**Figure S1.** The scrambled RNA was used as vehicle control to confirm that the observed effects were specifically due to BNIP3 silencing and not due to off-target effects of siRNA transfection. (A) Western blotting results of representative sample showing BNIP3 change. Each sample was processed in triplicate. (B) Statistics for the grey value analysis of western blotting bands for BNIP3 (n = 4 per group). The mean (standard deviations) for group BNIP3-siR was 0.24 (0.06), and the mean (standard deviations) for group Ctrl-siR was 0.65 (0.18) \*\*: *P* < 0.01.

**Figure S2.** Immunofluorescence assay was used to localize the expression of LC3B (red) and BNIP3 (green), with nuclei marked with DAPI (blue). Scale bar = 50 μm.

**Figure S3.** Representative transmission electron microscope images in the rectus femoris for each group (n = 6 per group), scale bar (under a 20000× magnification field) = 1 μm, scale bar (under a 50000× magnification field) = 200 nm.