

Supplementary Material 8 Supplementary figure for apparent Ca^{2+} -cooperativity of exocytosis measurement

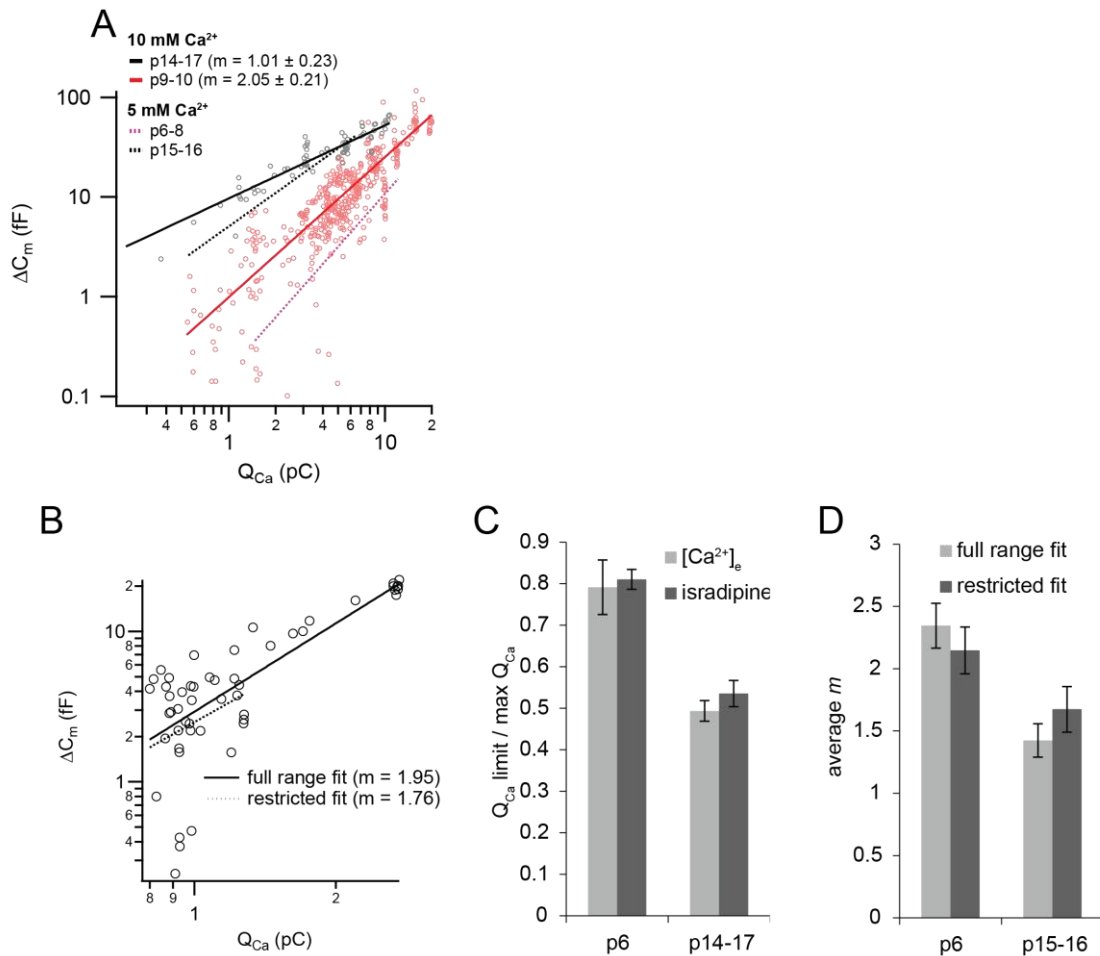


Figure S8. Additional data for apparent Ca^{2+} -cooperativity of exocytosis measurement. (A) Apparent Ca^{2+} -cooperativity of exocytosis in developing IHCs probed at 10 mM extracellular calcium. Open circles are raw data points obtained from p14-17 (grey, $n = 4$ IHCs) and p10 (pink, $n = 5$ IHCs) with slow perfusion of 10 μM isradipine, performed in the presence of 10 mM $[\text{Ca}^{2+}]_e$. Solid lines are power function fits to the combined datasets. Average exponents from fitting individual cells are: 1.01 ± 0.23 (p14-17) and 2.05 ± 0.21 (p9-10). For comparison, dotted lines show power fits to p15-16 (black) and p6-8 (magenta) data performed in 5 mM $[\text{Ca}^{2+}]_e$, as displayed in Figure 7 in the main figure. (B-D) Probing saturation with a restricted Q_{Ca} fitting range. (B) Data from an example p15 IHC in isradipine experiments (5 mM $[\text{Ca}^{2+}]_e$), where datapoints were either fitted with the full (solid line) or restricted (dotted line) Q_{Ca} range, as a fraction of the

maximum Q_{Ca} per cell (see panel C). (C) Average Q_{Ca} range where limited saturation was found in $[Ca^{2+}]_e$ experiments, and the average actual Q_{Ca} range used for restricted fitting for isradipine experiments, both expressed as a ratio to maximum Q_{Ca} . (D) Average power, m , from fitting the full and restricted Q_{Ca} range in isradipine experiments.