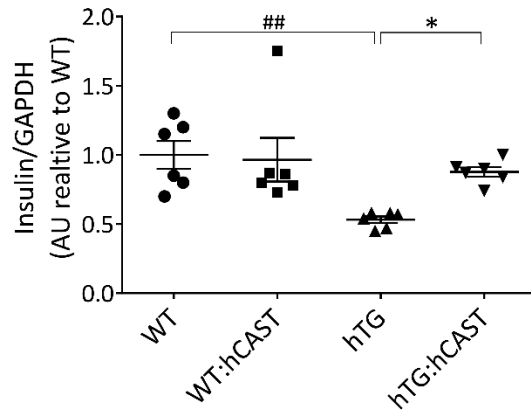
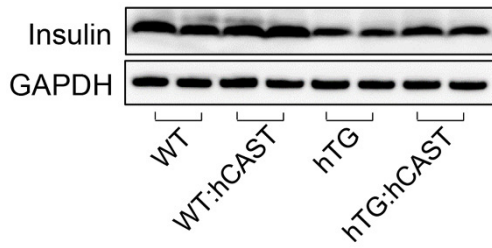
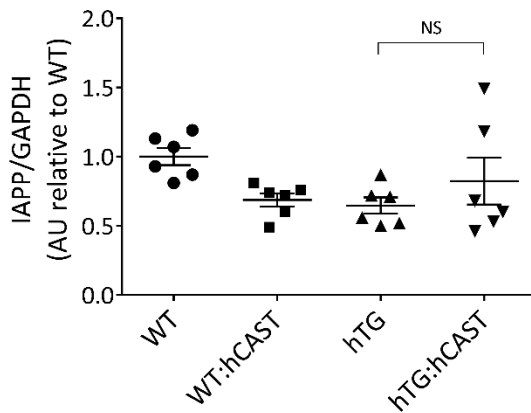
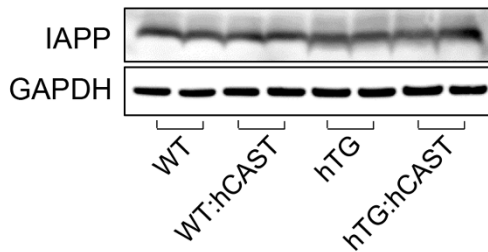


**Figure S1.** Representative western blot (of two independent experiments performed) reflecting calpastatin protein levels in cytosolic and nuclear enriched fractions of islet lysates obtained from 9 wk-old WT, WT:hCAST, hTG and hTG:hCAST. GAPDH and PARP were used as loading controls for cytosolic and nuclear fractions respectively.

