**Supplementary Information**

*Journal of Physiology and Biochemistry*

**Effect of Exercise Training on Autophagic Process in White Adipose Tissue of High Fat Diet-Induced Obese Mice**

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**Supplemental Table 1****.** The information of target-gene primers

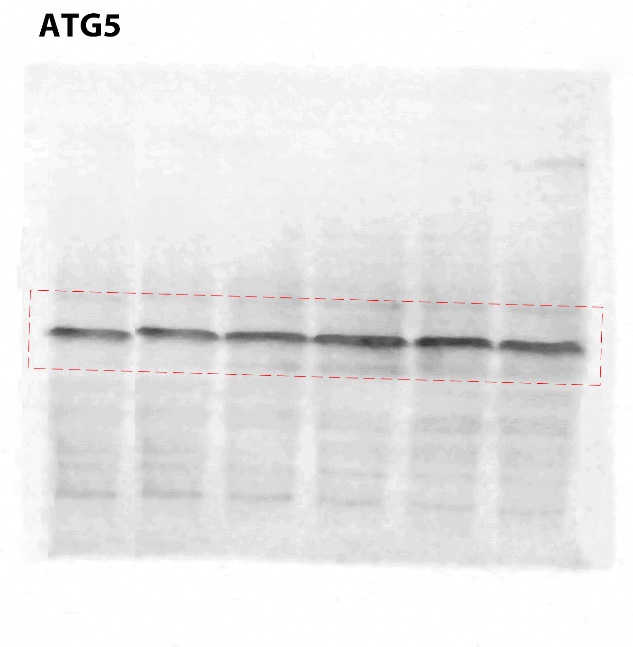
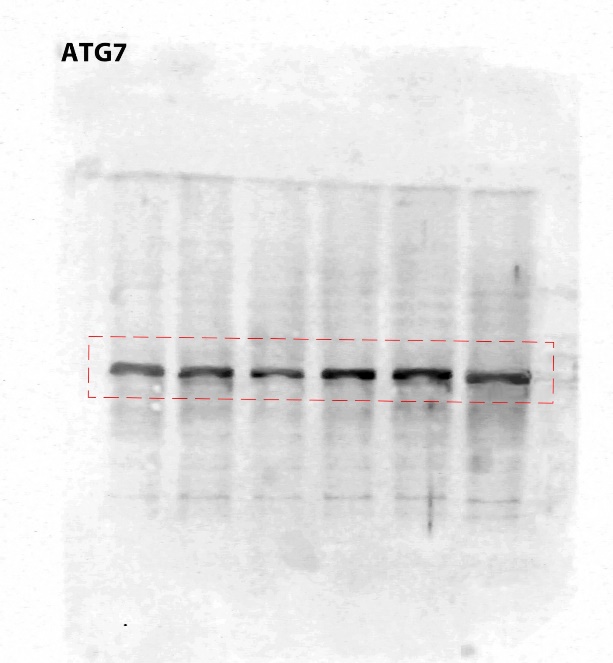
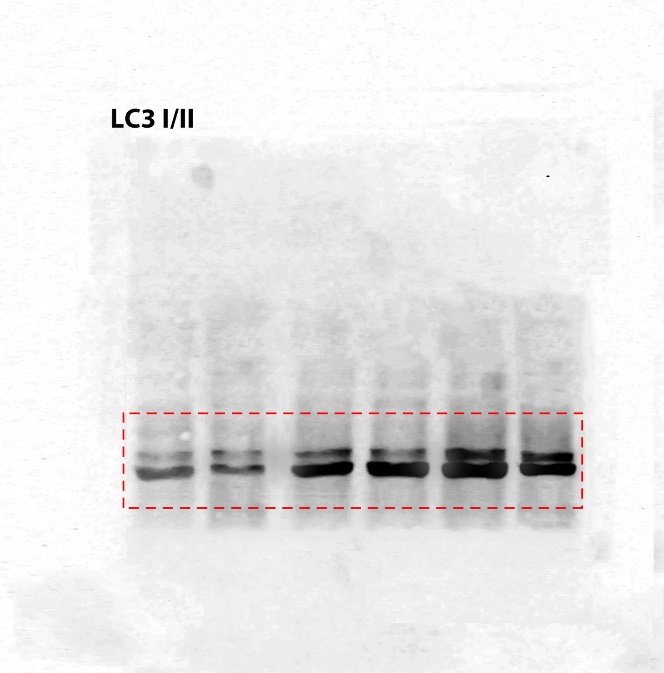
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Ref.** | **product length** | **Reverse primer  5′→3′** | **Forward primer 5′→3′** | **Accession** | **Name** |
| [1] | 150 | GGAGGGATGGTGTATGGTAAG  Tm: 57.23; GC%: 52.38 | AGACCTGCTTACTTGCTGTG  Tm: 57.82; GC%: 50 | NM\_007798.3 | **CTSB** |
| [2] | 184 | TATCCACGAACCCTGTGTCA  Tm: 58.37; GC%: 50 | GTGGACTGTTCTCACGCTCA  Tm: 59.97; GC%: 55 | NM\_009984.4 | **CTSL** |
| [3] | 120 | GTCAAATAGCTGACTCTTGGCAA  Tm: 59.25; GC%: 43.48 | TGTGCTTCGAGATGTGTGGTT  Tm: 60.20; GC%: 47.62 | NM\_053069.6 | **ATG5** |
| [3] | 101 | CACCTGACTTTATGGCTTCCC  Tm: 58.63; GC%: 52.38 | CCTGCACAACACCAACACAC  Tm: 60.18; GC%: 55.00 | NM\_001253717.2 | **ATG7** |
| [4] | 141 | CCTGCGAGGCATAAACCATGT  Tm: 61.02; GC5: 52.38 | GCTTGCAGCTCAATGCTAAC  Tm: 58.09; GC%: 50.00 | NM\_026160.5 | **LC3b (Map1lc3b)** |
| [4] | 150 | CAGCGGCTATGAGAGAAGCTAT-  Tm: 47.62; GC%: 50.00 | TGTGGTGGGAACTCGCTATAA  Tm: 58.82; GC%; 59.77 | [NM\_011018.3](https://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nucleotide&id=595582148) | **SQSTM1**  **(p62)** |
| [5] | 70 | TGTCATCATCCAGCGAACAC  Tm: 58.27; GC%: 50 | AAGGTGCAACCTTTTAATGTGAC  Tm: 58.06; Gc%: 39 | [NM\_010685.4](https://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nucleotide&id=594191038) | **LAMP2** |
|  | 138 | TGCTGGAAGGTGGACAGTGAGG  Tm: 64.17; GC%: 59.09 | CATTGCTGACAGGATGCAGAAGG  Tm: 62.04; GC%: 52.17 | NM\_007393.5 | **ꞵ-Actin** |

