

**Supplemental Table 1. Oligonucleotides used in this study**

<b>QUANTITATIVE</b>	<b>RT-PCR</b>	
BDNF	FWD	5'-CCATGACCTGAAAGGAAACAG-3'
	REV	5'-CACAATTAAGCAGCATGCAA-3'
Pax7	FWD	5'-GACGACGAGGAAGGAGACAA-3'
	REV	5'-CGGGTTCTGATTCCACATCT-3'
embMyHC	FWD	5'-GCAGATTCAGAAACTGGAGAC-3'
	REV	5'-CCTTAACACGCCGCTCATAAC-3'
MyoD	FWD	5'-TGGCATGATGGATTACAGCG -3'
	REV	5'-CCACTATGCTGGACAGGCAGT-3'
Myogenin	FWD	5'-ATCGCGCTCCTCCTGGTTGA-3'
	REV	5'-CTGGGGACCCCTGAGCATTG-3'
18S Ribosomal	FWD	5'-CGCCGCTAGAGGTGAAATC-3'
	REV	5'-CCAGTCGGCATCGTTTATGG-3'
P21	FWD	5'-CTCTTCTGCTGTGGGTCAGG -3'
	REV	5'-AAGTTTGGAGACTGGGAGAGG -3'
neoMyHC	FWD	5'-TCGCTGGCTTTGAGATCTTT-3'
	REV	5'-ACGAACATGTGGTGGTTGAA-3'
GAPDH	FWD	5'-GGGTGTGAACCACGAGAAAT-3'
	REV	5'-CCTTCCACAATGCCAAAGTT-3'

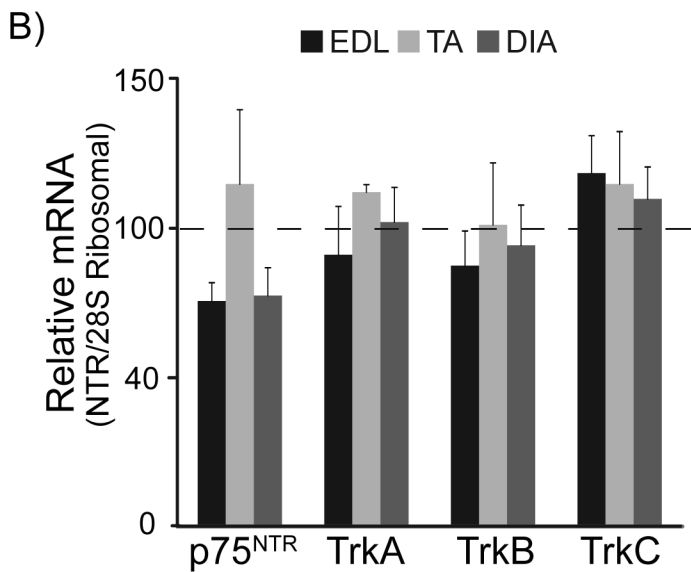
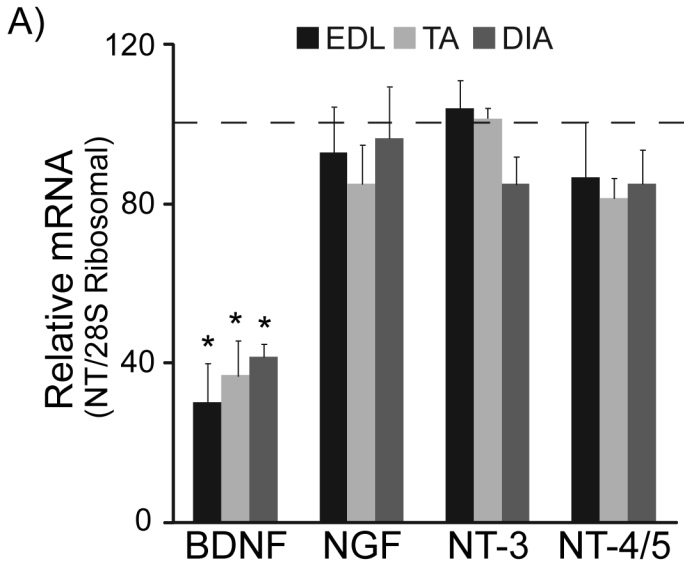
<b>ENDPOINT</b>	<b>RT-PCR</b>	
MyoD	FWD	3'-GCCCGCGCTCCAAGTCTGAT-5'
	REV	3'-CCTACGGTGGTGCGCCCTCTCGC-5'
Myogenin	FWD	3'-GGGCCCCTGGAAGAAAAG-5'
	REV	3'-AGGAGGCGCTGTGGGAGT-5'
MSTN	FWD	3'-GACGATTATCACGCTACCACGGAAAC-5'
	REV	3'-CATCGCAGTCAAGCCCAAAGTCTCTC-5'
28S	FWD	3'-TTGTTGCCATGGTAATCCTGCTCAGTACG-5'
	REV	3'-TCTGACTTAGAGGCGTTCAGTCATAATCCC-5'

