**Supplemental Data**

**Supplemental Methods**

*Immunohistochemistry for myosin heavy chain type IIa and IIb.* Transverse sections (10 μm) were cut from the mid-belly of the gastrocnemius muscle on a cryostat at −20°C. Sections were air dried for 10 minutes, fixed in cold acetone for 1 minute, and washed in PBS for 5 minutes. Samples were quenched in 0.3% H₂O₂-methanol solution for 20 minutes and rinsed in PBS for 5 minutes three times. They were blocked in 10% normal goat serum (Vectastain ABC kit, Vector Laboratories, Burlingame, CA) in PBS for 1 h at room temperature and then incubated overnight at 4°C with primary antibodies. (SC-71 for type IIa; BF-F3 for type IIb; Iowa Hybridoma Bank). Sections were washed three times for 5 minutes in PBS. Secondary antibodies (Vector Laboratories) were applied to the sections for 1 h at 37 °C and sections were washed again three times for 5 minutes in PBS. Avidin-biotin complex system (Vector Laboratories) was used to detect the biotinylated secondary antibody by incubating ABC solution at room temperature for 30 min. Sections were washed three times for 5 minutes in PBS and visualized by incubating in DAB solution for 6 minutes (Vectastain DAB kit, Vector Laboratories, Burlingame, CA). The sections were rinsed by dH₂O three times, dried, and mounted by cover glasses with a mounting media. Digital pictures were taken from each sample at a 200x magnification with a Motic spot camera (Motic, China). Fibers that stained positive for type IIa and type IIb were counted by an individual blinded to the treatment and were expressed as a percentage of the total fiber distribution.
Figure Legends

Figure S 1. Time course of body weight in wild-type, mild and severely cachectic $Apc^{Min/+}$ mice during the 20 week study. Body weights were measured every two weeks beginning at 8 weeks of age. Values are means ± SE. *Signifies different from Wt and mildly cachectic $Apc^{Min/+}$ mice. Wt = wild type mice.

Figure S 2. Representative image of the lateral (red) and intermediate (white) portions of the gastrocnemius muscle. A) Whole gastrocnemius image showing approximate area used for red and white analysis. Succinate dehydrogenase activity across the B) lateral (red) portion and C) intermediate (white) portion of the gastrocnemius muscle.

Figure S 3. Myosin expression measured in whole gastrocnemius muscle of wild type, mild and severely cachectic $Apc^{Min/+}$ mice. MHC IIA and IIB staining data are displayed as percentage of positively stained muscle fibers within the whole gastrocnemius muscle. Values are means ± SE. Wt = wild-type mice. ME = main effect.

Figure S 4. Myosin heavy chain IIA and IIB gene expression A) MHC IIA and B) MHC IIB mRNA expression in red gastroc, white gastroc and soleus muscle from wild type, mild and severely cachectic $Apc^{Min/+}$ mice. Values are means ± SE. W Gas = white gastrocnemius; R Gast= red gastrocnemius; Wt = wild-type mice. Gastroc = gastrocnemius. ME: Main effect.
Figure S 1.

![Graph showing body weight over weeks with three different groups: Wt, Mild, and Severe. The graph compares body weight in grams against weeks.]
Figure S 2.

A) Intermediate (white) and Lateral (red). 

B) Approximate Dissection line

C)
Figure S 3.
Figure S 4.

A)

B)