

SUPPLEMENTARY INFORMATION

Mitochondrial 2,4-dienoyl-CoA reductase (Decr) deficiency and impairment of thermogenesis in mouse brown adipose tissue

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Supplementary Figures:

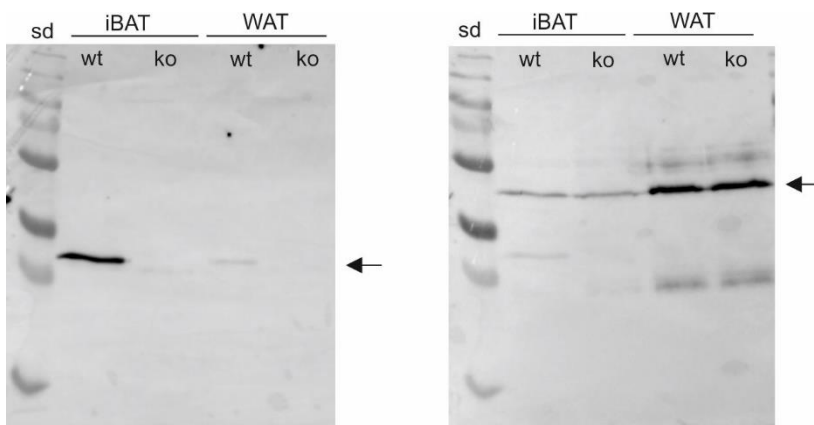


Figure S1. Original Western blots of DECR (left) and β -actin loading control (right) as shown in Figure 3A. Thermo Scientific PageRuler Plus Prestained Protein Ladder (Thermo Fisher Scientific, CA, USA) was used as a molecular size marker (sd).

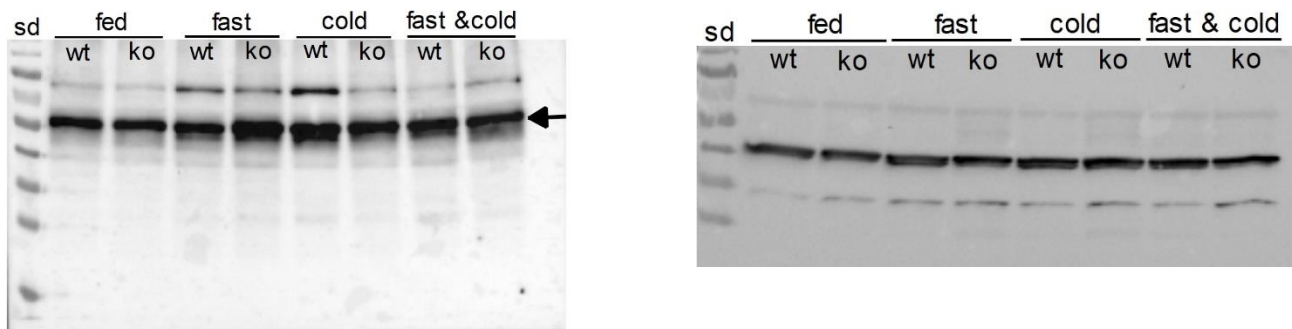


Figure S2. Original Western blots of ATGL (left) and β -actin loading control (right) as shown in Figure 6A. Thermo Scientific PageRuler Plus Prestained Protein Ladder (Thermo Fisher Scientific, CA, USA) was used as a molecular size marker (sd).

