

Supplementary Information

Mitigating sarcoplasmic reticulum stress limits disuse- induced muscle loss in hindlimb unloaded mice

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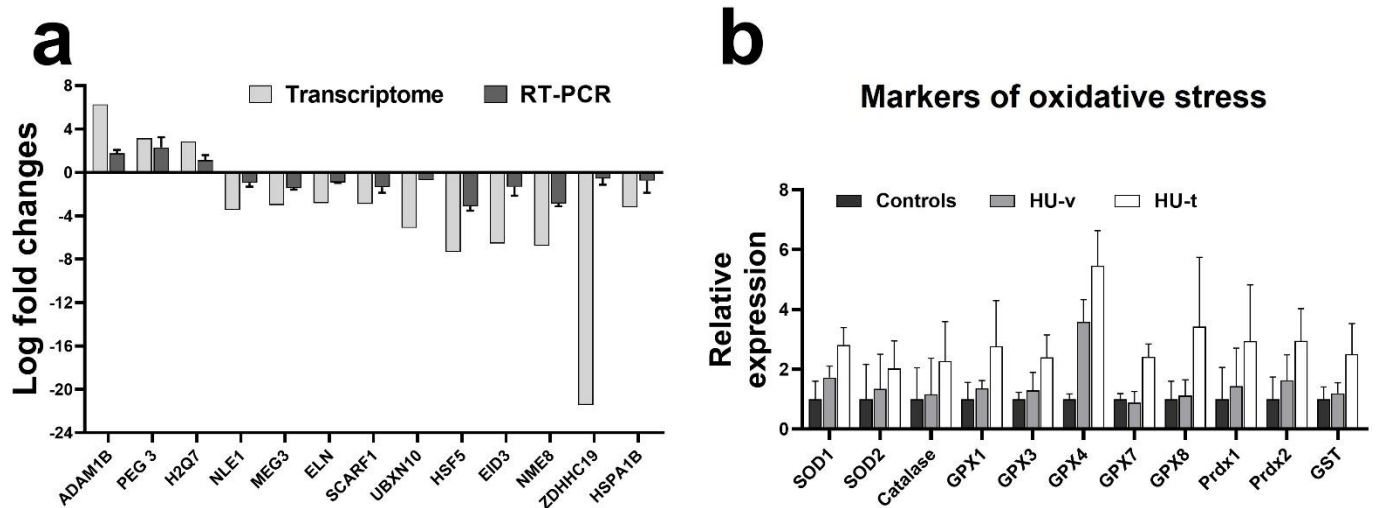
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Figures legends for supplementary files
 Supplementary figure 1.



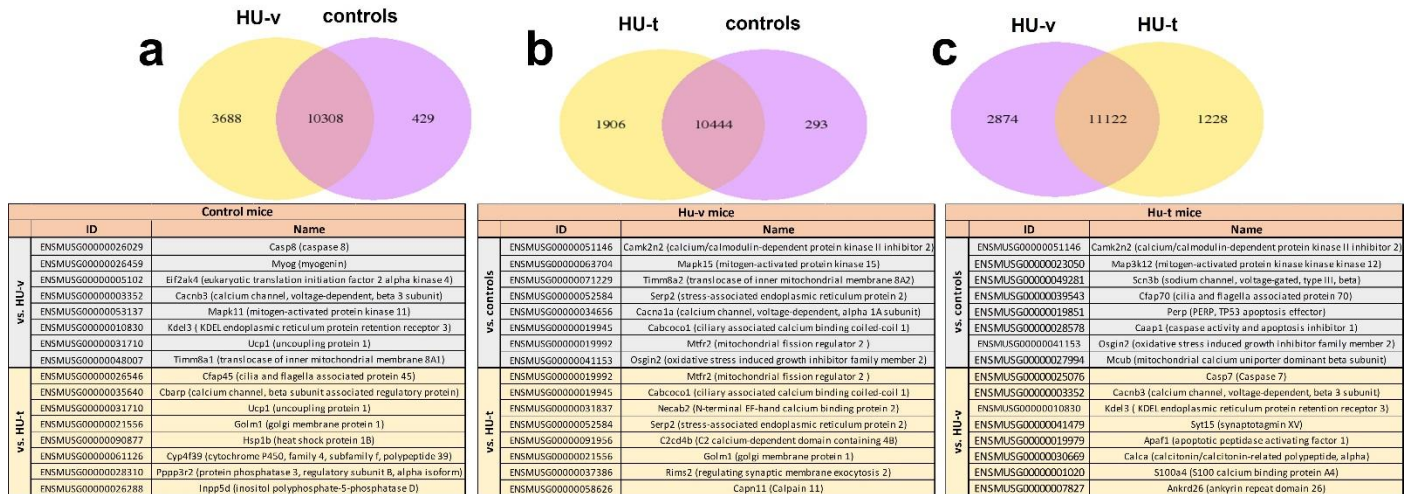
Supplementary figure 1.

Title: Validation of transcriptome data.

Caption: Transcriptome and mRNA expression of randomly selected genes (a) and the transcriptome expressions of the markers of oxidative stress (b) in ground-based controls and the hindlimb-unloaded mice treated with vehicle (HU-v) or 4-PBA (HU-t). Data is presented as mean \pm SD, (n = 3 / group).

