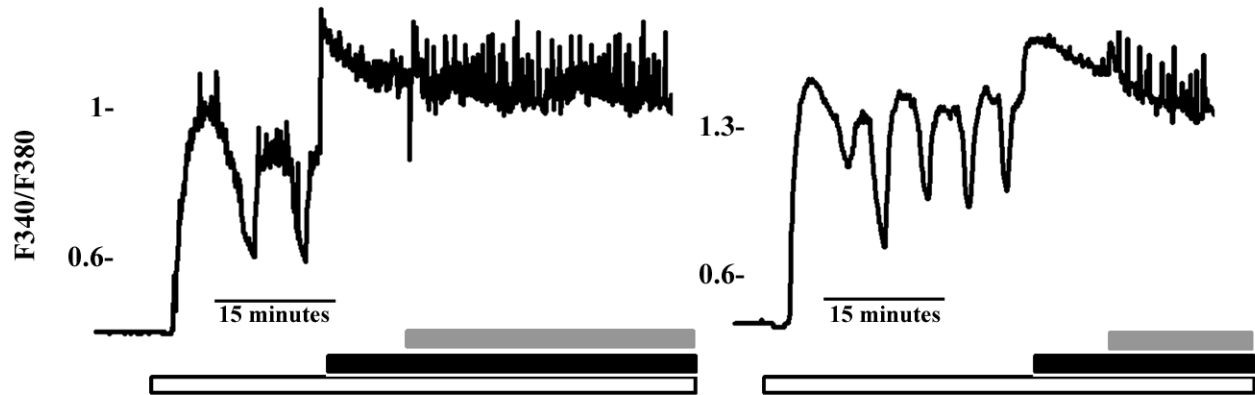
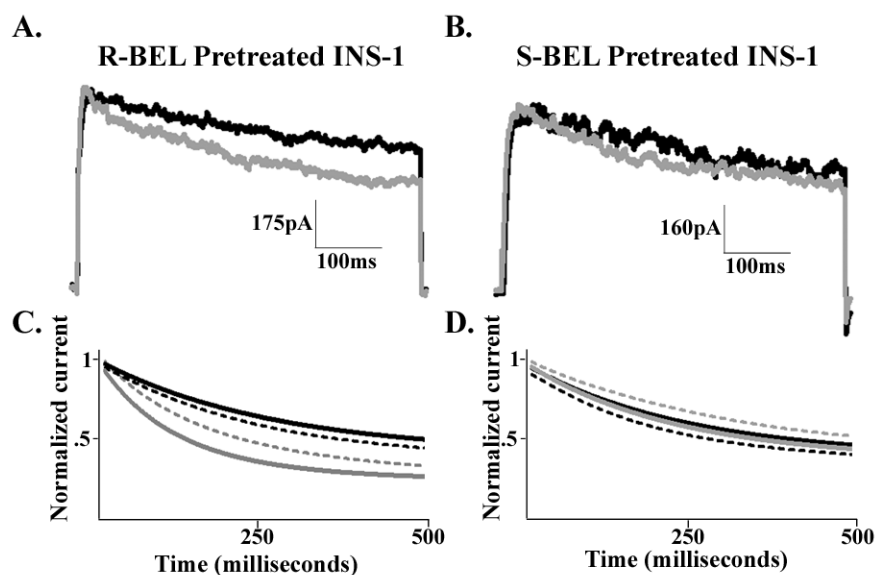


## Supplemental Figure 1



**Supplemental Fig. 1. Arachidonic acid increases  $[Ca^{2+}]$  fluctuation independently of the  $Na^{+}/K^{+}$ -ATPase. Representative calcium traces (A and B) recorded with mouse islets loaded with Fura-2 and incubated with 2 mM glucose (no bar) in combination with the presence of 14.4 mM glucose (white bar), 250 nM ouabain (black bar), and 10 uM arachidonic acid (grey bar).**

## Supplemental Figure 2



**Supplemental Fig. 2. Enantiomer specificity of BEL block of carbachol induced Kv-current inactivation. (A) Kv current traces from an INS-1 cell pretreated with 10  $\mu$ M R-BEL and then subjected to a 500 ms step from -80 to -5 mV before (black trace) and 10 minutes after incubation with 500  $\mu$ M carbachol (grey bar). (B) Kv current traces from an INS-1 cell pretreated with 10  $\mu$ M S-BEL and then subjected to a 500 ms step from -80 to -5 mV before (black trace) and 10 minutes after incubation with 500  $\mu$ M carbachol (grey bar). Kv current decay curves from INS-1 cells pretreated with R-BEL (C; n=7) or S-BEL (D; n=6) and subjected to 500 ms depolarization from -80 to -5 mV before (black line) and after (grey line) incubation with 500  $\mu$ M carbachol. Dashed lines represent standard errors of the mean.**