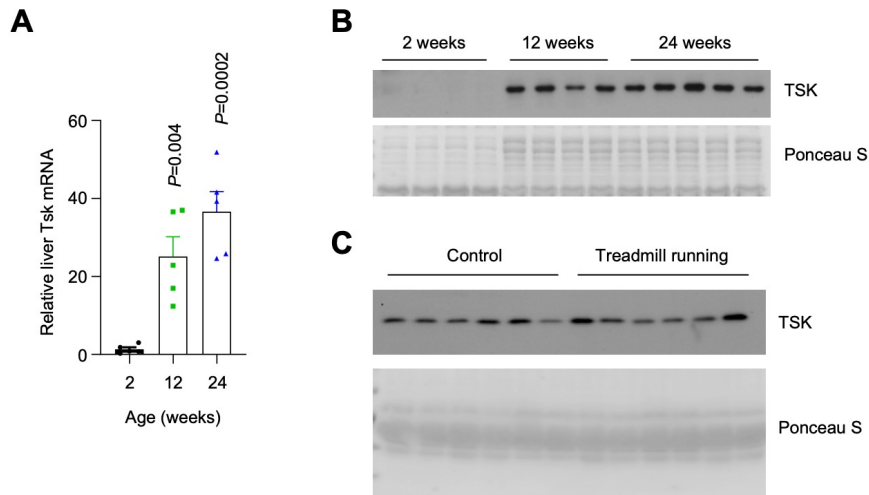


Figure S2. Postnatal regulation of hepatic TSK expression and its plasma levels.

(A) qPCR analysis of TSK mRNA expression in mouse liver at different ages. **(B)** Immunoblot of plasma TSK. **(C)** Immunoblot of plasma TSK in HFD-fed mice without or with daily 30-minute treadmill running for a total of 20 days. Data in **(A)** represent mean $\pm$ SEM; two-tailed unpaired Student's *t*-test.

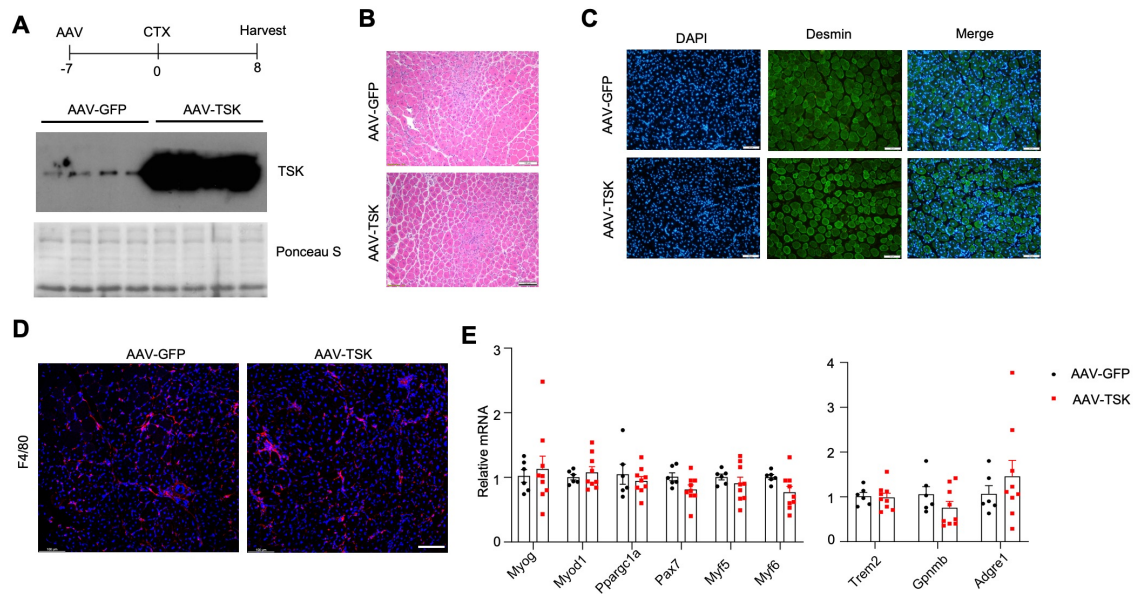


Figure S3. Effects of AAV-mediated TSK overexpression on muscle injury and repair.

(A) AAV-mediated TSK overexpression in mice followed by intramuscular cardiotoxin treatment. (B) H&E staining of TA muscle in mice transduced with AAV-GFP (n=6) or AAV-TSK (n=9). (C) Anti-Desmin immunofluorescence staining of TA muscle sections from treated mice. (D) F4/80 immunofluorescence staining. (E) qPCR analysis of muscle gene expression. Data in (E) represent mean $\pm$ SEM and were analyzed by two-tailed unpaired Student's *t*-test.