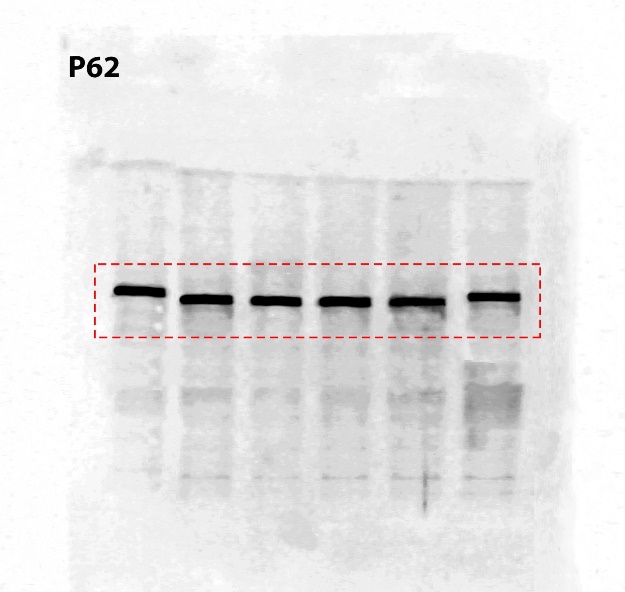
**CTSB**, cathepsin B; **CTSL**, cathepsin L; **ATG5**, autophagy-related genes5; **ATG7**, autophagy-related genes7; **LC3b**, microtubule-associated protein 1-light chain 3; **SQSTM**, sequestosome 1; **LAMP2**, lysosome-associated membrane protein 2; **Ref.,** Reference

