

mTORC1 Signaling is a Critical Regulator of Postnatal Tendon Development

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Supplementary Figures

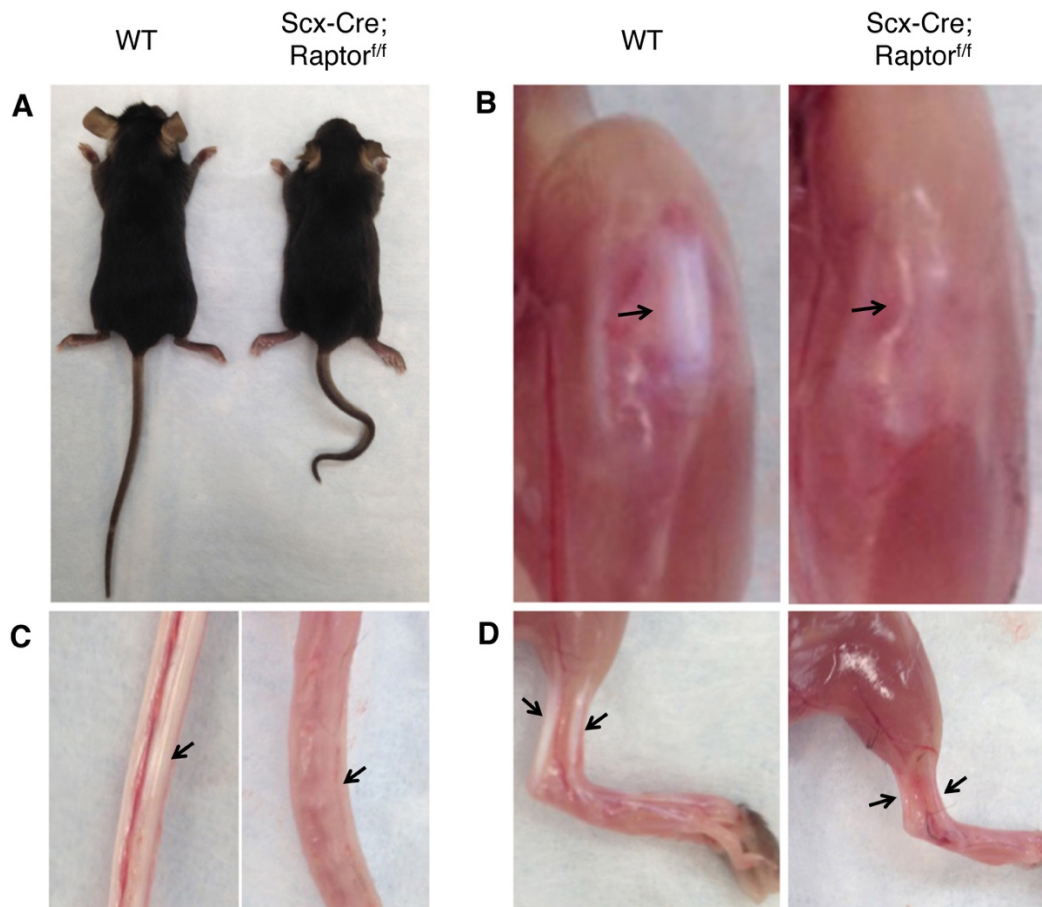


Figure S1. Loss of mTORC1 in tendons caused curly tails and translucent tendons.

(A) The straight tail of wildtype mice and the curly tail of *Scx-Cre; Raptor^{ff}* littermates at 1 month of age. (B-D) Visual examination of patellar (B), tail (C), and Achilles tendon (D) showed white color in wildtype and translucent color in *Scx-Cre; Raptor^{ff}* littermates. Arrows indicate tendons.