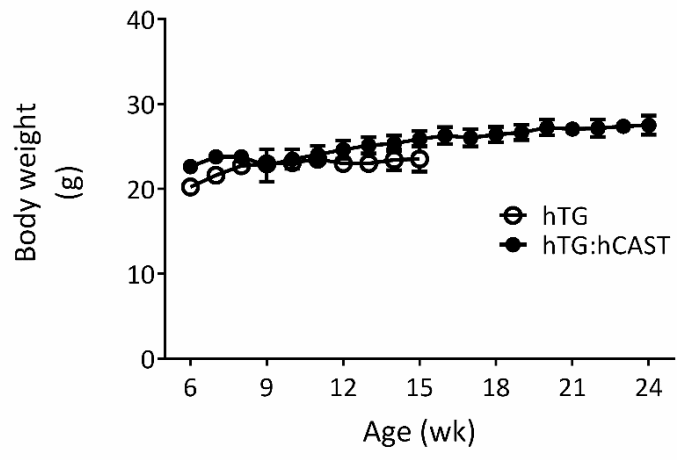
A



B

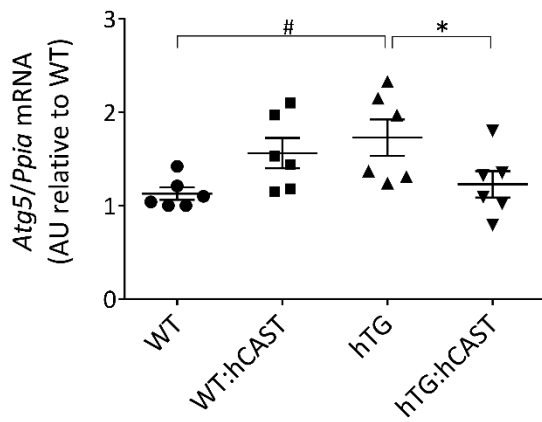


**Figure S2.** Insulin (A) and IAPP (B) protein levels in islets from 9 wk-old WT, WT:hCAST, hTG and hTG:hCAST mice were measured by Western blot. Average fasting blood glucose levels in corresponding groups were 62.7±3.8, 63.9±6.2, 90.3±4.2 and 71.8±4.3 mg/dl in (A) and 72.0±2.5, 73.2±6.2, 85.5±3.1 and 71.5±4.7 mg/dl in (B). Data are expressed as mean±SEM; n=6 per group; \* p<0.05 versus hTG; ## p<0.01 versus WT; one-way ANOVA followed by Fisher's LSD post hoc test in (A); two tail Student's test in (B).

