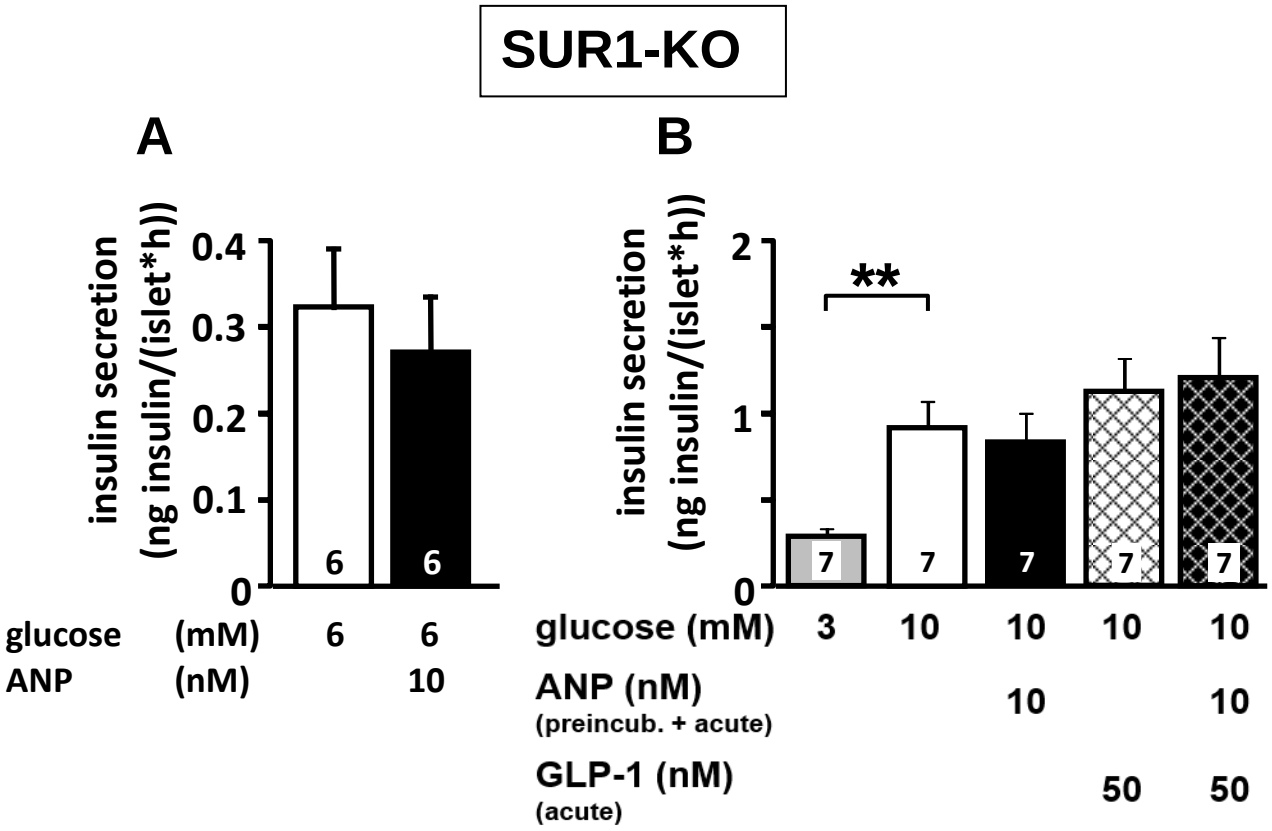
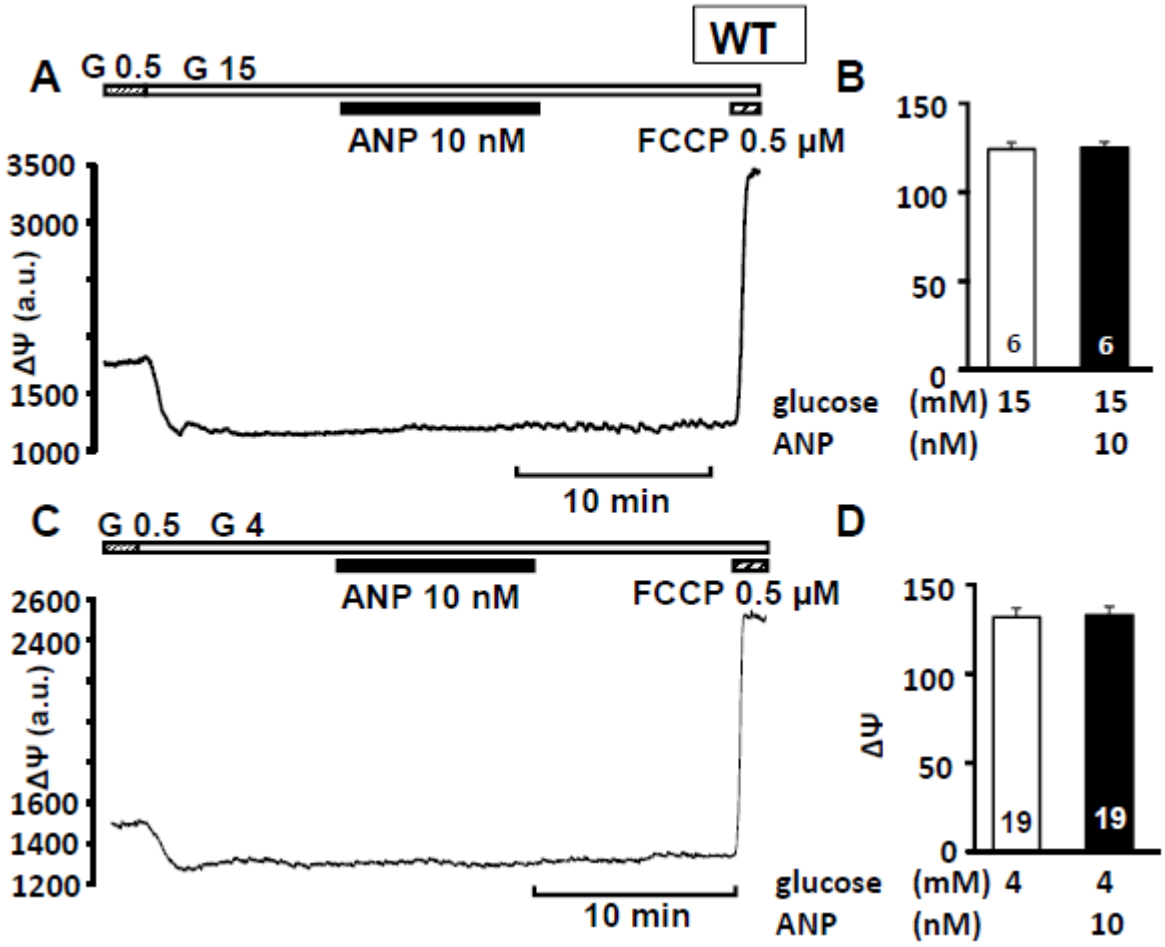
SUPPLEMENTARY DATA