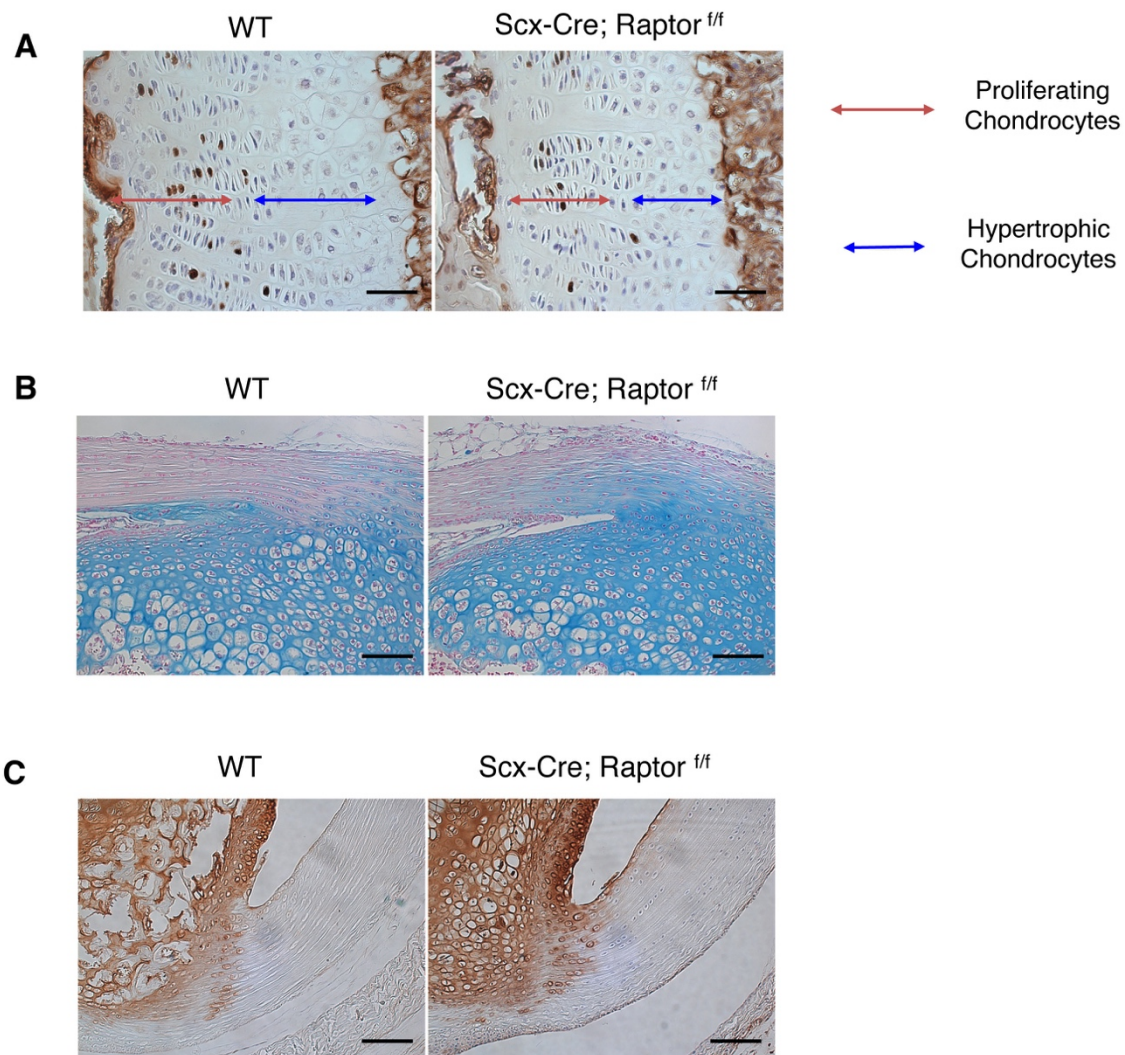


Figure S2. (A) BrdU staining (BrdU) of the tibia growth plate from wildtype and *Scx-Cre; Raptor^{ff}* littermates at postnatal day 30 (P30). (B) Alcian blue staining of the entheses of patellar tendon (integration site of patellar to tibia) from wildtype and *Scx-Cre; Raptor^{ff}* littermates at P30. (C) Col2a1 immunohistochemistry of the entheses of patellar tendon from wildtype and *Scx-Cre; Raptor^{ff}* littermates at P30. Scale bars indicate 100 μm.

