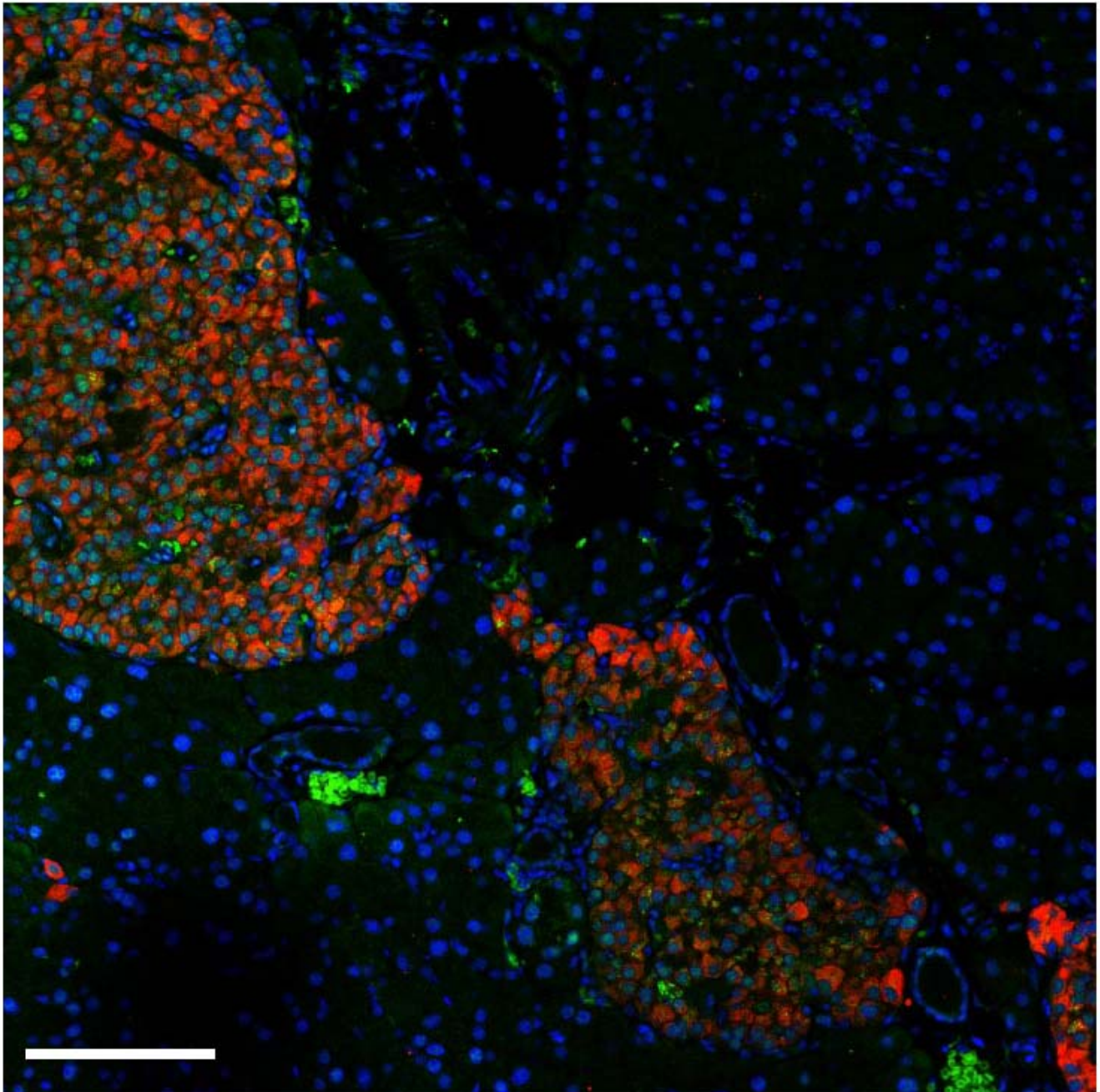


SUPPLEMENTARY DATA

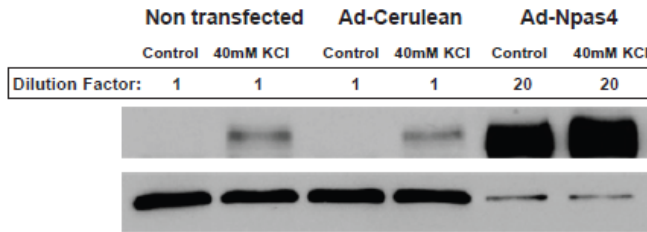
Supplementary Figure 1. Npas4 expression is restricted to pancreatic islets. Immunofluorescent staining of C57Bl6 pancreas demonstrating that Npas4 (green) is expressed solely within the islet, costained with insulin (red) and nuclei (blue). Scale bar = 100 μ m.