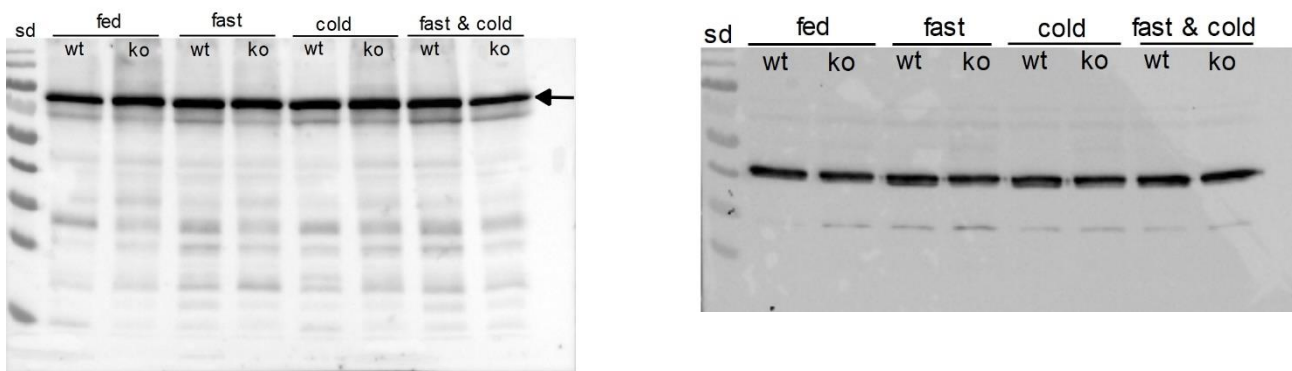


Figure S3. Original Western blots of HSL (left) and β -actin loading control (right) as shown in Figure 6A. Thermo Scientific PageRuler Plus Prestained Protein Ladder (Thermo Fisher Scientific, CA, USA) was used as a molecular size marker (sd).

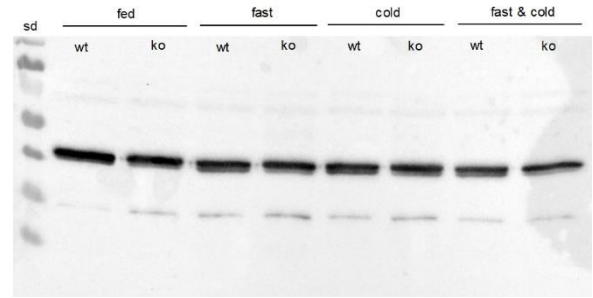
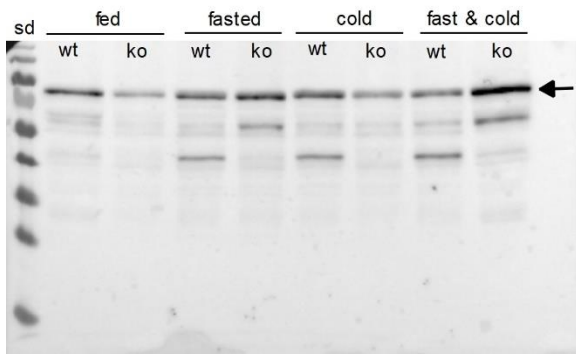


Figure S4. Original Western blots of p-HSL (left) and β -actin loading control (right) as shown in Figure 6A. Thermo Scientific PageRuler Plus Prestained Protein Ladder (Thermo Fisher Scientific, CA, USA) was used as a molecular size marker (sd).

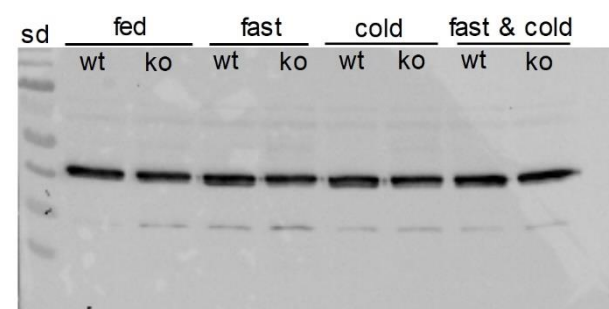
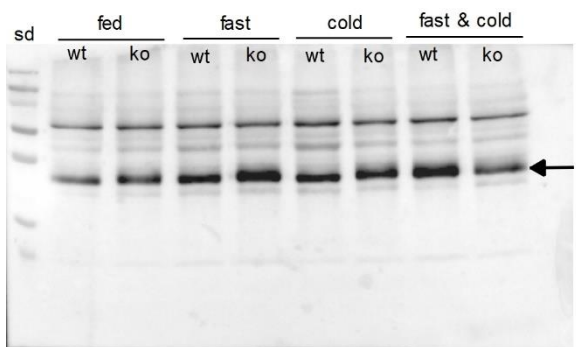


Figure S5. Original Western blots of UCP1 (left) and β -actin loading control (right) as shown in Figure 6A. Thermo Scientific PageRuler Plus Prestained Protein Ladder (Thermo Fisher Scientific, CA, USA) was used as a molecular size marker (sd).

