

Supplemental Material and Methods

1. Effect of high fat high sucrose (HFHS) diet on histidyl dipeptides in skeletal muscle. To assess the effect of HFHS on histidyl dipeptides levels within the skeletal muscle, we fed low-fat diet (LFD TD.08485) and HFHS diets (TD.88137) to WTC57/Bl6 mice (age 8 weeks) for 14 weeks. Gastrocnemius muscle isolated from the LFD and HFHS fed mice were analyzed for the histidyl dipeptides carnosine and anserine by LC/MS as described previously[1] .

1. Hoetker D, Chung W, Zhang D, Zhao J, Schmidtke VK, Riggs DW, Derave W, Bhatnagar A, Bishop DJ, Baba SP: **Exercise alters and beta-alanine combined with exercise augments histidyl dipeptide levels and scavenges lipid peroxidation products in human skeletal muscle.** *J Appl Physiol (1985)* 2018. 2018, 1767-1778, 125, doi.org/10.1152/applphysiol.00007. 2018