SI Figure Legends

Fig. S1. PDH-E1α Ser293 phosphorylation in P1 Liver. (A) Immunoblot for phosphorylated Ser293 of Pyruvate Dehydrogenase (PDH) E1α subunit (PDH-p293) and total PDH-E1α (PDHt) in protein lysates derived from livers of P0 mice. **(B)** Densitometric quantification of phosphorylated Ser293 of PDH-E1α (pSer293-PDHE1α) normalized to total PDHE1α. n = 7/group.

Fig. S2. Normal oxidative and ketogenic machinery in livers of P1 SCOT-KO mice. (A) Relative mRNA abundances of *Fabp1, Fgf21, Cpt1a, Acadm, Hmgcs2,* and *Bdh1* in livers of P1 mice. n = 5/group. **(B)** Immunoblots for HMGCS2 and actin in protein lysates derived from livers of P1 mice. Densitometric quantification normalized to actin below. n = 4/group. **(C)** Immunoblots for BDH1 and actin in protein lysates derived from livers of P1 mice. Densitometric quantification normalized to actin below. n = 7/group. *, $p < 0.05$ by Student's *t* test.

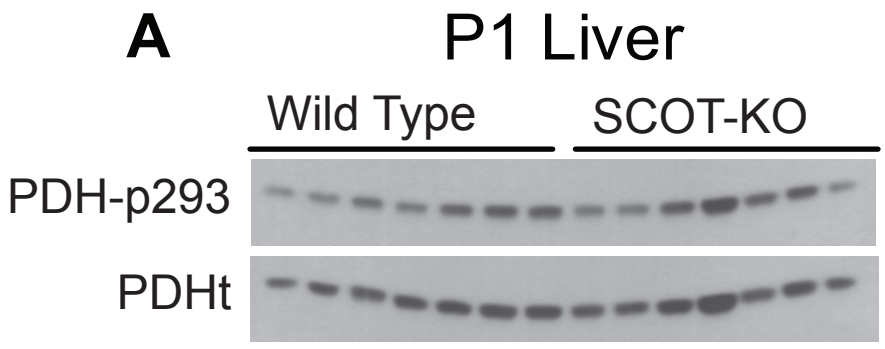
Fig. S3. Normal hepatic fractional enrichment of ^{13}C-glutamate from [^{13}C]octanoate in P0 SCOT-KO mice. (A) Fractional ^{13}C-enrichments of glutamate (left) and total hepatic glutamate pools (right) 20 min after intraperitoneal injection of sodium [1,2,3,4-$^{13}C_4$]octanoate (10 µmol per g body weight) in livers unfed (n=6-7/group) and **(B)** milk-fed P0 mice (n=6/group).

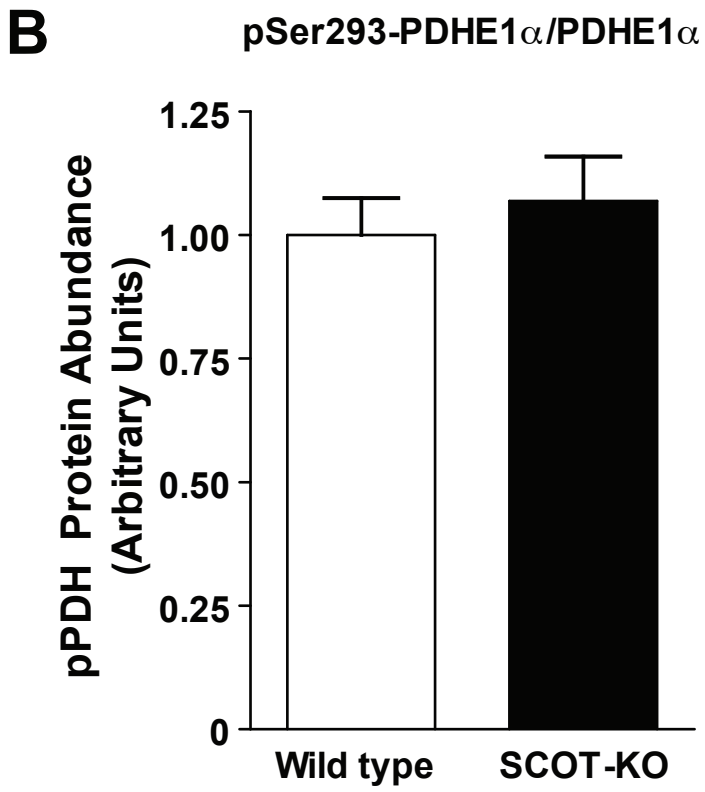
Fig. S4. Normal oxidative and ketogenic machinery in livers of milk-fed P0 SCOT-KO mice. (A) Relative mRNA abundance of *Fabp1, Cpt1a, Acadm, Hmgcs2,* and *Bdh1* in livers of fed P0 mice. n = 5/group. **(B)** Immunoblots for HMGCS2 and actin in protein lysates derived from livers of P0 mice. Densitometric quantification normalized to actin on right. n = 4/group. *, $p < 0.05$ by Student's *t* test.

