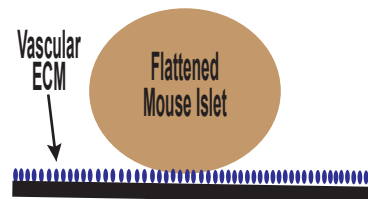
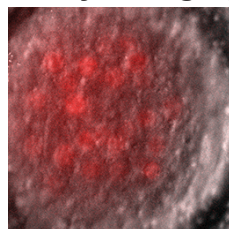


A Islet Preparation

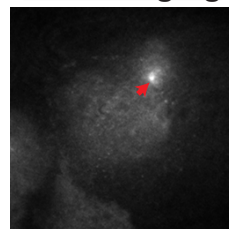


Pre-dye imaging



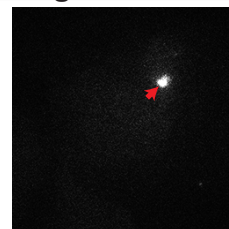
visualize cell borders
determine b-cells

TIRF Imaging



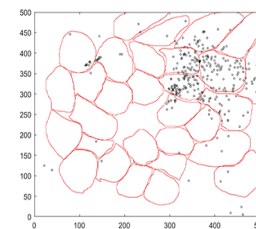
No delay, 60ms exposure
10 minutes

Image Processing



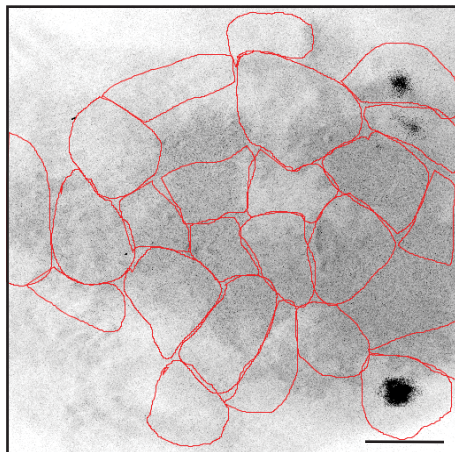
Remove first ~2.5 minutes
Image subtraction
Grouped t-projection

Data Processing

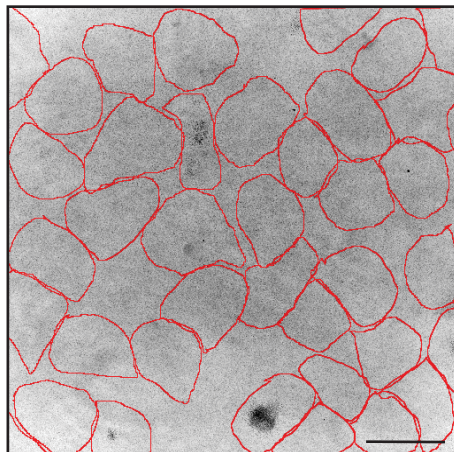


Identify secretion events
Overlay with cell borders
Matlab script to process data

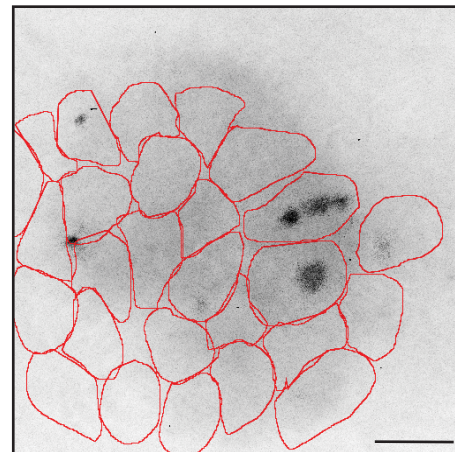
B **Ctrl Low**



C **Noc Low**



D **Taxol Low**



Ctrl

Noc

Taxol

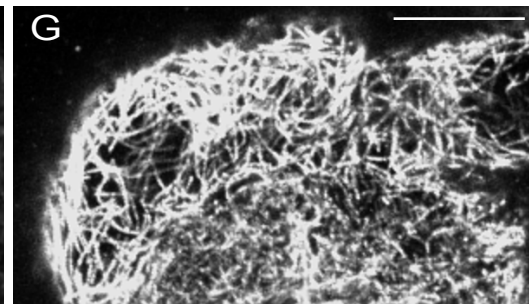
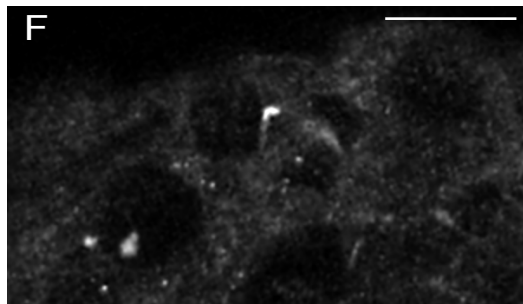
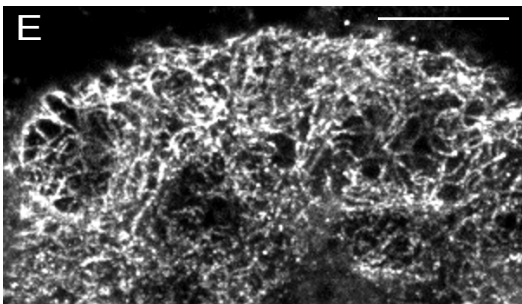


Figure 2 - Supplemental Figure 1. Assay protocol and basal glucose conditions are not affected by MT stability.

A) Overview of FluoZin-3 assays. For more information see materials and methods.

B-D) Time projections of islets from Supplemental Movies 4-6 inverted. FluoZin-3 flashes are represented as black areas. Cell borders overlaid in red. Islets were pre-incubated in DMSO (control, B), nocodazole (C) or taxol (D) and incubated in 2.8 mM glucose. Scale bars 100 μm .

E-G) Representative images of tubulin following FluoZin-3 imaging as shown in A, islets were pre-incubated in DMSO (control, E), nocodazole (F) or taxol (G) and stimulated with 20 mM glucose. 3-image max projection of the bottom of the islet. Scale bars, 10 μm .