***Supplemental Figure 1. Expression levels of neurotrophins and their receptors are not altered in the absence of muscle-BDNF.*** A) Relative levels of BDNF, NGF, NT-3 and NT-4/5 transcript in EDL, TA, DIA muscles from adult BDNFMKO mice. B) Transcript levels of neurotrophin receptors p75<sup>NTR</sup>, TrkA, TrkB and TrkC in EDL, TA, DIA muscles from adult BDNF<sup>MKO</sup> mice. All values are relative to control (---) mRNA levels (n=6). Error bars represent SE.

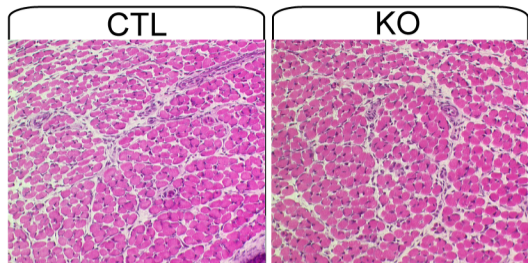
***Supplemental Figure 2. Overall muscle histology is not affected in the BDNF<sup>-/-</sup> mouse at postnatal day 1.*** A) Representative haematoxylin and eosin stained cross-sections from control (CTL) and BDNF<sup>-/-</sup> (KO) hindlimb sections at postnatal day 1 (n=3) B) Quantification of the average cross-sectional area and C) fiber number from P1 cross-sections (n=3). Error bars represent SE.

***Supplemental Figure 3. Expression levels of genes involved in regulation of myogenic differentiation are not changed in the BDNF<sup>MKO</sup> mouse.*** Relative levels of MyoD, Myogenin, and Myostatin (MSTN) transcript in EDL, TA, DIA muscles from 6-8 week old BDNF<sup>MKO</sup>. All values are relative to control mRNA levels standardized to 28S ribosomal RNA (n=6) Error bars represent SE.

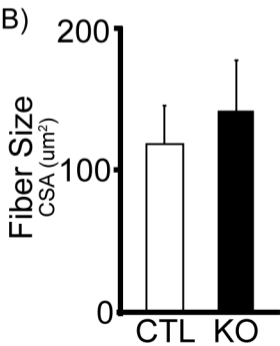
***Supplemental Figure 4. Decreased fusion of BDNF<sup>MKO</sup>-derived myotubes.*** Quantification of the number of nuclei per myotube in BDNFMKO (MKO) and control (CTL) cultures following 5 days in differentiation promoting medium (n=4).



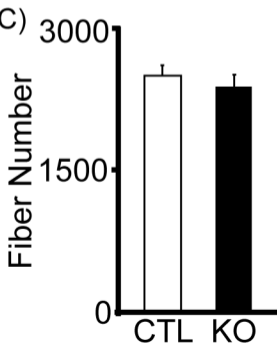
A)



B)



C)



# Relative mRNA

(MRF/28S Ribosomal)