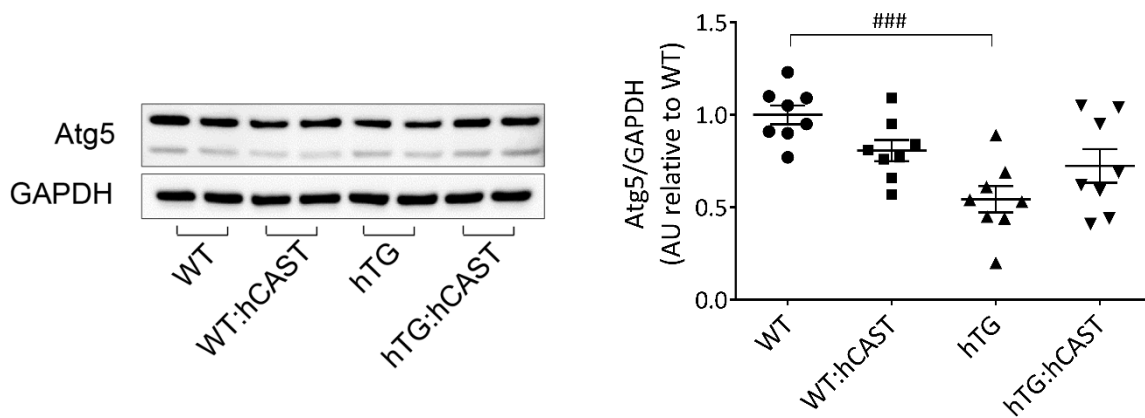


**Figure S3.** Body weight in hTG and hTG:hCAST mice (n=4-9 mice per group per time point).

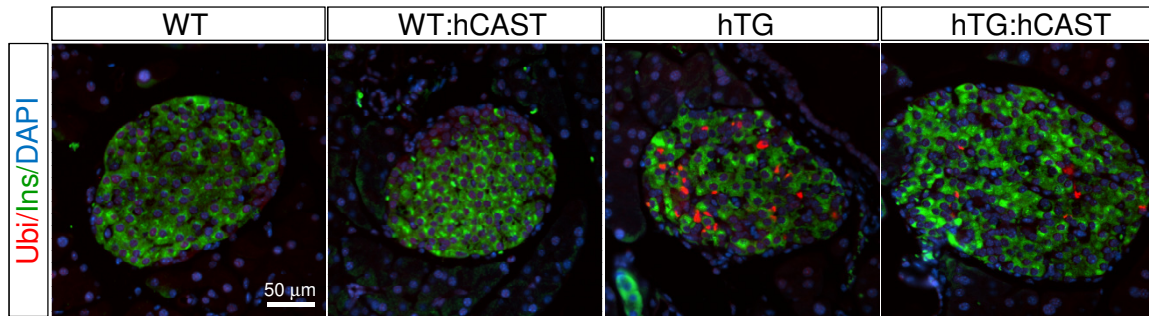
A



B

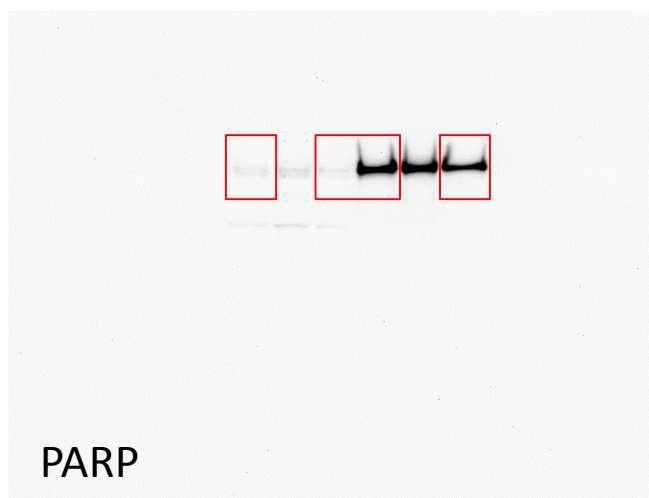
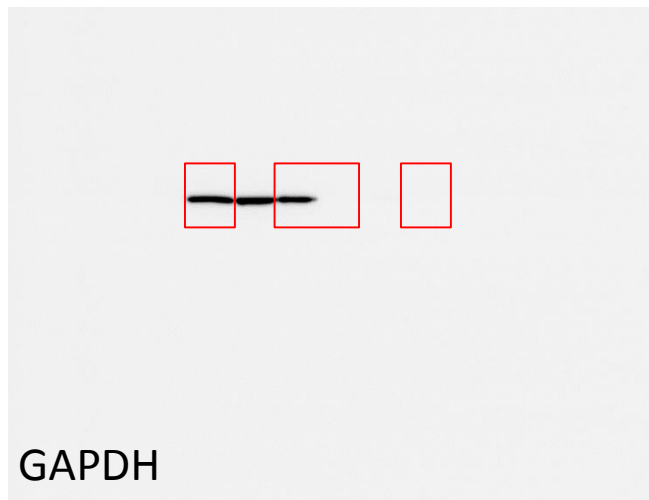
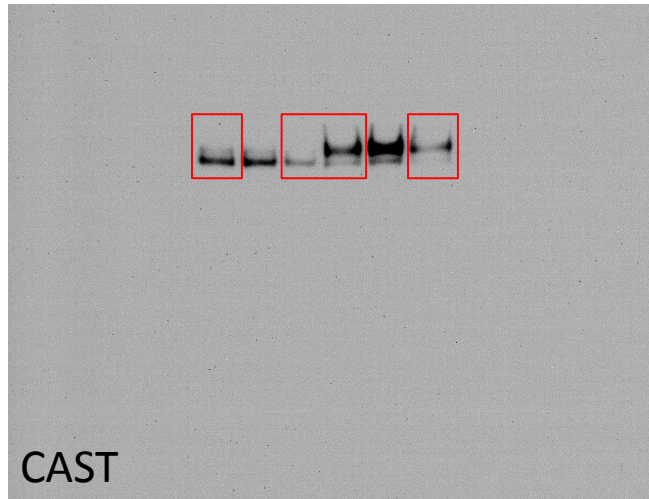


**Figure S4.** *Atg5* mRNA were measured by RT-qPCR (A) and protein levels were measured by Western blot (B) in islet lysates obtained from 9 wk-old WT, WT:hCAST, hTG and hTG:hCAST mice. Average fasting blood glucose levels in corresponding groups were 65.1±4.3, 77.2±3.5, 72.0±3.8 and 70.1±4.1 mg/dl in (A) and 69.9±3.0, 66.4±2.9, 91.7±3.4 and 68.4±4.8 mg/dl in (B). Data are expressed as mean±SEM; n=6 (A) and n=8 (B) per group; \*p<0.05 versus hTG; #p<0.05, ### p<0.001 versus WT.

