

Table S1 Primers used for RT-qPCR

Primer	sequence
β -actin	GGCCAGGTCATCACTATTG GAGGTCTTTACGGATGTCAAC
MyoD	ATGAGGCCTTCGAGACGCTC CAGAGCCTGCAGACCTTCGA
Myogenin	CCTACAGGCCTTGCTCAGCT CGAACTCCAGTGCATTGCCC
MyHC1	AGCATTCTCCTGCTGTTTCCT GGCTGAGCCTTGGATTCTCA
MyHC2a	ATTCTCAGGCTTCAGGATTTGGTG CTTGCGGAACTTGGATAGATTTGTG
MyHC2x	CATCCCTAAGGCAGGCTCT AGCCTCGATTGCTCCTTTT
MyHC2b	CTGCAGGACTTGGTGGACAAACTA TTGGCCAGGTTGACATTGGA
Sema3A	GGCCAGGTCATCACTATTG GAGGTCTTTACGGATGTCAAC
Netrin-1	GCCTTCCTCACCGACCTCAA TTCTTGCCGAGCGACAGAGT
Neuropilin 1	ACCCTGAGAGAGCCACACAC CCTGGTCGTCGTCACACTCA
Neuropilin 2	CTCTCGGGCCTCATTGCTGA GGCTTGAGGGTTCCGAGGAA
Neogenin	TCCCACTCCCATGATGCCAC TGGTGTTTGGGCAGGGAGTT
DCC	TTTGTCCGTTTGAGCTGGCG AAGCTCGCTCCCTGTTGTCA
Sirt1	GCAGACGTGGTAATGTCCAAACAG ACATCTTGGCAGTATTTGTGGTGAA
PGC-1 α	CCGTAAATCTGCGGGATGATG CAGTTTCGTTGACCTGCGTAA
TFAM	CATTTATCTATCTGAAAGCTTCC CTCTTCCCAAGACTTCATTTT
BDNF	AGTTGGAAGCCTGAATGAATGGA CTGATGCTCAGGAACCCAGGA
Irisin	TGCCCACATGAAGAGGACCA CCACGCGAGGCTGAAAAGAT
IL-15	CTCACCAGCAAGGACCATGAAG CCAGTTGCAGAGTTGGACGAAG

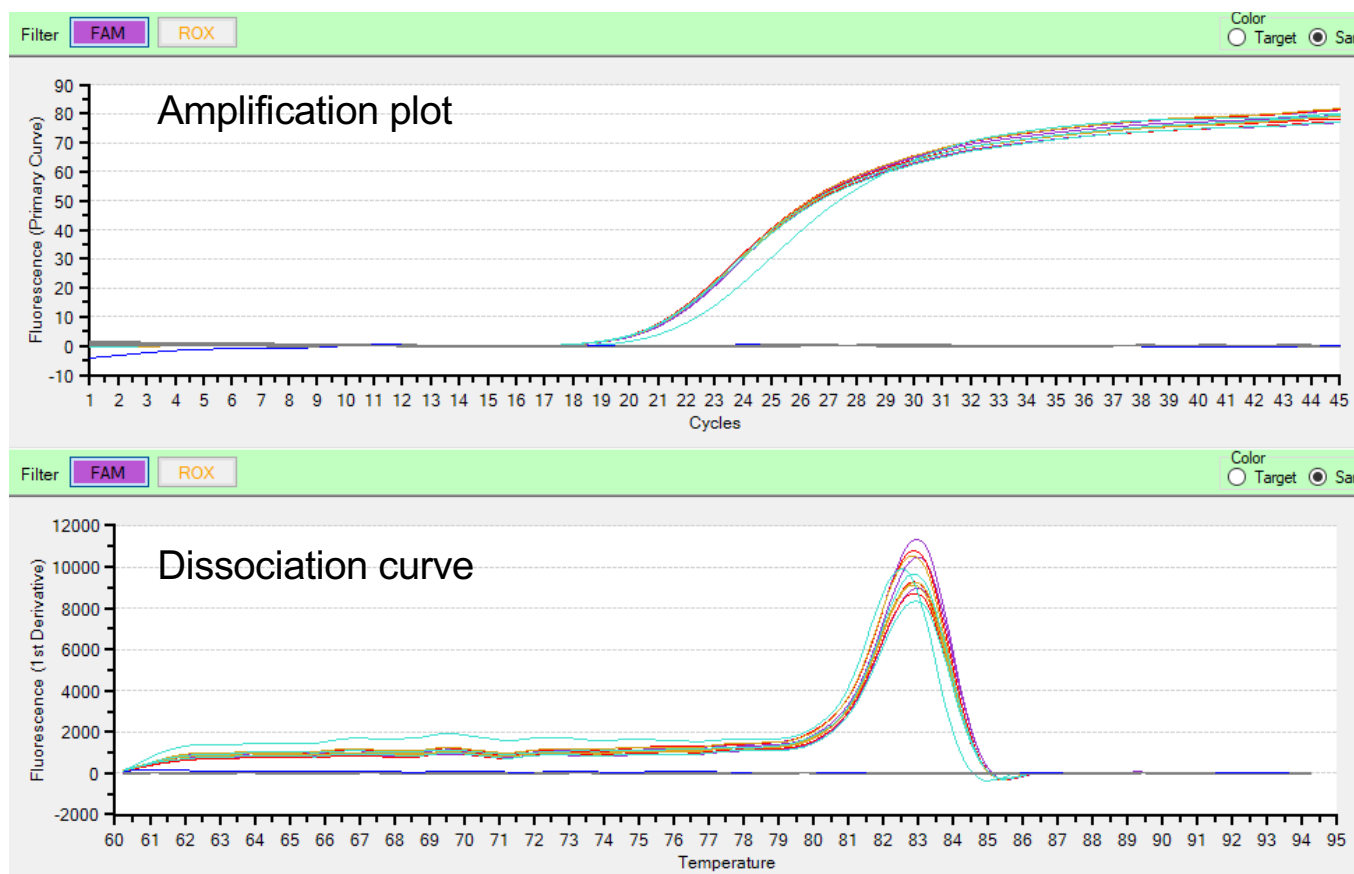
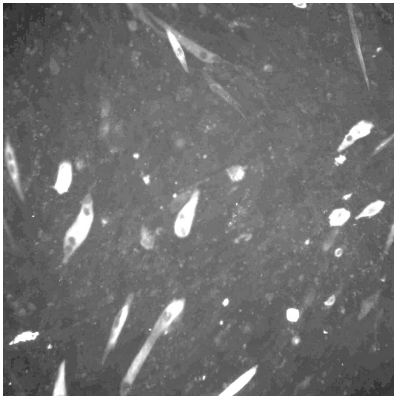
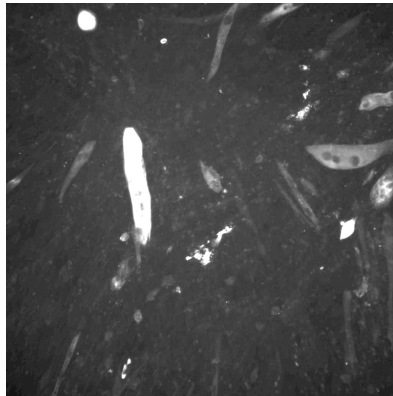


