## **Supplementary Figures**

## Interleukin-6 increases the expression and activity of insulin-degrading enzyme

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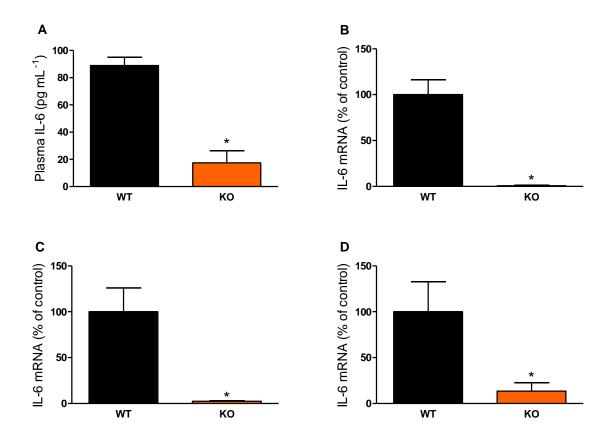
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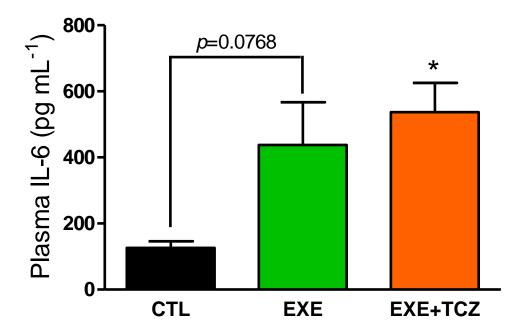
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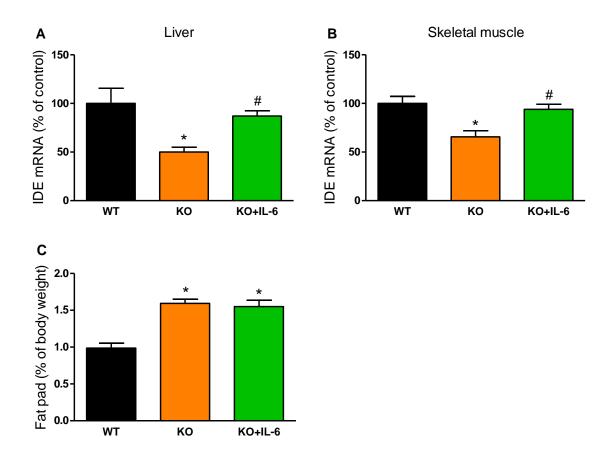
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**Supplementary figure 1. Plasma concentration and mRNA expression of IL-6.** Plasma IL-6 concentration (A) and IL-6 mRNA expression in the liver (B), gastrocnamius skeletal muscle (C) and perigonadal adipose tissue (D). WT, wild type mice; and KO, IL-6 knockout mice. Data are presented as the mean  $\pm$  S.E.M. n=4. \*  $p \le 0.05 \ vs$  WT.



Supplementary figure 2. Plasma IL-6 concentrations in mice after acute exercise. IL-6 concentration in the plasma of mice. CTL, control mice; EXE, exercised mice; and EXE+TCZ, exercised mice treated with 2 mg kg<sup>-1</sup> Tocilizumab 1-h before the acute exercise protocol (a single bout of exercise on a treadmill inclined at 25° for 3-h at 60-70% of VO<sub>2</sub> max). Data are presented as the mean  $\pm$  S.E.M. n=3. \* p  $\leq$  0.05 vs CTL.



Supplementary figure 3. IDE mRNA expression and fat pad of KO mice after IL-6 treatment. IDE mRNA expression in the liver (A) and gastrocnemius skeletal muscle (B) and percent of body weight of perigonadal fat pad (C) of mice. WT, wild type; KO, IL-6 knockout and KO+IL-6, IL-6 KO mice treated with 200 ng per day IL-6 during 3 days before the experiments. Data are presented as the mean  $\pm$  S.E.M. n=5-6. \* p < 0.05 vs WT, # p < 0.05 vs KO.