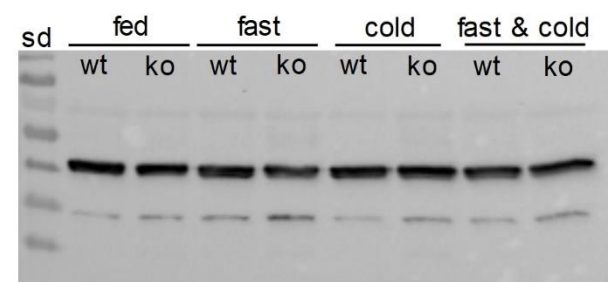
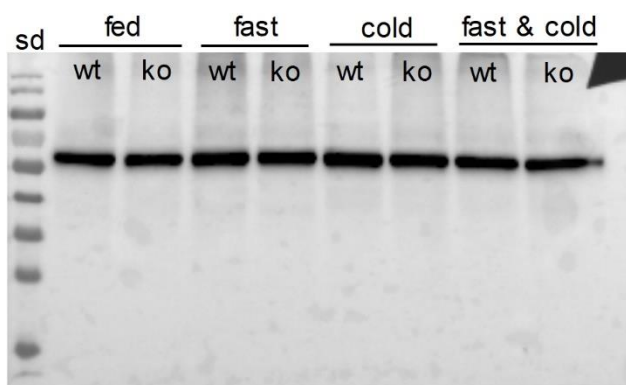


Figure S6. Original Western blots of PKB (left) and β -actin loading control (right) as shown in Figure 6A. Thermo Scientific PageRuler Plus Prestained Protein Ladder (Thermo Fisher Scientific, CA, USA) was used as a molecular size marker (sd).

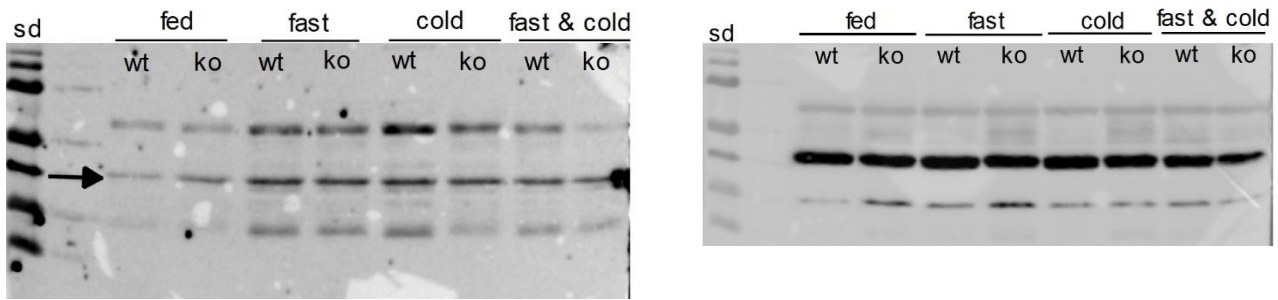


Figure S7. Original Western blots of AMPK (left) and β -actin loading control (right) as shown in Figure 6A. Thermo Scientific PageRuler Plus Prestained Protein Ladder (Thermo Fisher Scientific, CA, USA) was used as a molecular size marker (sd).

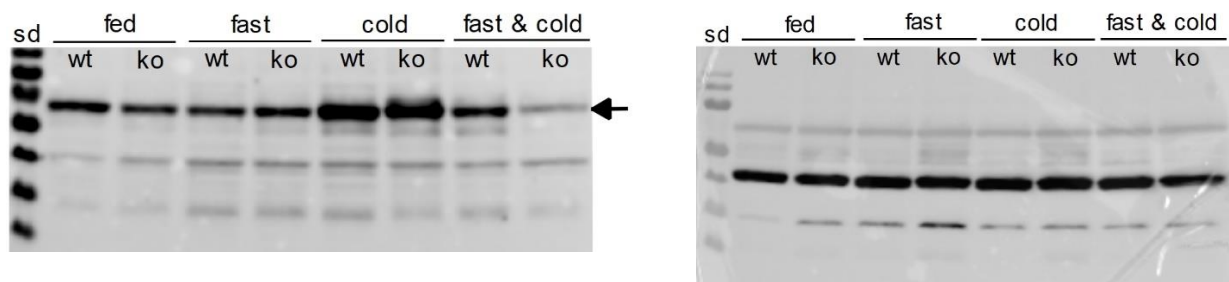


Figure S8. Original Western blots of p-AMPK (left) and β -actin loading control (right) as shown in Figure 6A. Thermo Scientific PageRuler Plus Prestained Protein Ladder (Thermo Fisher Scientific, CA, USA) was used as a molecular size marker (sd).

