Supporting Information

Tsai et al. 10.1073/pnas.1424641112

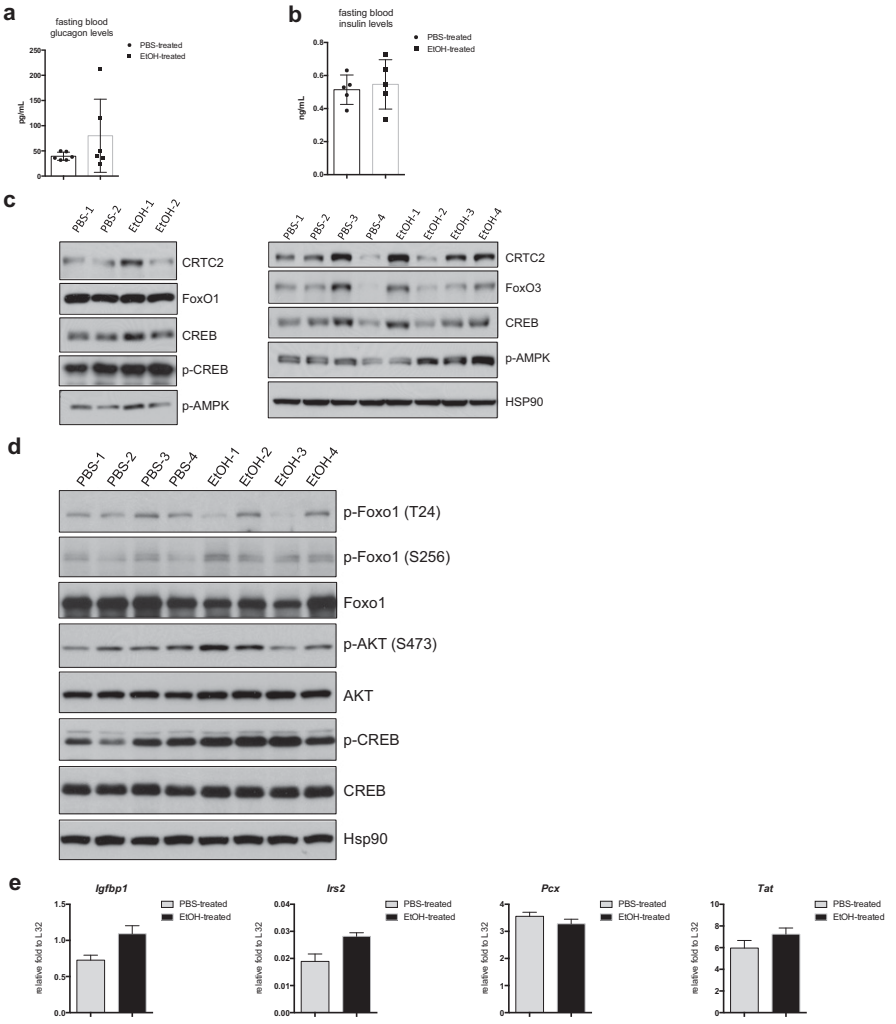

Fig. S1. Effects of ethanol in vivo. (*A*) Fasting blood glucagon concentrations in WT mice treated with PBS or ethanol (EtOH). (*B*) Fasting blood insulin concentrations in WT mice treated with PBS or ethanol. (*C*) Western blot showing effects of ethanol on protein expression in livers of fasted WT mice treated with PBS or ethanol. The left and right panels represent two independent cohort experiments. (*D*) Western blot showing the effects of ethanol on amounts of phosphorylated Foxo1, AKT, and CREB in livers of fasted WT mice treated with PBS or ethanol. HSP90 served as a loading control. (*E*) Analysis of mRNA amounts for *Igfbp1*, *Irs2*, *Pcx*, and *Tat* genes in livers of fasted WT mice treated with PBS or ethanol. Each bar represents averaged results, $n = 5$. Error bars indicate SEM.

