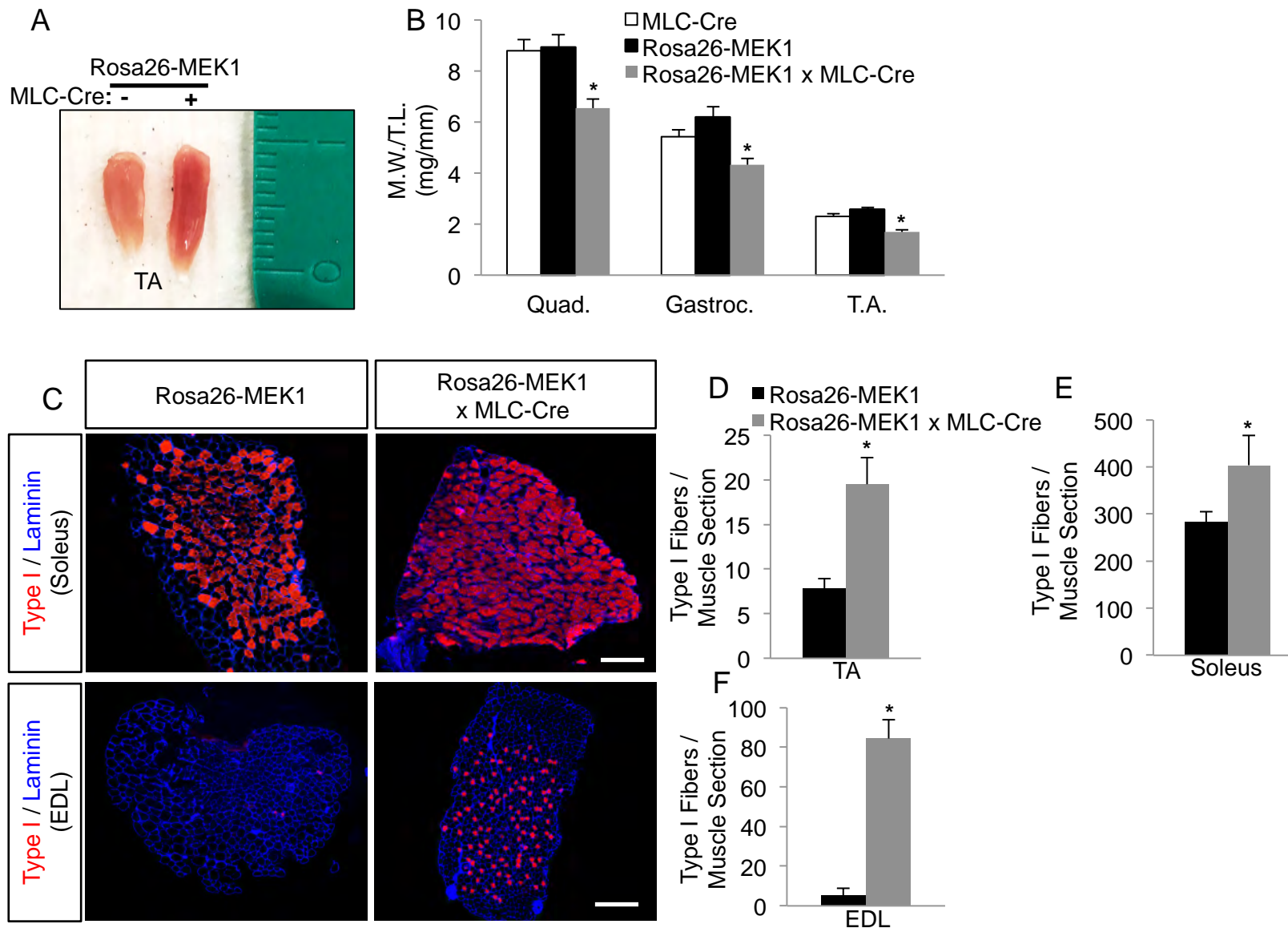


**Supplementary Figure 1. Activation of ERK1/2 in skeletal muscle.**

Western blot analysis for total MEK1/2 and total ERK1/2 using muscle lysate from (A) the soleus muscle, (B) the quadriceps muscle, (C) the tibialis anterior muscle and (D) in the gastrocnemius muscle (n = 3). GAPDH was used a loading control.



**Supplementary Figure 2. MEK1-ERK1/2 signaling increases the number of type I fibers.**

(A) Representative image of the tibialis anterior (TA) muscles from 2 month-old *Rosa26-MEK1* and *Rosa26-MEK1 x MLC-Cre* animals. (B) Muscle-weight normalized to tibia-length (M.W./T.L.) at 2 months of age from mice of the indicated genotypes. Muscles analyzed are shown.  $n = 5-10$  mice per group. \* $P < 0.05$  versus controls. (C) Representative immunohistochemical stained images from the soleus and extensor digitorum longus (EDL) muscles showing MHY7 (red) positive type I fibers and laminin expression (blue) used to identify all myofibers present in sections from mice of the indicated genotypes. Scale bars: 500  $\mu\text{m}$ . (D-F) Quantitation of type I fibers in sections from the TA muscle (D), the soleus muscle (E) and the EDL muscle (F) of *Rosa26-MEK1* and *Rosa26-MEK1 x MLC-Cre* animals at 2 months of age.  $n = 4-6$  mice per group. \* $P < 0.05$ .