

Supplementary information

Reactive oxygen and nitrogen species disturb Ca^{2+} oscillations in insulin-secreting MIN6 beta-cells

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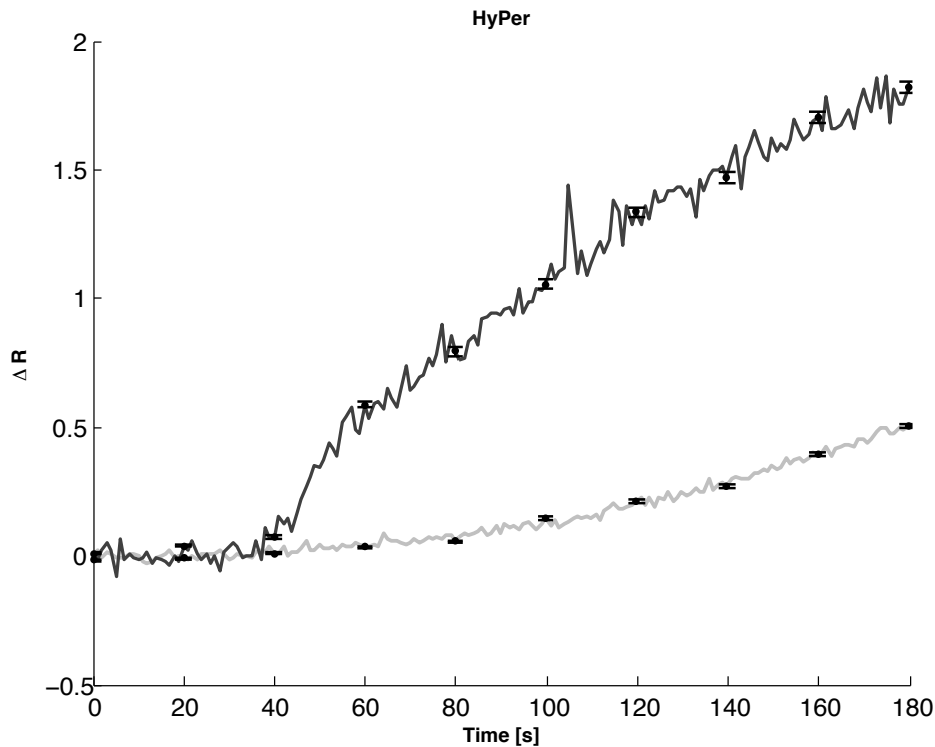


Figure S1. ROS production by AICIPc photoactivation measured with the HyPer probe (pHyPer-dMito; Evrogen, FP942). The LED intensity was 100% (black curve, n=18 cells) or 10% (grey curve, n=20 cells). Illumination from t=30 s. Error bars show s.e.m.

For these experiments, Min6 pseudoislets were transfected 24-36 h after splitting by a mixture of vector DNA and lipofectamine 3000 transfection reagent according to the manufacturer's recommendations. Fluorescence imaging experiments were performed 48 h after transfection. Specimens were excited with 460 nm high efficacy 5W Dental Blue LED (Led Engine, LZ1-00DB00). The 460 nm LED was activated for 100 ms and a pHyPer-dMito intensity image was generated every second. Traces were generated by averaging pixel signals within regions of interest (ROIs) corresponding to individual cells, and corrected by subtracting linear fits to the pre-illumination signals.