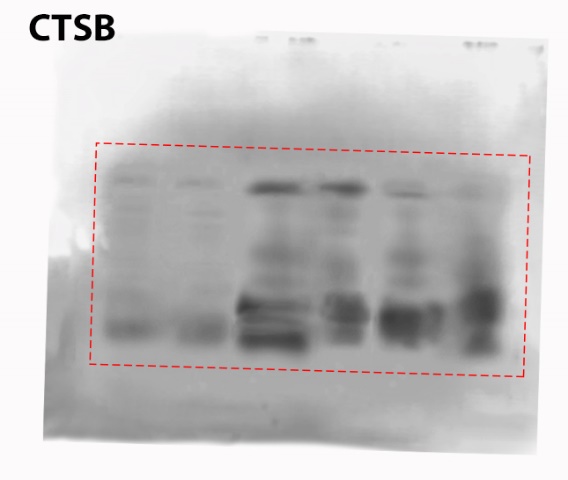
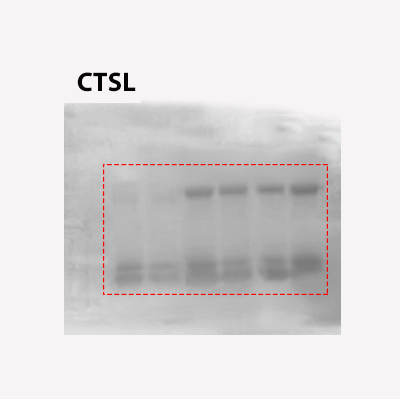
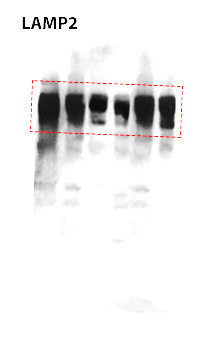
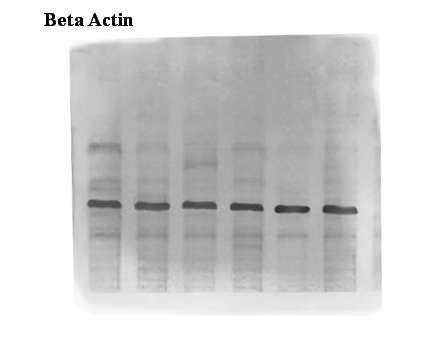
**Supplemental Table 2.** The information of the antibodies used in the western blot

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **dilution** | **Inc.** | | **Cat. No.** | | **Name** |
| 1:1000 | | Cell Signaling Technology, Danvers, Massachusetts, USA | | Cathepsin B (D1C7Y), 31718 | **CTSB** |
| 1:500 | | Santa Cruz Biotechnology  Dallas, Texas , USA | | cathepsin L Antibody (B-8): sc-393770 | **CTSL** |
| 1:1000 | | Cell Signaling Technology, Danvers, Massachusetts, USA | | Atg5 (D5F5U), 12994 | **ATG5** |
| 1:1000 | | Cell Signaling Technology, Danvers, Massachusetts, USA | | Atg7 Antibody , 2631 | **ATG7** |
| 1:1000 | | Cell Signaling Technology, Danvers, Massachusetts, USA | | LC3A/B Antibody, 4108 | **LC3A/B** |
| 1:1000 | | Cell Signaling Technology, Danvers, Massachusetts, USA | | SQSTM1/p62 Antibody #5114 | **SQSTM1**  **(p62)** |
| 1:500 | | Santa Cruz Biotechnology  Dallas, Texas, USA | | LAMP2 Antibody (M3/84): sc-19991 | **LAMP2** |
| 1:1000 | | Cell Signaling Technology, Danvers, Massachusetts, USA | | β-Actin (8H10D10) Mouse mAb #3700 | **ꞵ-Actin** |
| 1:1000 | | Novus Biologicals  Centennial, Colorado | | Goat anti-Rabbit IgG Secondary Antibody HRP (Horseradish Peroxidase) HAF-008 | **Secondary Antibody** |

**CTSB**, cathepsin B; **CTSL**, cathepsin L; **ATG5**, autophagy-related genes5; **ATG7**, autophagy-related genes7; **LC3A/B**, microtubule-associated protein 1-light chain 3; **SQSTM**, sequestosome 1; **LAMP2**, lysosome-associated membrane protein 2; **Cat. No.,** Catalogue number**; Inc.,** Incorporated

**Supplemental Figure.** Western-Blot image (without crop) of measured protein





1. Moon, H.Y., et al., Running-induced systemic cathepsin B secretion is associated with memory function. Cell metabolism, 2016. 24(2): p. 332-340.

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5. Sakane, H. and K. Akasaki, The major lysosomal membrane proteins LAMP-1 and LAMP-2 participate in differentiation of C2C12 myoblasts. Biological and Pharmaceutical Bulletin, 2018. 41(8): p. 1186-1193.