

**Table S3.** Primer sequences of housekeeping and target genes related with intestinal tight junction and muscle antioxidant capacity

Genes	Sequences (5' - 3')	Size (bp)
<i>Occludin</i>	F: ATGCTTTCTCAGCCAGCGTA R: AAGGTTCCATAGCCTCGGTC	176
<i>Claudin-1</i>	F: CAAAACCTTCGCCTTCCAG R: TCCCCACATTGAGATGATTAC	293
<i>ZO-1</i>	F: GAGGATGGTCACACCGTGGT R: GGAGGATGCTGTTGTCTCGG	169
<i>Mucin-2</i>	F: CGGCTCTCCAGTCTACTCGTCTAA R: TGGTTGTCGGGCAAGTTGATGA	204
<i>SOD1</i>	F: GAGACCTGGGCAATGTGACTG R: GCCAAACGACTTCCAGCAT	190
<i>GPX1</i>	F: CAGGCGGCGGGTTTCG R: TGAGGGCAGTGGCATCGT	129
<i>Hmox1</i>	F: TGGTCTCTTGACTGGCTTCCTTGT R: GCTTCTGGCTGGCTCCATTCTC	245
<i>NFE2L2</i>	F: TTCTAAGAGGTCTGCTGGCATCAC R: CTGCGAGCTACACCACAGTTCAT	106
<i>MyHC I</i>	F: CCGAGAAGGATGAGGAGATGGAAC R: ATGCGATTGGCGTGGCTGAG	175
<i>MyHC IIa</i>	F: ACCTACAGCACCGTCTGGATGA R: GCTCACTCTCAACCTCTCCTTCC	114
<i>MyHC IIx</i>	F: CCTGGAGCGGATGAAGAAGAACCT R: CTCGTGTTTGCGTAGACCCTTGAC	199
<i>PGC1a</i>	F: ACAGACTCAGACCAGTGCTACCT R: GGATGACCGAAGTGCTTGTTTCAG	128
<i>Nrf2</i>	F: ACCTGTGCCTGCTGGATTGAGA R: GGTTTCGTTACCACTGAGCCATAGC	162
<i>UCP1</i>	F: TTGTACCTTCCTTCTGGTGACTGG R: CTGCCGTGACTCCATCAACTCTT	138
<i>HSL</i>	F: TCGTGAAAGGACAGGACAGTGA R: AGGTAAGGCTCGTGGGATTTGGA	172
<i>ChREBP</i>	F: GGCACCCTTGGCAAACCTTTATAG R: AACTCCGTTCTTCCTGGCTTCTG	136
<i>PPAR<math>\gamma</math></i>	F: CCAACGGCATCCAGAACAAGGAG R: AACTCCGTTCTTCCTGGCTTCTG	193
<i><math>\beta</math>-actin</i>	F: TACGCCAACACGGTGCTGTC R: GTACTCCTGCTTGCTGATCCACAT	207

F, forward primer; R, Reverse primer; ZO-1, zonula occludens-1; SOD1, superoxide dismutase; GPX1, glutathione peroxidase 1; Hmox1, heme oxygenase 1; NFE2L2, nuclear factor erythroid 2-like 2; MyHC1, myosin heavy chain 1; MyHC IIa, myosin heavy chain IIa; MyHC IIx myosin heavy chain IIx; PGC-1 $\alpha$ , peroxisome proliferator-activated receptor  $\gamma$  coactivator-1 $\alpha$ ; Nrf2, nuclear respiratory factor; UCP1, uncoupling protein-1; HSL, hormone-sensitive lipase; ChREBP, carbohydrate response element binding protein; PPAR $\gamma$ , peroxisome proliferator-activated receptor  $\gamma$ .