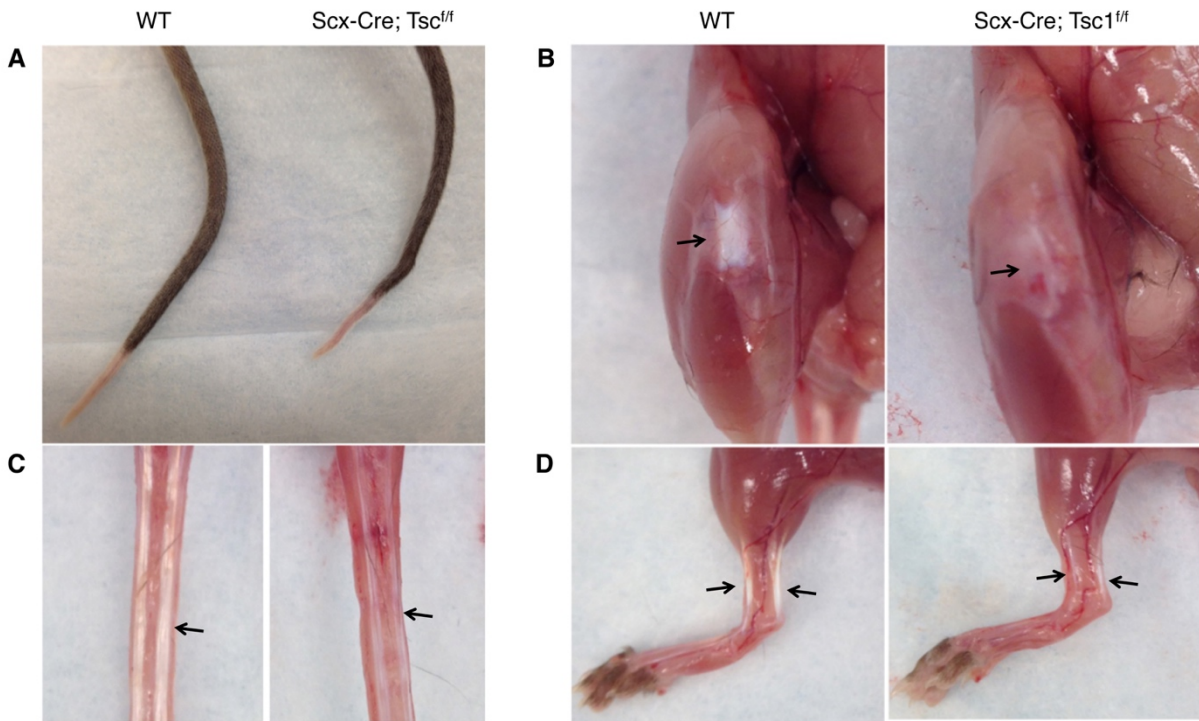


Figure S3. Gain of mTORC1 in tendon caused kinked tails and pale-white tendons.

(A) The straight tail of wildtype mice and kinks at the distal end of the tail of *Scx-Cre; Tsc1^{ff}* littermates at 1 month of age. (B-D) Visual examination of patellar (B), tail (C), and Achilles tendons (D) in wildtype and *Scx-Cre; Tsc1^{ff}* littermates. Arrows indicate tendons.

