**SUPPLEMENTARY DATA**

**Supplementary Figure S1**

A. Transverse sections of gastrocnemius muscles from oil- and tamoxifen-treated Akt-mdx mice injected with Evans blue were examined for Evans blue fluorescence or processed for the immunohistochemical demonstration of IgG. No significant difference in the proportion of labeled fibers can be detected (n=9 oil; n=7 tam). B. Serum creatine kinase levels in oil- and tamoxifen-treated Akt-mdx. No significant difference can be detected (n=9 per group).

**Supplementary Figure S2**

Representative records of the responses of control and mdx muscles to a series of 20 eccentric contractions. Upper trace (black): first contraction; lower trace (grey): last contraction. The eccentric phase is clearly recognizable by the large increase in force on the top of the tension plateau. Isometric force deficit was measured after tension plateau had been reached, just before the beginning of the lengthening phase.

**Supplementary Figure S3**

Relationship between the degree of muscle hypertrophy, expressed by the ratio of muscle weight to body weight, and the force drop after eccentric contractions, expressed as percentage of initial force, as determined in 13 different muscles from Akt-mdx mice after tamoxifen treatment. No significant correlation is apparent. The average values for control muscles from oil-treated mice is also indicated.

**Supplementary Figure S4**

A. Transverse sections of gastrocnemius muscles from oil- and tamoxifen-treated Akt-mdx mice injected with Evans blue after eccentric contractions were examined for Evans blue fluorescence B. No significant difference in the proportion of labeled fibers can be detected between the two groups (n=10 per group).

**Supplementary Figure S5**

Transverse sections of gastrocnemius muscles from normal C57, mdx, oil- and tamoxifen-treated Akt-mdx mice were stained with an antibody specific for the N-terminal part of dystrophin. No staining for dystrophin is detected in mdx, oil- and tamoxifen-treated Akt-mdx mice except for occasional revertant fibers.

**Supplementary Figure S6**

Utrophin mRNA levels in gastrocnemius muscles from oil- and tamoxifen-treated Akt-mdx mice detected by quantitative RT-PCR (n=3 per group). No significant difference is seen.