Fig. S5. Relative abundances of mRNAs encoding mediators of NAD$^+$ metabolism and signaling in livers of P0 and P1 mice. n = 5/group. *Nampt,* nicotinamide adenine dinucleotide phosphoribosyl transferase. *Sirt1,* silent mating type information regulation 2 homolog 1.

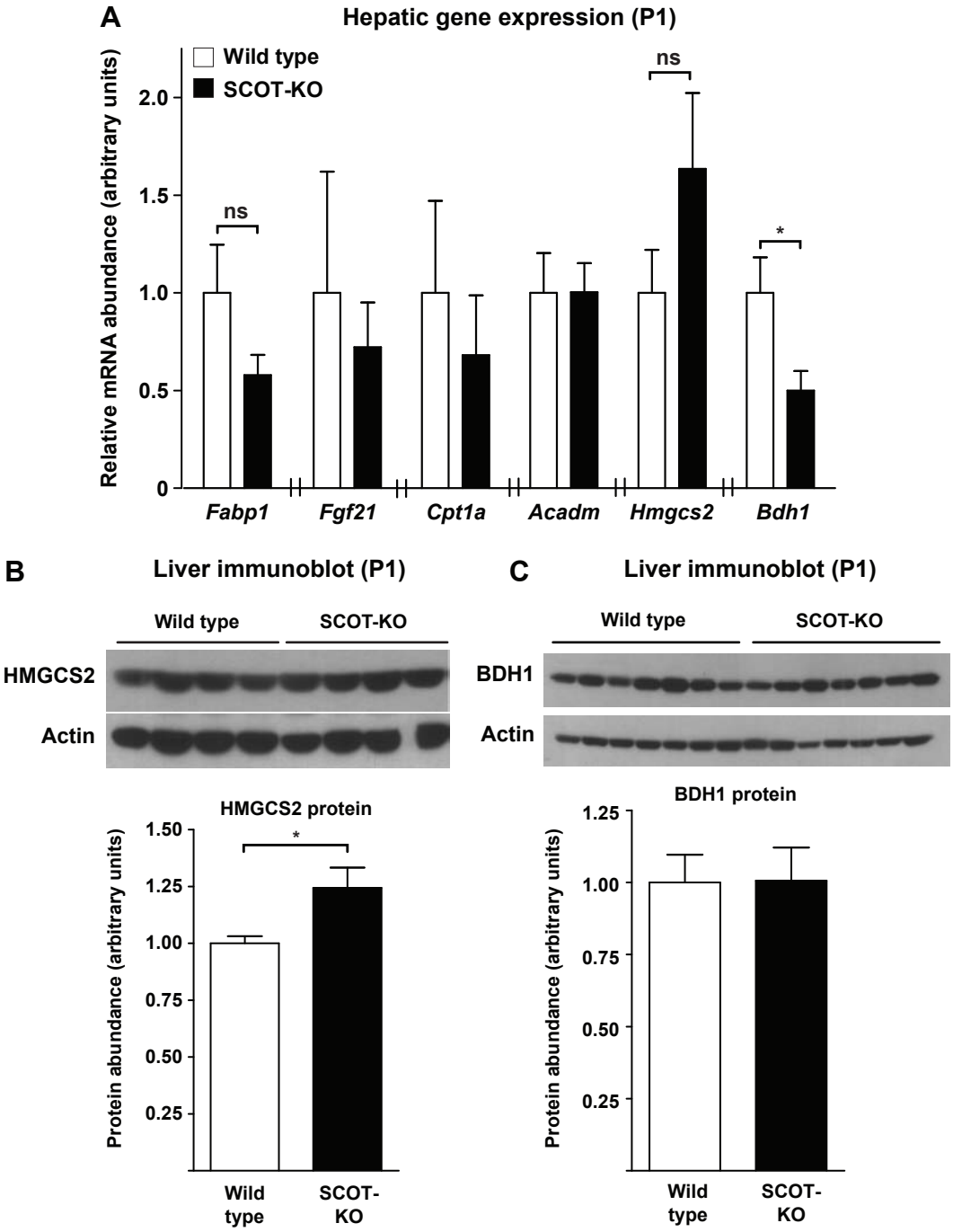
Fig. S6. CoA transferase protein abundance in neonatal tissues. CoA transferase (SCOT) and actin immunoblots of protein lysates derived from brain, heart, skeletal muscle, and liver collected from P0 wild type and SCOT-KO mice.