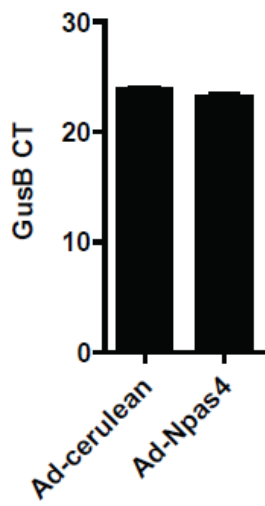
SUPPLEMENTARY DATA

Supplementary Figure 2. Transduction of MIN6 cells with the Ad-Npas4 leads to robust induction of Npas4 protein expression (n=3) (A). β -glucuronidase (GusB) is a suitable reference gene in cells overexpressing Npas4 as there is no change in the cycle threshold (CT) value for GusB in control infected or Npas4 infected MIN6 as measured by real-time PCR when amplifying 40ng of cDNA (n=3) (B). Expression of other reference genes: 18s, GAPDH, B-Actin and Rplp0 do not significantly change when compared to GusB in infected MIN6 (n=3) (C-D).

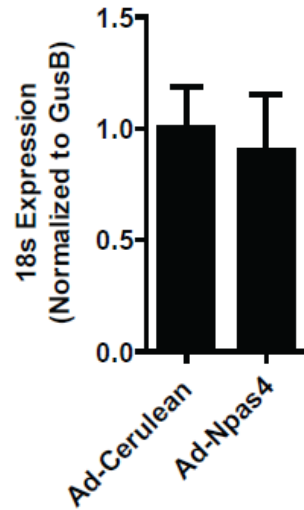
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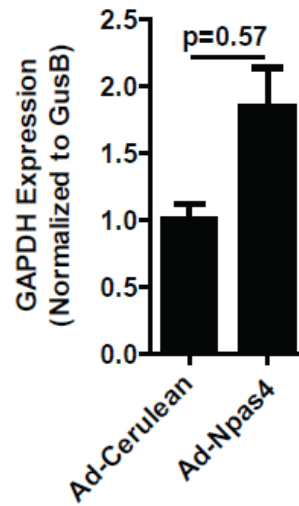
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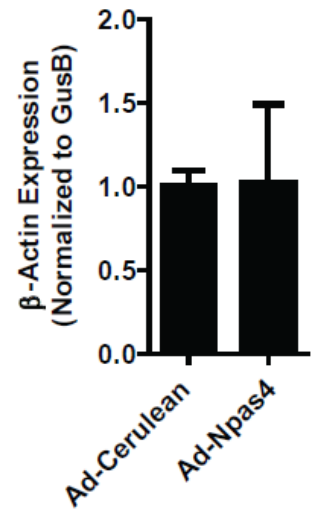
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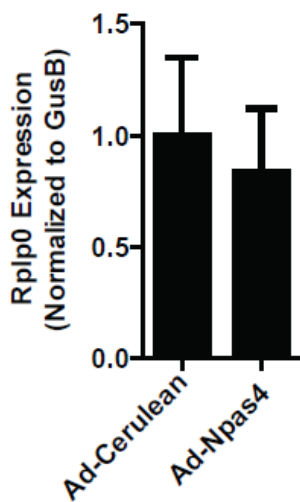