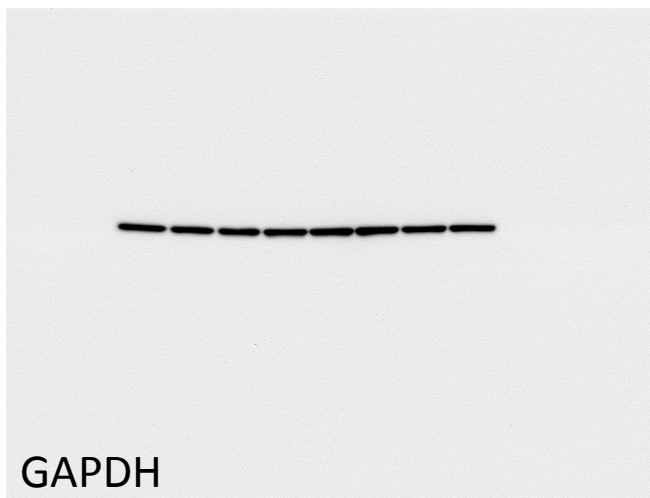
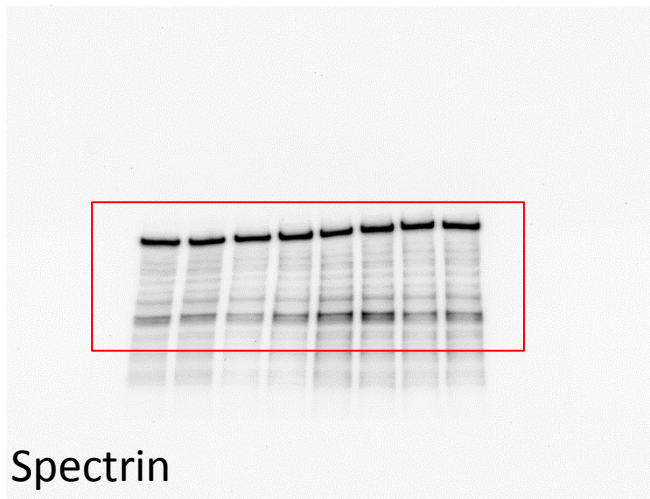
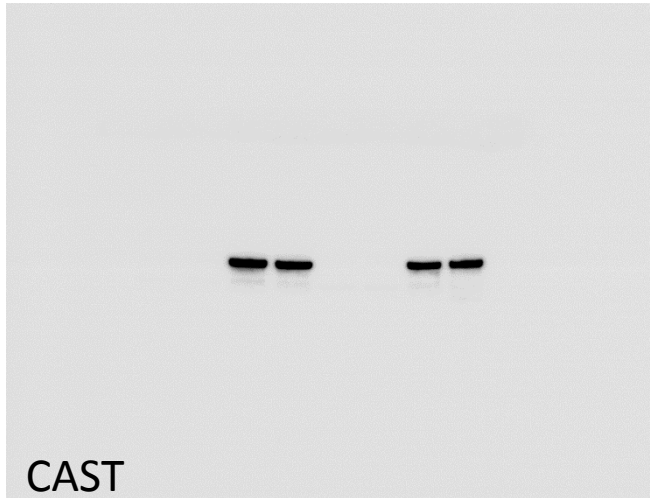


**Figure S5.** Representative immunofluorescence images of islets from 9 wk-old WT, WT:hCAST, hTG and hTG:hCAST mice stained for ubiquitin (red), insulin (green) and nuclei (blue, DAPI). Staining was performed in 2 mice per group with fasting blood glucose levels within normal range (WT - 84 and 76 mg/dl; WT:hCAST - 92 and 74 mg/dl; hTG - 64 and 89 mg/dl; hTG:hCAST - 78 and 71 mg/dl). Images of 15-30 islets per tissue section were taken using 20x objective.