(ADAM1B; ADAM Metallopeptidase Domain 1B, PEG 3; paternally expressed 3, H2Q7; histocompatibility 2, Q region locus 7, NLE1; notchless protein homolog 1, MEG3; maternally expressed 3, ELN; elastin, SCARF1; Scavenger Receptor Class F Member 1, UBXN10; UBX domain protein 19, HSF5; heat shock transcription factor 5, EID3; EP300 Interacting Inhibitor Of Differentiation 3, NME8; NME family member 8, ZDHHC19; Zinc Finger DHHC-Type Palmitoyltransferase 19, HSPA1B; heat shock protein family A member 1B, SOD1; superoxide dismutase 1, SOD2; superoxide dismutase 2, GPX1; glutathione peroxidase 1, GPX3; glutathione peroxidase 3, GPX4; glutathione peroxidase 4, GPX7, glutathione peroxidase 7, GPX8; glutathione peroxidase 8, Prdx1; peroxiredoxin 1, Prdx2; peroxiredoxin 2, GST; glutathione s-transferase).

Supplementary figure 2.

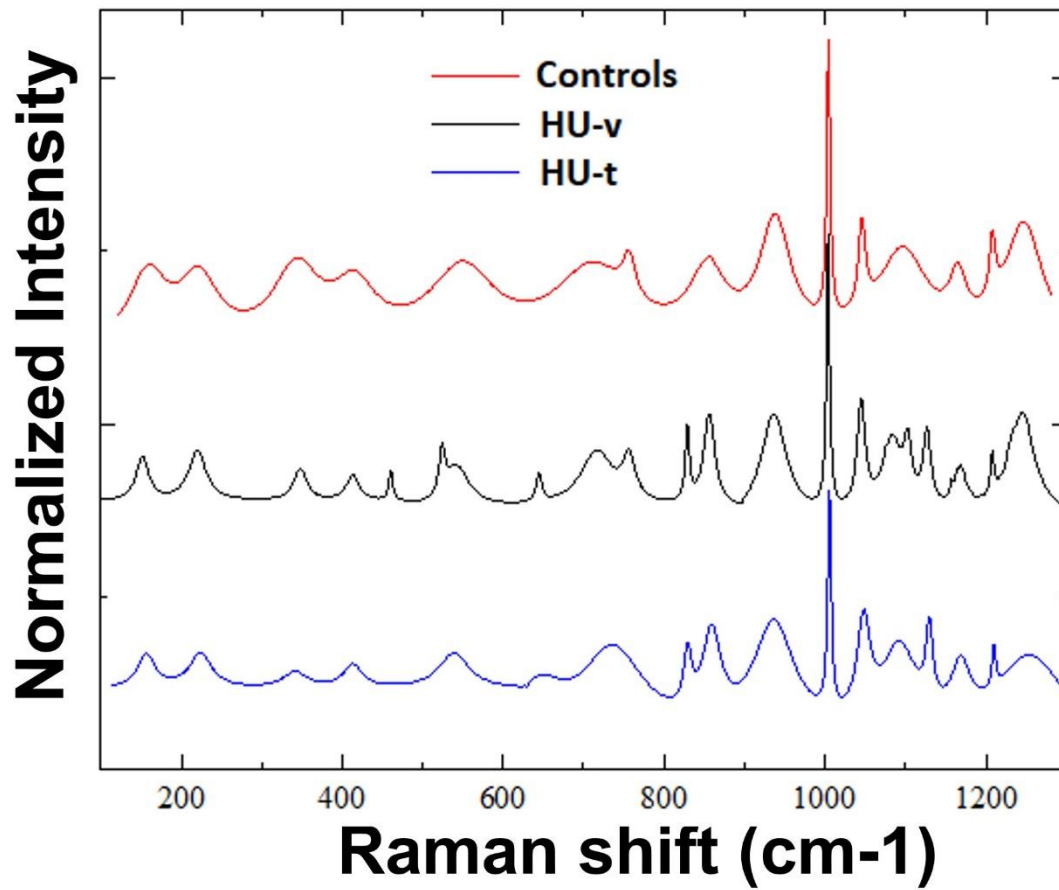


Supplementary figure 2.

Title: Uniquely expressed genes.

Caption: The number of uniquely expressed genes in the hindlimb-unloaded mice treated with vehicle (HU-v) vs. ground-based controls (a), hindlimb-unloaded mice treated with 4-PBA (HU-t) vs. ground-based controls (b), and HU-v vs. HU-t mice (c). The corresponding tables indicate selected genes that were uniquely expressed in each comparison (n = 8-11 / group). The full list of uniquely expressed genes is available in supplementary table 3.

Supplementary figure 3.



Title: Raman spectroscopy

Caption: Experimentally obtained Raman spectra from the gastrocnemius muscles of the control (red line), HU-v (black line), and HU-t (blue line) mice. (HU-v; hindlimb-unloaded mice treated with vehicle, HU-t; hindlimb-unloaded mice treated with 4-PBA).

Fig 1. Full western blot image.