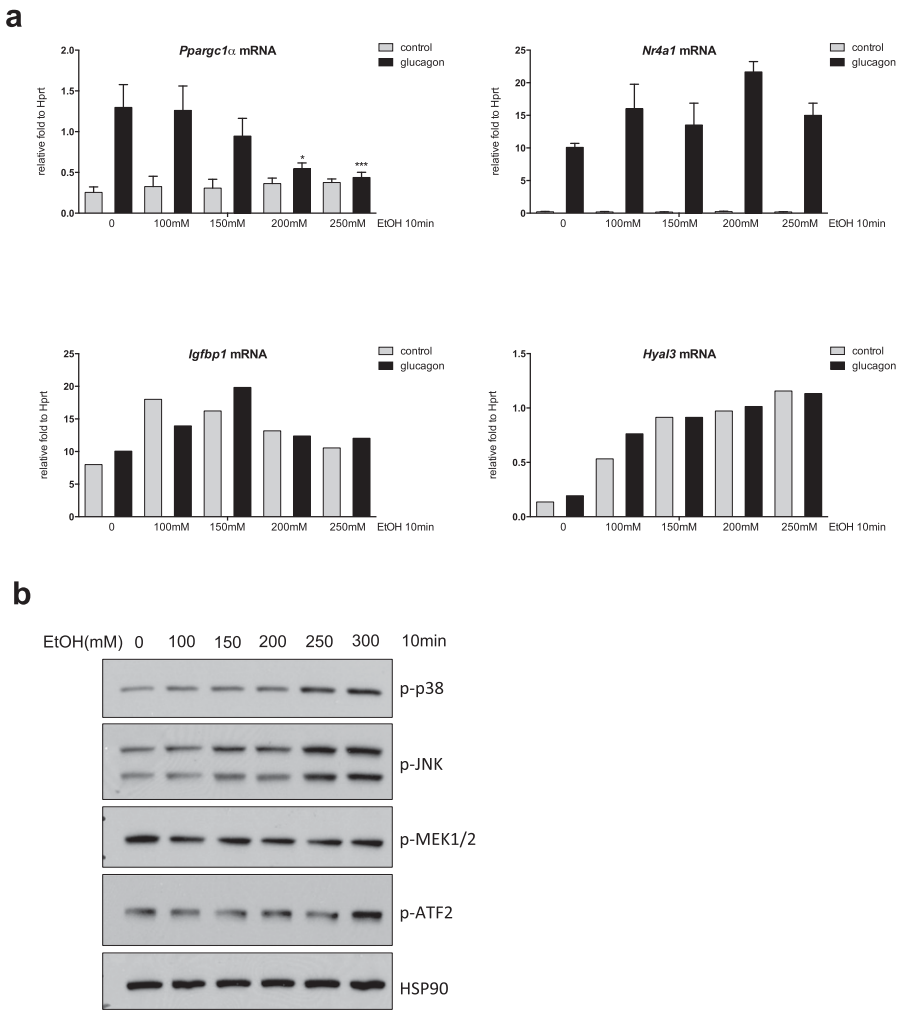

Fig. S2. Effects of ethanol in primary hepatocytes. (*A*) Effects of a 10-min pretreatment with ethanol (EtOH) on mRNA amounts for *Pgc1a*, *Nr4a1*, *Igfbp1*, and *Hyal3* in mouse primary hepatocytes exposed to glucagon for 1.5 h. Each bar represents averaged results for three biological replicates, assayed three times each. Error bars indicate SEM. $*P < 0.05$; $**P < 0.01$; $***P < 0.001$. (*B*) Western blot showing the effects of a 10-min treatment with ethanol on phosphorylation of p38 and JNK kinases in primary hepatocytes. HSP90 served as a loading control.

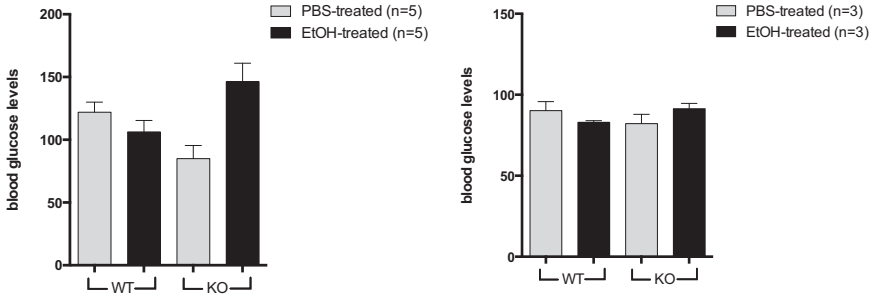

Fig. S3. Effects of ethanol in *ATF3*$^{-/-}$ mice. Shown are fasting blood glucose concentrations in control WT and *ATF3*$^{-/-}$ mice treated with PBS or ethanol (EtOH). (*Left*) Cohort 1. Mean BAL was 406 ± 14 mg/dL in WT mice and 371 ± 18 mg/dL in *ATF3*$^{-/-}$ mice. Each bar represents averaged results, $n = 5$. Error bars indicate SEM. (*Right*) Cohort 2. Mean BAL was 450 ± 15 mg/dL in WT mice and 447 ± 6 mg/dL in *ATF3*$^{-/-}$ mice. Each bar represents averaged results, $n = 3$. Error bars indicate SEM.