Supplementary Figure S1. Lack of effects of ANP in SUR1-KO mice. A) Lack of stimulating effect of ANP on insulin secretion in the presence of 6 mM glucose. B) Lack of potentiation of the GLP-1 effect on insulin secretion in the presence of 10 mM glucose. Islets were preincubated with ANP for 90 min at room temperature. **P≤0.01



SUPPLEMENTARY DATA

Supplementary Figure S2. Lack of effect of 10 nM ANP on the mitochondrial membrane potential $\Delta\Psi$ in the presence of 15 or 4 mM glucose. A,C) Representative measurements showing the hyperpolarization induced by an increase of the glucose concentration from 0.5 to 15 and 4 mM glucose, respectively, indicating ATP production. Addition of ANP was without effect. At the end of each experiment, FCCP was added to determine the maximal depolarization of $\Delta\Psi$. B,D) Summary of all experiments conducted under the condition in A and C, respectively. The number in the columns gives the number of experiments with different cell clusters from 3 different WT mice.



SUPPLEMENTARY DATA

Supplementary Figure S3. Effect of cilostamide on insulin secretion. A) Preincubation of the islets with the PDE3 inhibitor cilostamide potentiated the effect of GLP-1 on glucose-stimulated insulin secretion. B) In the presence of cilostamide ANP does not increase insulin secretion in 6 mM glucose. The experiments were performed with islets from WT mice. The number in the columns gives the number of different mice. *P≤0.05, ***P≤0.001