Cotter et al. Fig. S1

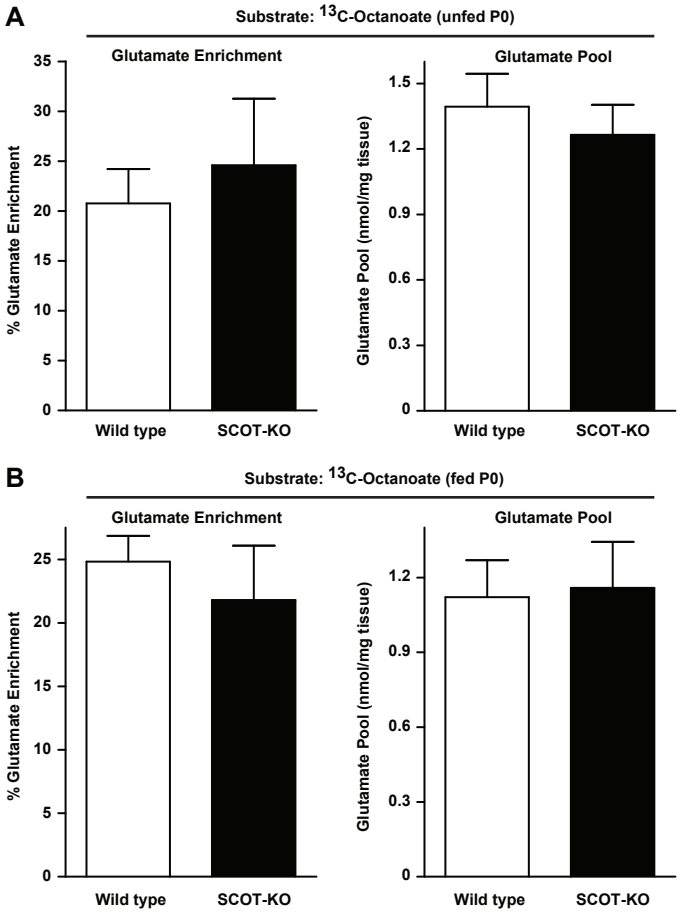




Cotter et al. Fig. S2



Cotter et al. Fig. S3



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