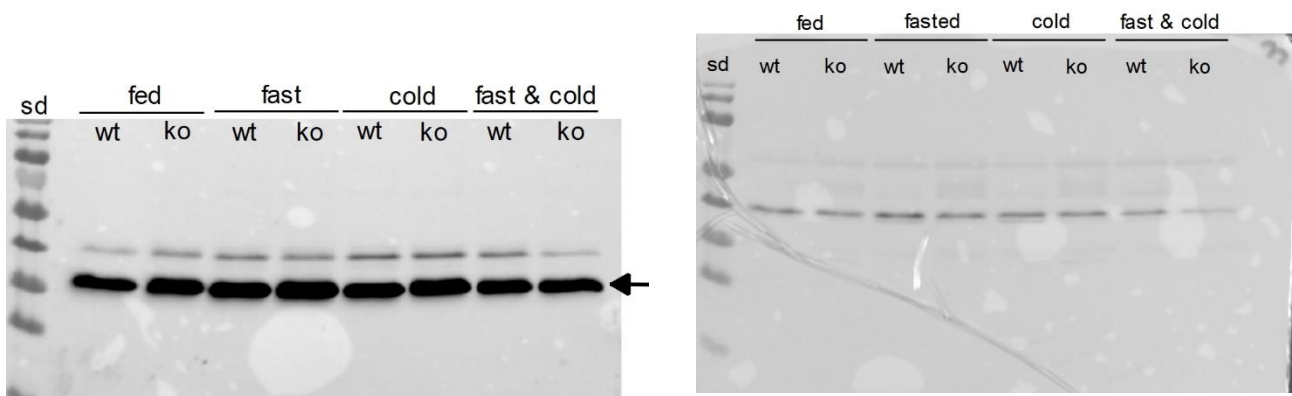


Figure S9. Original Western blots of p38 MAPK (left) and β -actin loading control (right) as shown in Figure 6A. Thermo Scientific PageRuler Plus Prestained Protein Ladder (Thermo Fisher Scientific, CA, USA) was used as a molecular size marker (sd).

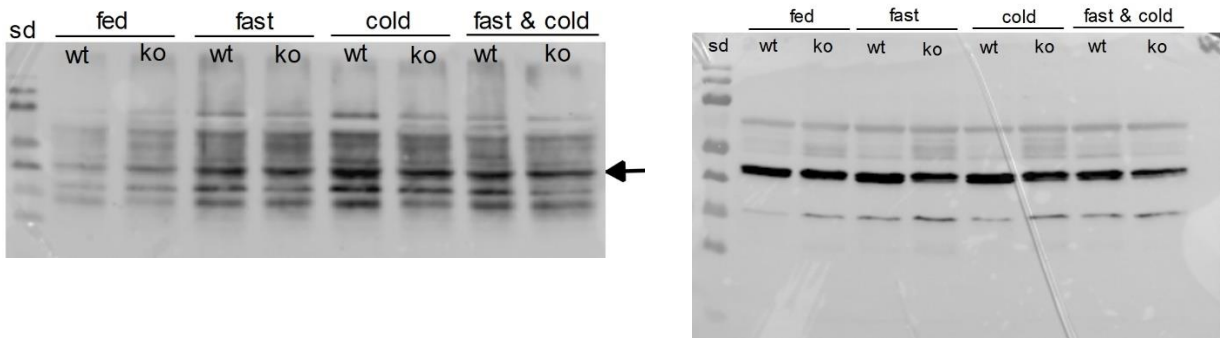


Figure S10. Original Western blots of p-p38 MAPK (left) and β -actin loading control (right) as shown in Figure 6A. Thermo Scientific PageRuler Plus Prestained Protein Ladder (Thermo Fisher Scientific, CA, USA) was used as a molecular size marker (sd).

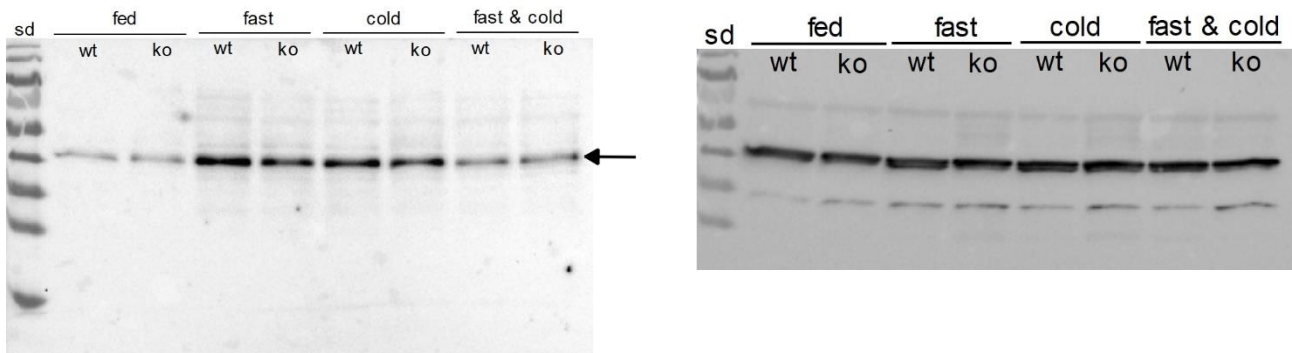


Figure S11. Original Western blots of CREB (left) and β -actin loading control (right) as shown in Figure 6A. Thermo Scientific PageRuler Plus Prestained Protein Ladder (Thermo Fisher Scientific, CA, USA) was used as a molecular size marker (sd).