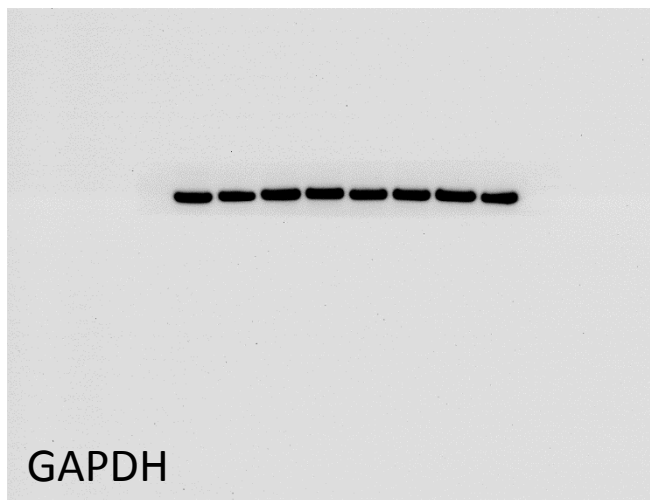
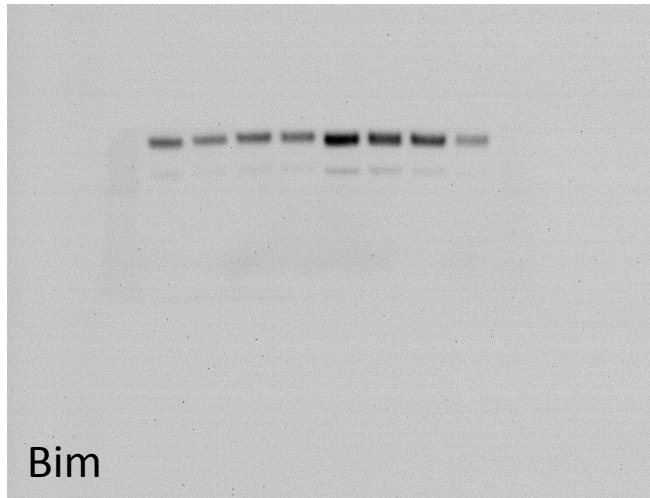
# Full unedited gel for Figure 1



Full unedited gel for Figure 2

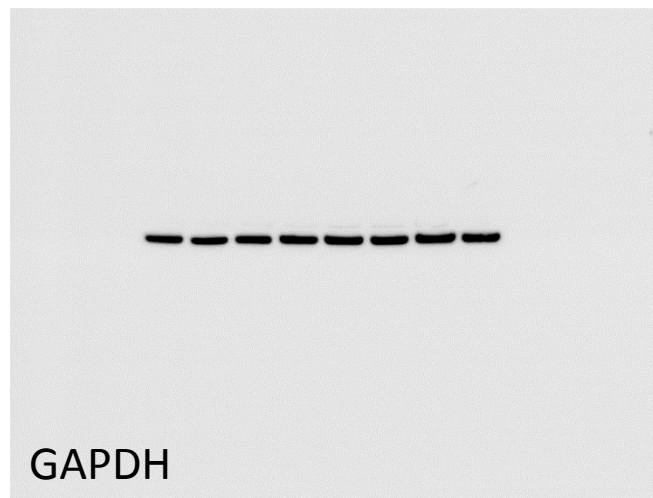
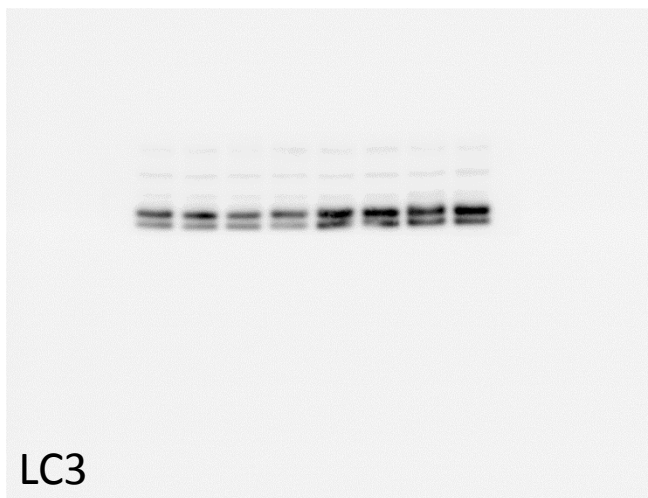
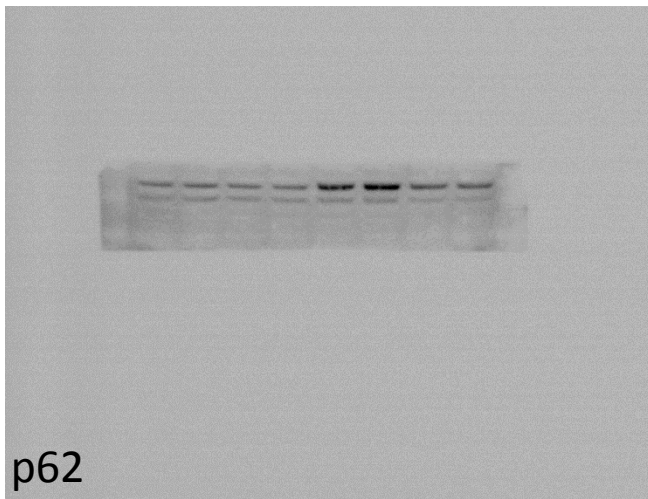
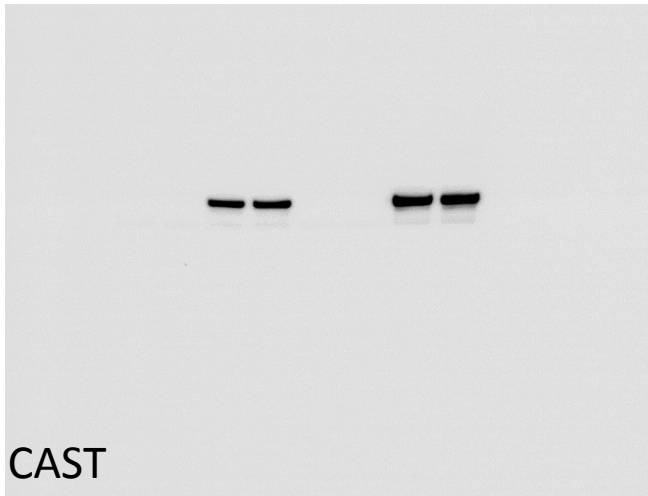