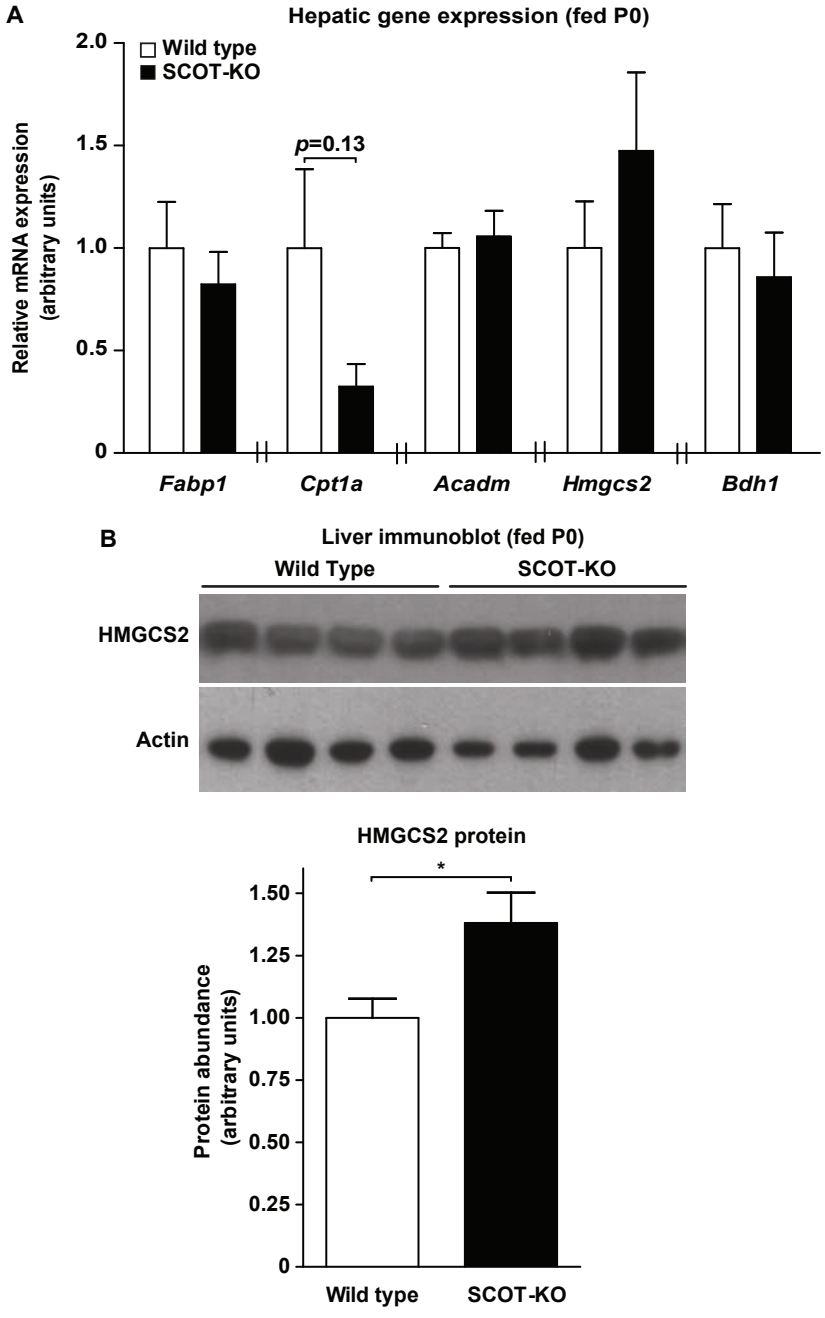
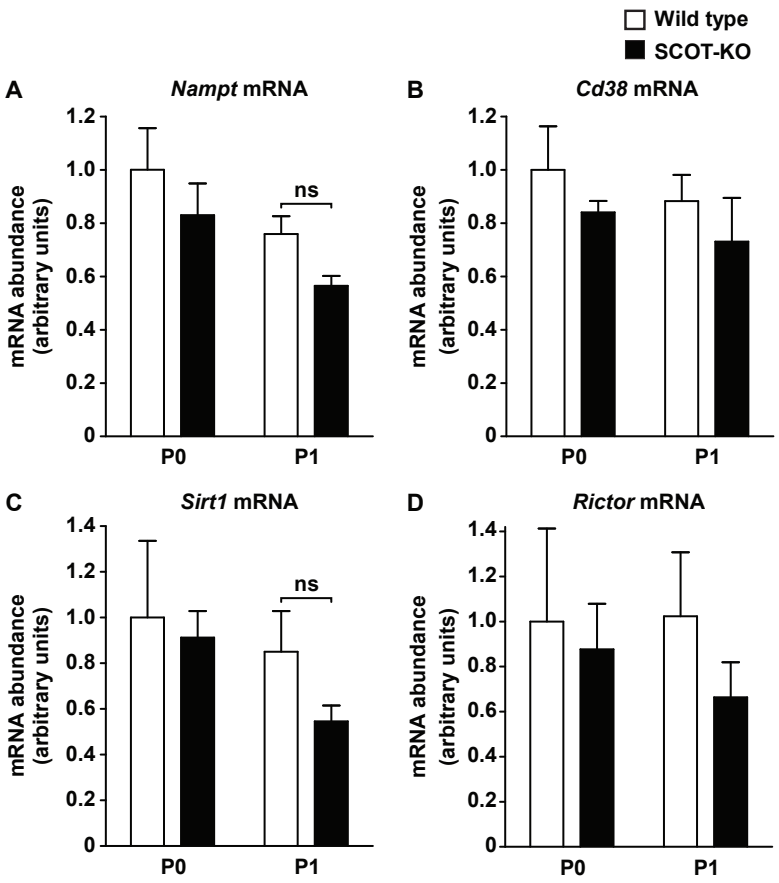


Cotter et al. Fig. S5



Cotter et al. Fig. S6