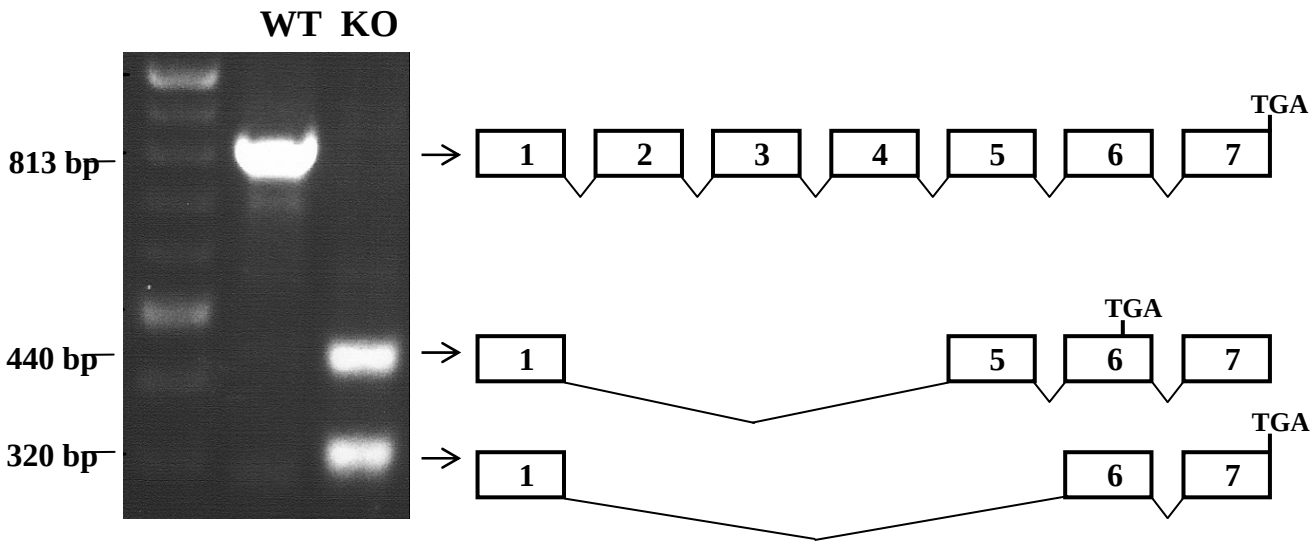
Supplementary Figure Legends.

Figure 1. (A) Total RNA from WT and $\beta1^{-/-}$ mouse hearts was reverse transcribed, and PCR amplified with primers specific for the 5' and 3' ends of the β1 (*prkab1*) ORF (NCBI Gene ID #19079). The agarose gel image shows a single 813 bp amplicon, reflecting the correctly spliced WT mRNA species (shown to right). Amplification of mRNA from $\beta1^{-/-}$ mice, produced the expected 440 bp transcript and an additional alternatively spliced species (320bp). DNA sequencing was used to confirm both $\beta1^{-/-}$ splice variants (shown on the right).

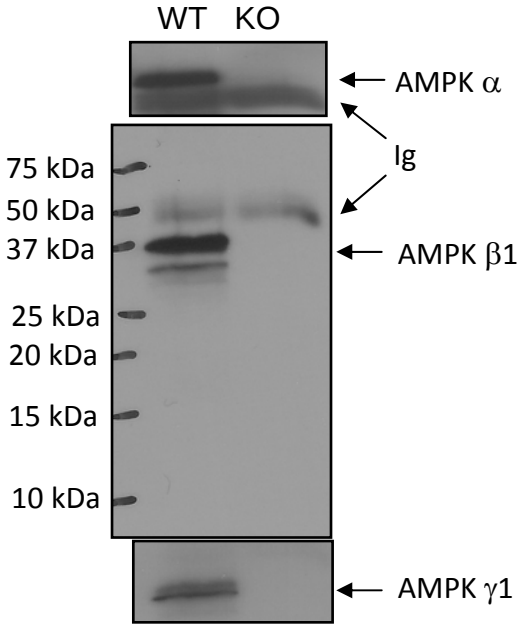
Figure 2. (A) AMPK β1 was immunoprecipitated from livers of WT and $\beta1^{-/-}$ mice using an N-terminal β1 antibody. AMPK α and γ co-immunoprecipitated with β1 in WT mice but not $\beta1^{-/-}$ mice.

Figure 3. Histopathology of wildtype (left) and $\beta1^{-/-}$ (right) mouse brain