Full unedited gel for Figure 4

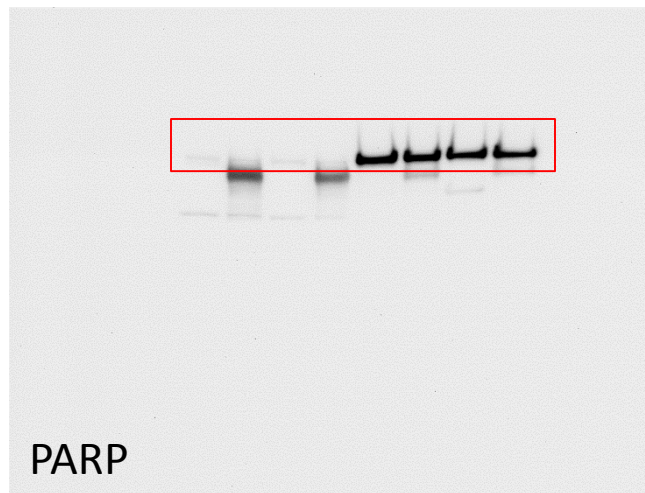
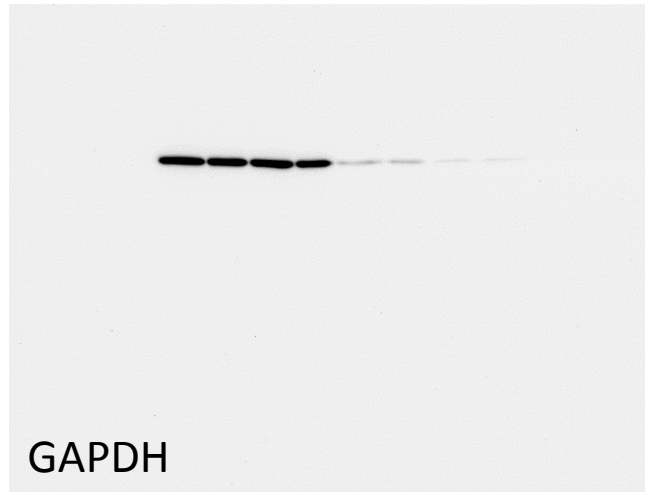