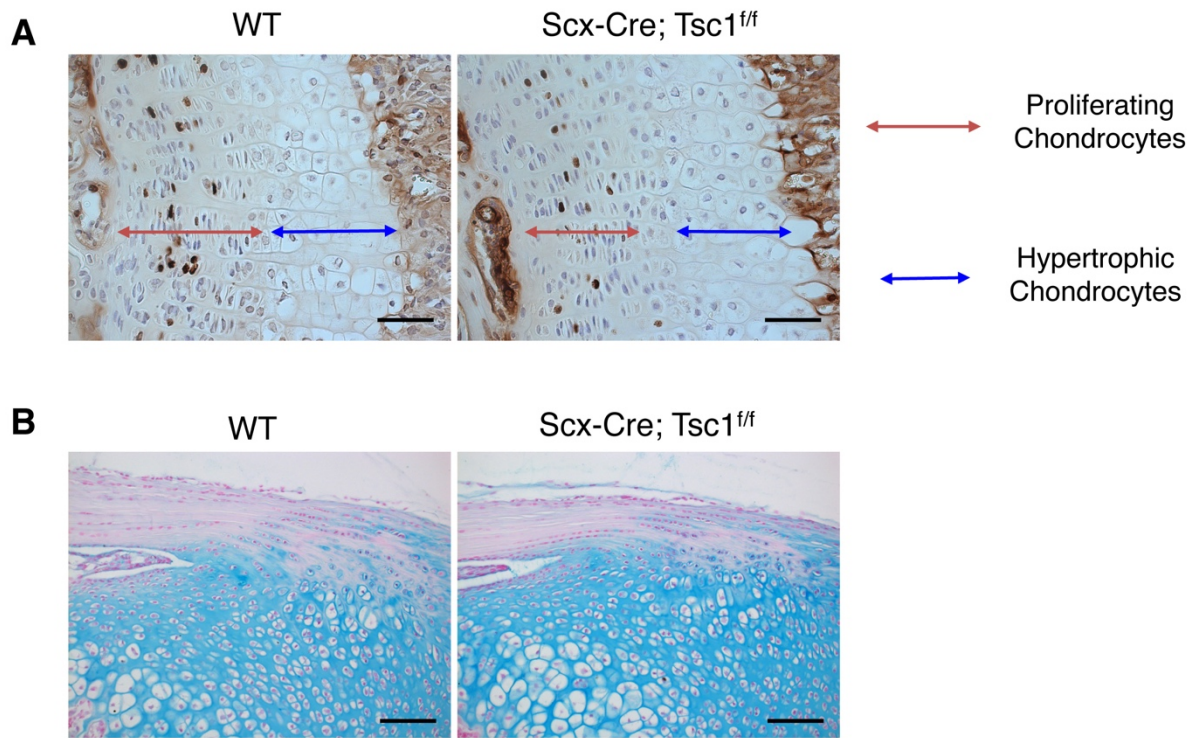


Figure S4. (A) BrdU staining (BrdU) of the tibia growth plate from wildtype and *Scx-Cre; Tsc1^{ff}* littermates at P30. (B) Alcian blue staining of the enthesis of patellar tendon from wildtype and *Scx-Cre; Tsc1^{ff}* littermates at P30. Scale bars indicate 100 μ m.

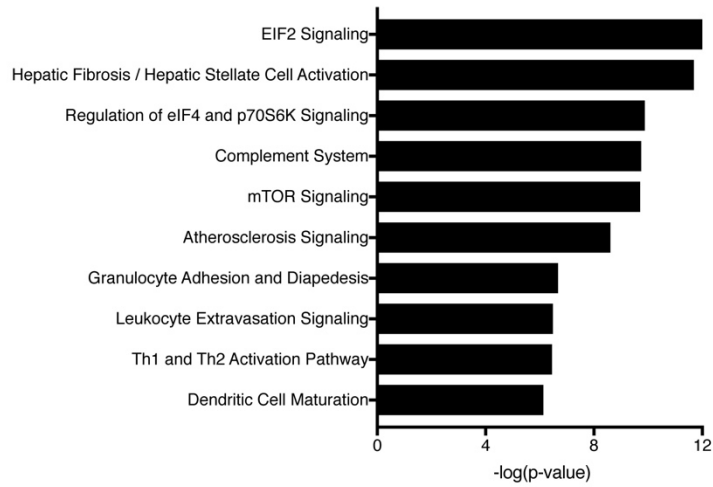
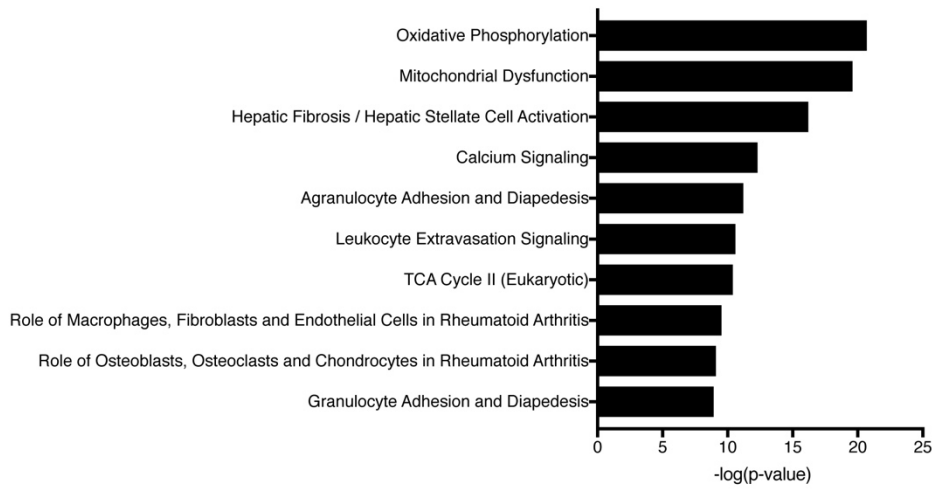
A**B**

Figure S5. Ingenuity system (IPA) core analysis revealed differential effects of loss- or gain-of mTORC1 signaling. Results of top 10 affected canonical pathways in (A) *Scx-Cre; Raptor^{ff}* and (B) *Scx-Cre; Tsc1^{ff}* mice. X-axis: $-\log(P\text{-value})$. Y-axis: pathways identified by IPA.