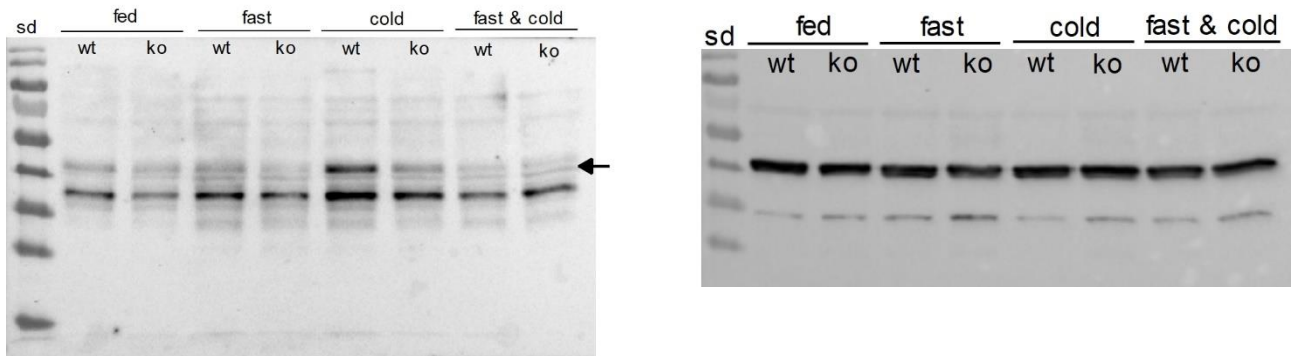


Figure S12. Original Western blots of p-CREB (left) and β -actin loading control (right) as shown in Figure 6A. Thermo Scientific PageRuler Plus Prestained Protein Ladder (Thermo Fisher Scientific, CA, USA) was used as a molecular size marker (sd).

Supplementary Tables:**Supplementary Table S1.** Commercial antibodies used in immunoblotting

Primary Antibodies	Manufacturer	Catalog number
Akt/PKB (pan) Rabbit monoclonal antibody (mAb)	Cell Signaling Technology, USA	4691P
AMPK α Rabbit pAb	Cell Signaling Technology, USA	2603
Phospho-AMPK α (Thr172) Rabbit mAb	Cell Signaling Technology, USA	2535
ATGL Rabbit pAb	Cell Signaling Technology, USA	2138
CREB Rabbit mAb	Cell Signaling Technology, USA	9197
Phospho-CREB (Ser133) Rabbit mAb	Cell Signaling Technology, USA	9198
HSL Rabbit pAb	Cell Signaling Technology, USA	4107
Phospho-HSL (Ser660) Rabbit pAb	Cell Signaling Technology, USA	4126
p38 MAP Kinase Rabbit pAb	Cell Signaling Technology, USA	9212
Phospho-p38 (Thr180/Tyr182) Rabbit pAb	Cell Signaling Technology, USA	9211
UCP1 Goat pAb	Novus Biologicals, USA	NB-100-2828
Secondary Antibodies	Manufacturer	Catalog number
Rabbit Anti-Goat-HRP	Santa Cruz Biotechnology, USA	sc-2922
Goat Anti-Guinea pig IgG(H&L)-HRP	Abcam, USA	ab6908
Goat Anti-Rabbit IgG-HRP	Santa Cruz Biotechnology, USA	sc-2004
Goat Anti-Mouse IgG-HRP	Thermo Fisher Scientific, CA, USA	62-6520

Supplementary Table S2. TaqMan Gene Expression Assays

TaqMan Gene Expression Assay	Manufacturer: Thermo Fisher Scientific, CA, USA Catalog number
Atgl/Pnpla2 (adipose triacylglycerol lipase)	Mm00503040_m1
Cox2 (cyclo-oxygenase 2)	Mm03294838_g1
Dio2 (type II iodothyronine deiodinase)	Mm00515664_m1
Elov13 (fatty acid elongase 2)	Mm00468164_m1
Fgf21 (fibroblast growth factor 21)	Mm00840165_g1
Pgc1a (PPAR γ coactivator 1 α)	Mm01208835_m1
Ucp1 (uncoupling protein 1)	Mm01244861_m1