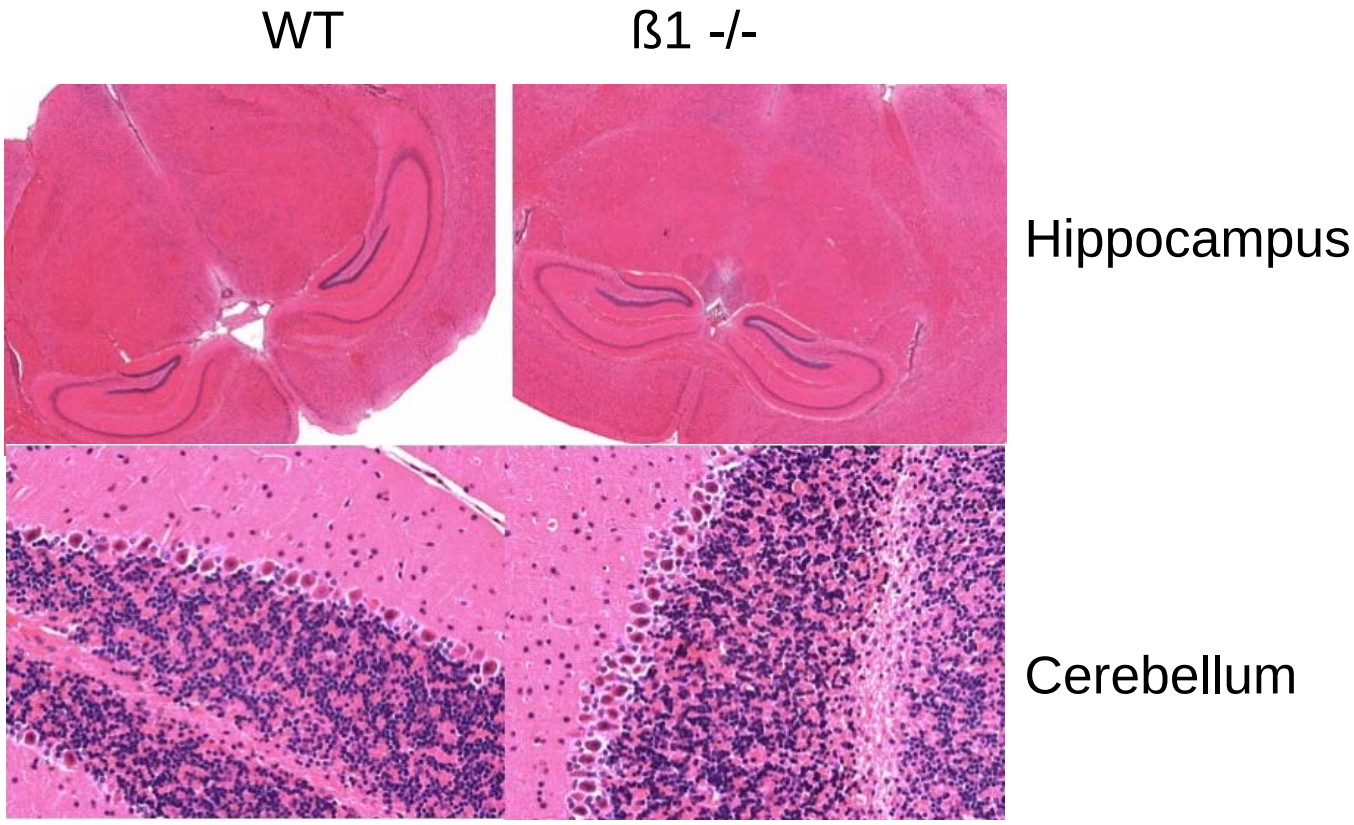
Figure 4. A) Basal and insulin stimulated lipogenesis in isolated fat explants from WT and $\beta1^{-/-}$ mice. B) Basal and isopreterenol stimulated lipolysis in isolated fat explants from WT and $\beta1^{-/-}$ mice. All values are mean ± SEM, n = 6-8, * = $p < 0.05$ compared to wildtype.



Supplementary Figure 1

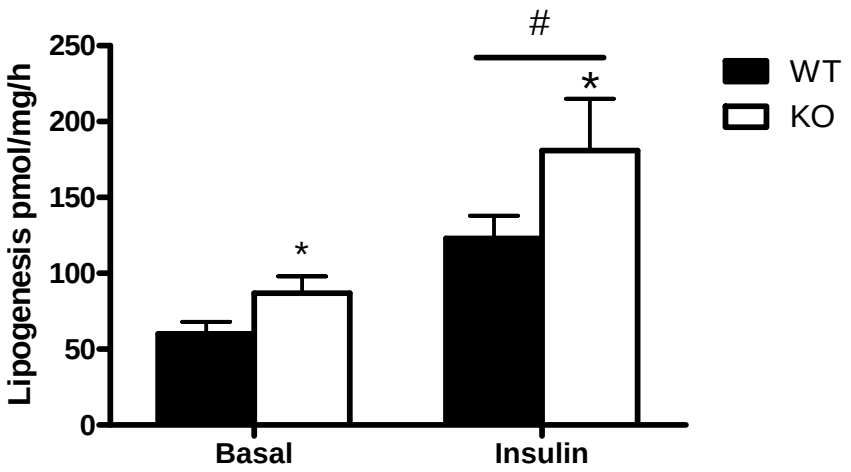


Supplementary Figure 2

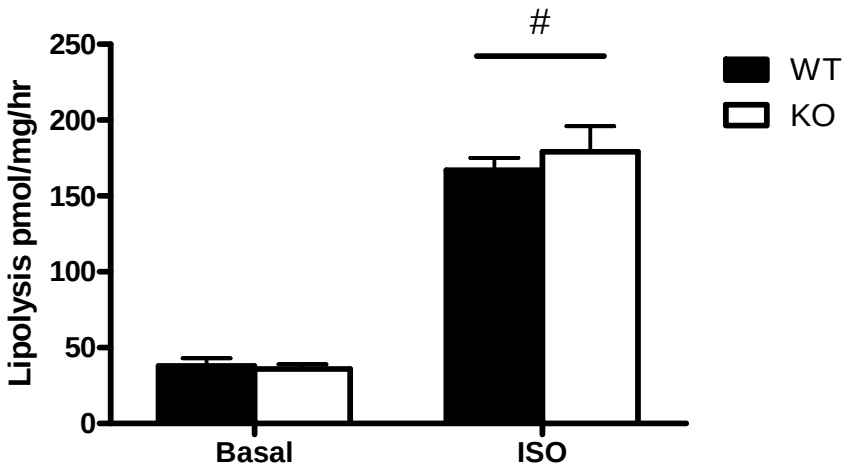


Supplementary Figure 3

A



B



Supplementary Figure 4