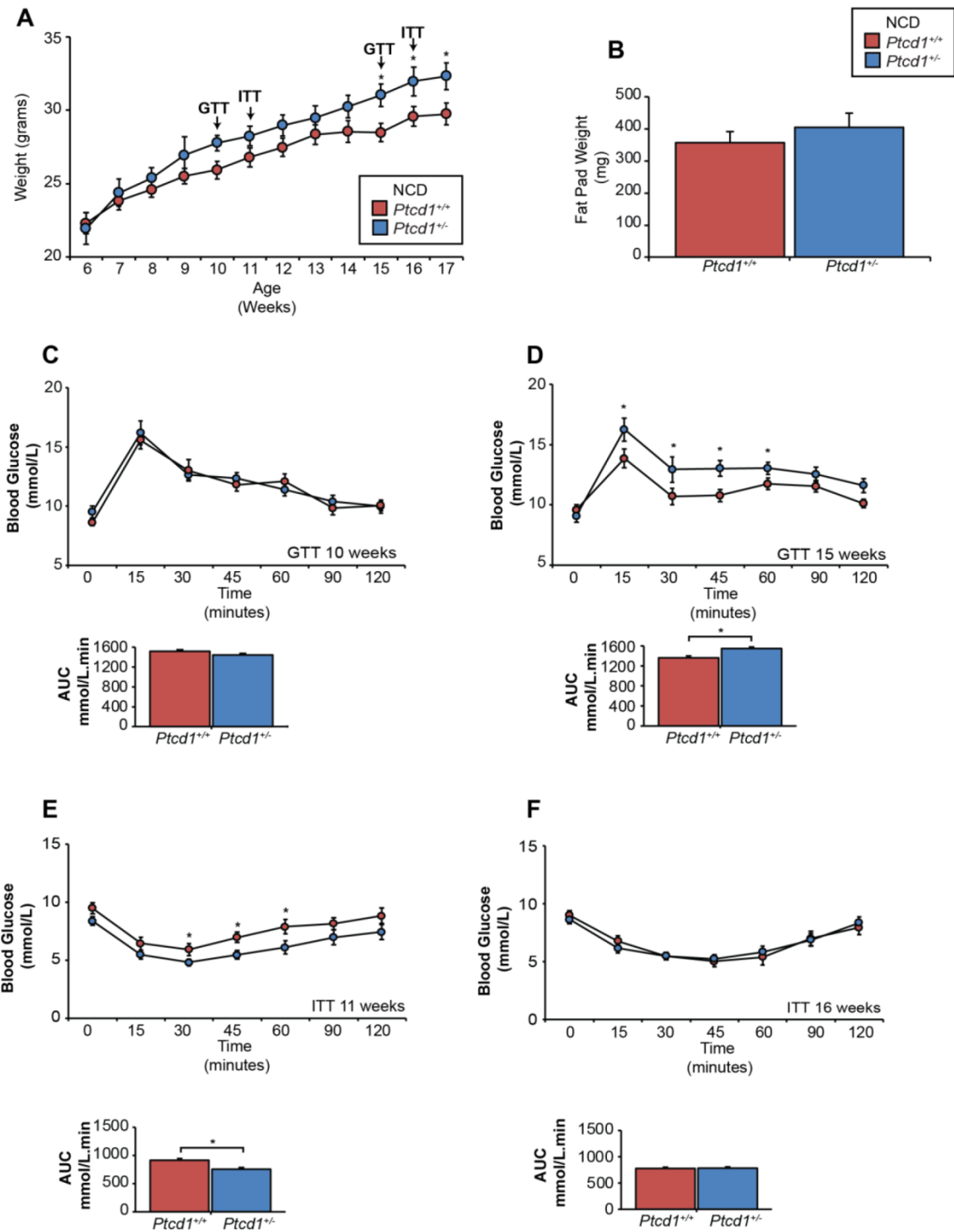
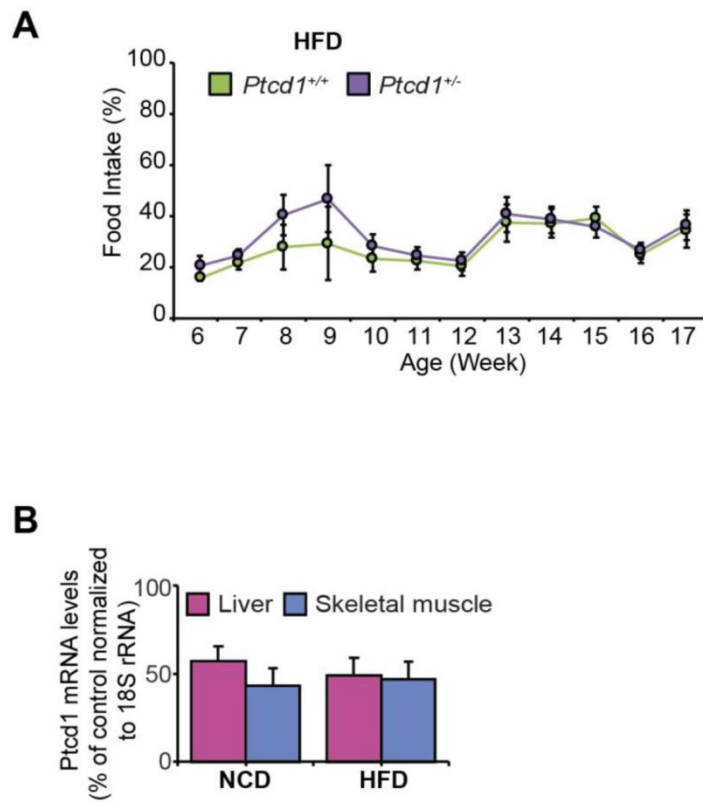


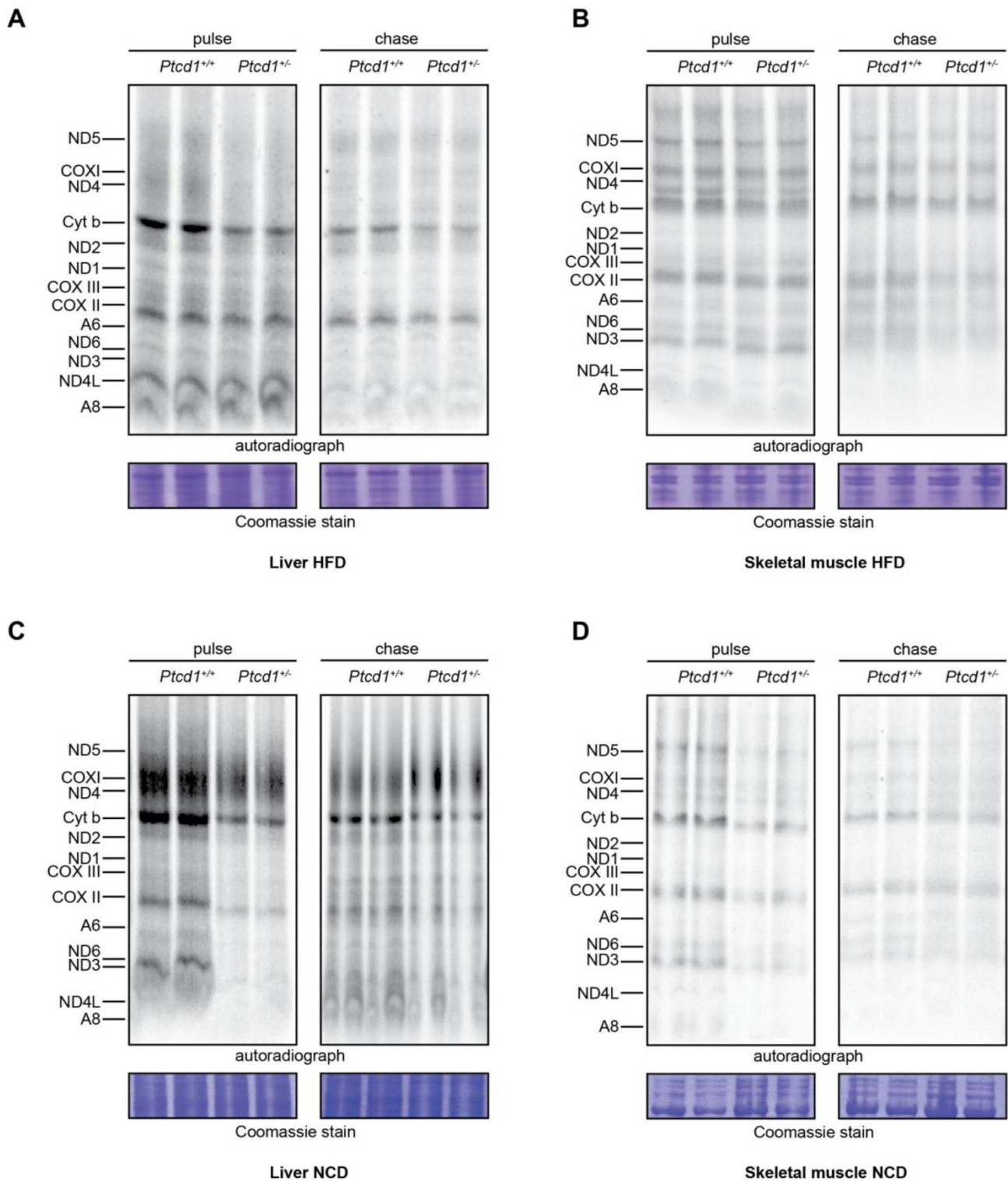
SUPPLEMENTARY FIGURES



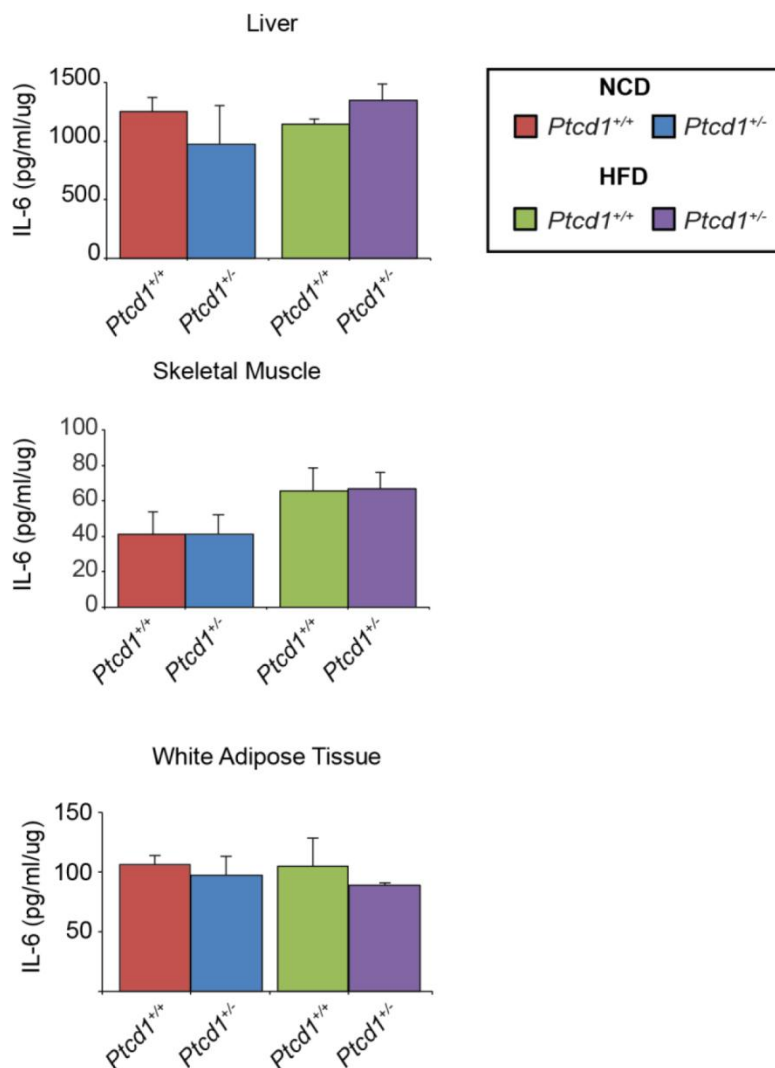
Supplementary Figure 1. Related to figure 1. The effects of normal chow diet on mice with reduced mitochondrial protein synthesis. (A) Weight progression in grams from 6 to 17 weeks of age between *Ptc1^{+/+}* (n=12) and *Ptc1^{+/-}* (n=12) mice fed a normal chow diet. (B) Weight of intra-abdominal epididymal fat pads in grams for NCD 17-week old *Ptc1^{+/+}* (n=12) and *Ptc1^{+/-}* (n=12) mice. Glucose tolerance in 10- (C) and 15-week-old (D) *Ptc1^{+/+}* (n=12) and *Ptc1^{+/-}* (n=12) mice. Insulin sensitivity in 11- (E) and 16-week-old (F) *Ptc1^{+/+}* (n=12) and *Ptc1^{+/-}* (n=12) mice. Quantitative values are the area under the curve (AUC) ± SEM. *P < 0.05, Student's t test.