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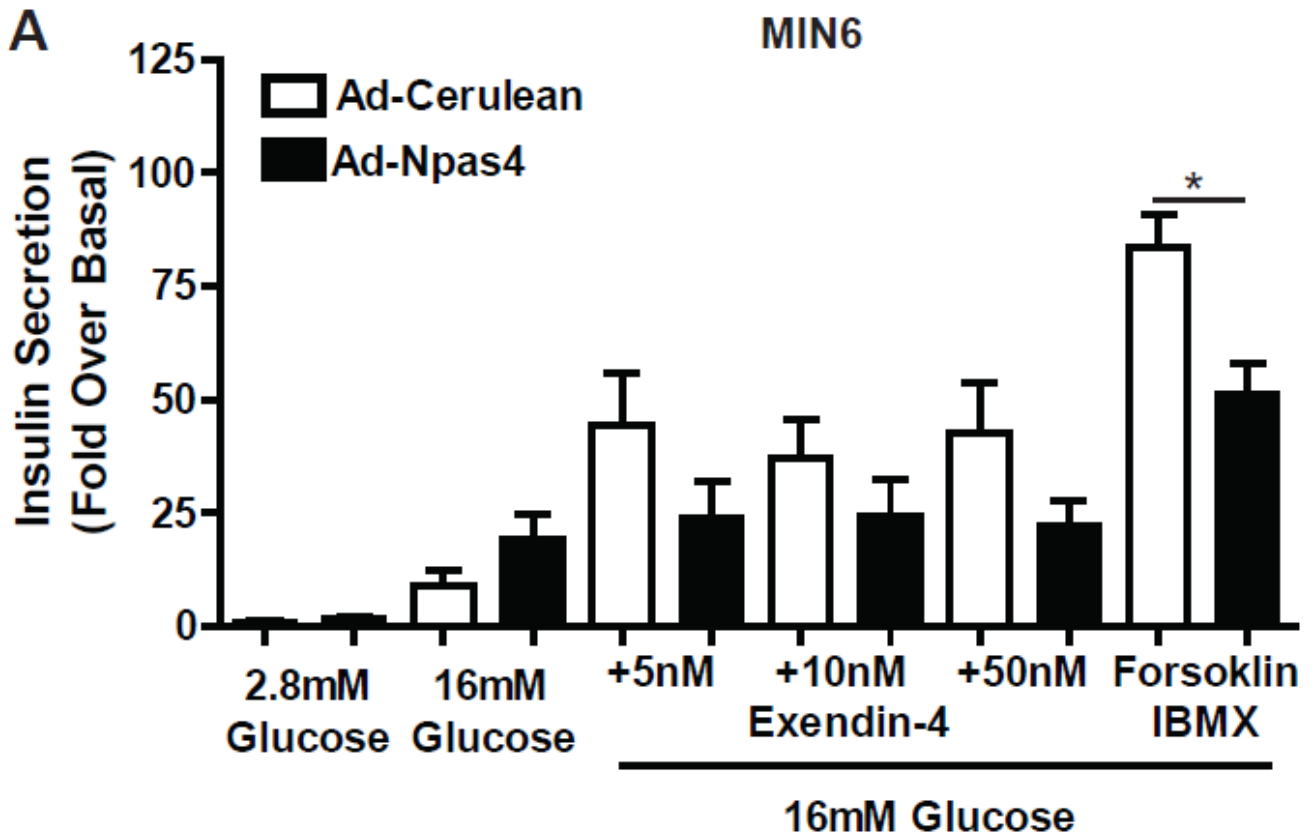


F



SUPPLEMENTARY DATA

Supplementary Figure 3. Npas4 inhibits Exendin-4 stimulated insulin secretion in MIN6 cells. Normalizing insulin secretion to insulin content in MIN6 (A) demonstrates that Exendin-4 does not increase insulin secretion in Npas4 transduced MIN6 but a combination of Forskolin and IBMX does (n=3-6).



SUPPLEMENTARY DATA

Supplementary Figure 4. Npas4 decreases expression of ATF4 and Xbp. Following Npas4 (black bars) or control (white bars) infection and treatment with either thapsigargin (A) or palmitate (B). ATF4 expression is decreased at all concentrations, either significantly or trending towards significance (n=3-6). Similar expression of Xbp and spliced Xbp (Xbp-Sp) was observed following thapsigargin treatment of MIN6 transduced with Npas4 (C-D) (n=4). Significance was determined using two tailed student's t-tests. *= p≤ 0.05