Full unedited gel for Figure 6

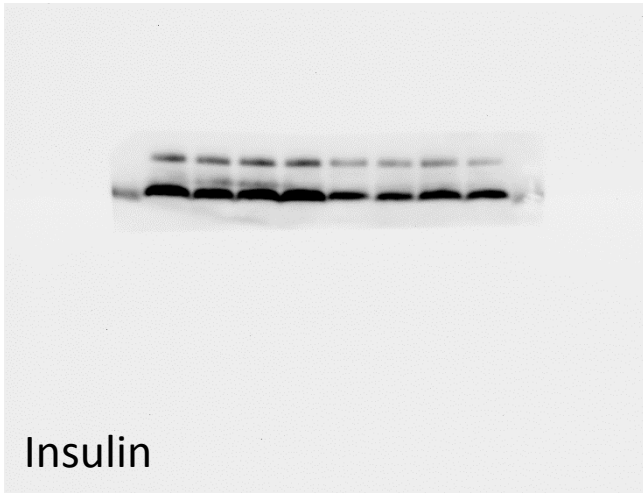


Full unedited gel for Figure S1

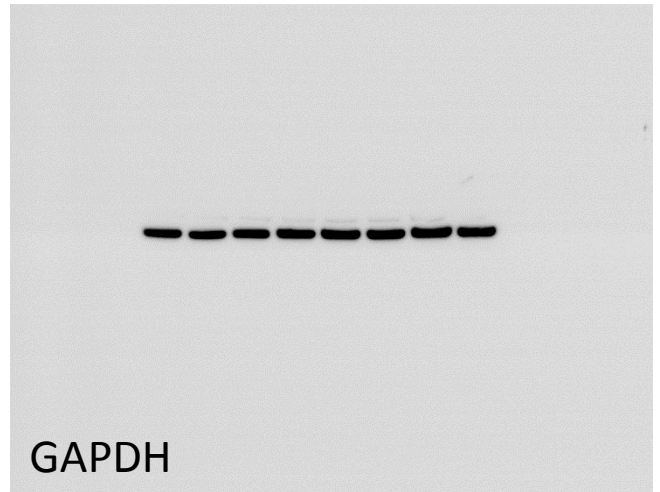
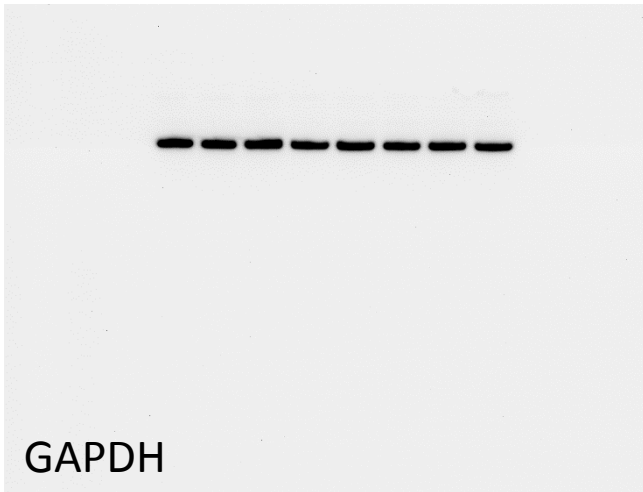
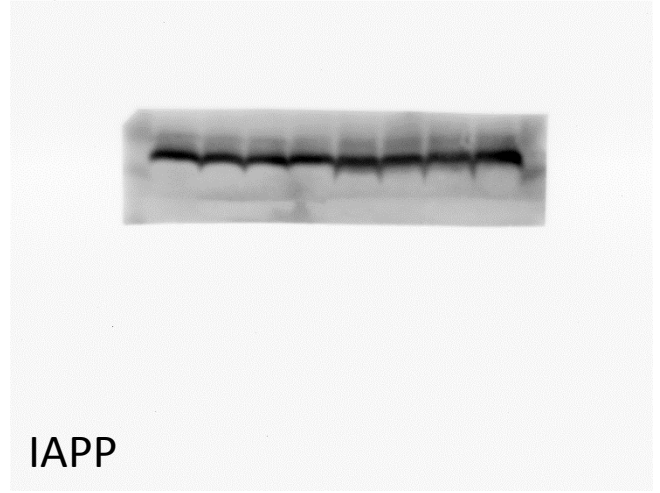


Full unedited gels for Figure S2

A



B



Full unedited gel for Figure S4