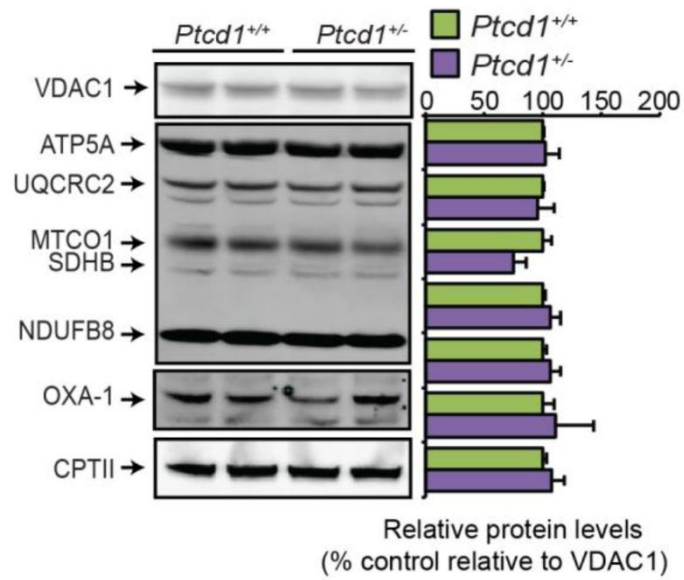
Supplementary Figure 2. Related to figure 1. The effects of reduced mitochondrial protein synthesis on food intake and *Ptcd1* expression. (A) Percentage of food intake from 12 weeks of HFD feeding between *Ptcd1*^{+/+} (n=10) and *Ptcd1*^{+/-} (n=10) mice. (B) Percent reduction in *Ptcd1* expression in liver and skeletal muscle from NCD or HFD fed *Ptcd1*^{+/-} (n=5) mice relative to *Ptcd1*^{+/+} (n=5) determined by qRT-PCR and normalized to 18S rRNA expression.



Supplementary Figure 3. The effects of diet on mitochondrial protein synthesis in *Ptc1^{+/+}* and *Ptc1^{-/-}* mice. *De novo* protein synthesis in mitochondria isolated from livers - and skeletal muscle - of young *Ptc1^{+/+}* and *Ptc1^{-/-}* fed either a high fat diet (**A, B**) or normal chow diet (**C, D**) was measured by pulse and chase incorporation of ³⁵S-labeled methionine and cysteine. Mitochondrial proteins were separated by SDS-PAGE, stained using Coomassie Brilliant Blue to show equal loading, and visualized by autoradiography.



Supplementary Figure 4. Related to figure 2. The effects of reduced mitochondrial protein synthesis on IL-6 levels. IL-6 levels were measured in liver, skeletal muscle and white adipose tissue from *Ptc1*^{+/+} (n=5) and *Ptc1*^{+/-} (n=5) mice.



Supplementary Figure 5. Related to figure 6. The effects of HFD on heart mitochondrial biogenesis in *Ptc1*^{+/+} and *Ptc1*^{+/-} mice. Heart mitochondrial proteins (50 µg) isolated from *Ptc1*^{+/+} (n=5) and *Ptc1*^{+/-} (n=5), 17-week-old mice fed a high fat diet were resolved on 4-20% SDS-PAGE gels and immunoblotted against the OXPHOS antibodies to investigate the steady state levels of nuclear and mitochondrial encoded proteins. VDAC1 (porin) was used as a loading control. Relative abundance of the levels of the steady state proteins were calculated as a percentage compared to VDAC1. Results were analyzed using the Student's t test.