Figure. S1 Specificity check of PCR reaction. The specificity of the PCR reaction was confirmed by amplification plot and dissociation curve data for each gene.

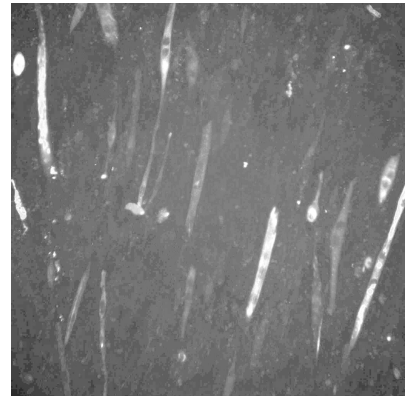
0 mM



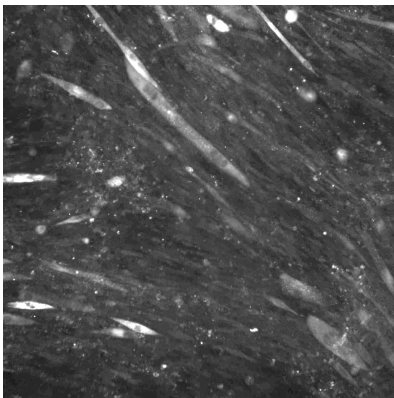
1 mM



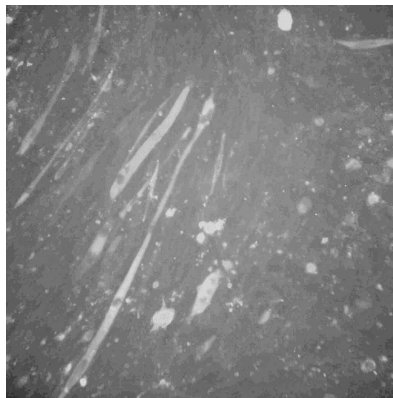
3 mM



10 mM



30 mM



50 mM

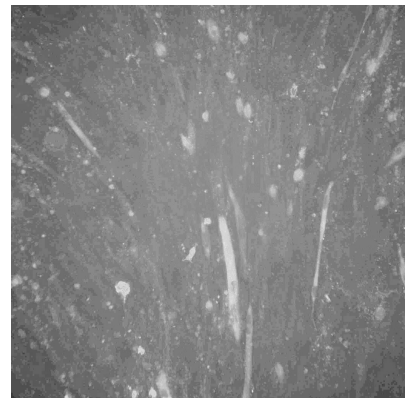


Figure. S2 C2C12 cells induced to differentiate in the presence of various concentrations of carnosine (0 ~ 50 mM). All stained cells are shown in grayscale, stained with slow and fast myosin skeletal heavy chain antibodies in C2C12 cells after differentiation. Same color photographs (0 mM and 50 mM) are also shown in Figure 2E and F.