

Supporting Information

Vaithianathan and Matthews 10.1073/pnas.1323962111

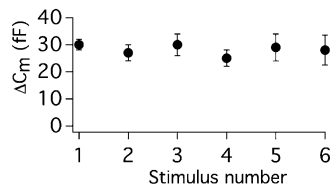


Fig. S1. Capacitance responses to 10-ms depolarizations given at intervals of 10 s. The size of the capacitance response evoked by 10-ms voltage-clamp depolarizations did not change during a series of stimuli separated by 10 s, which indicates that this interval was sufficient for refilling of the ultrafast pool after it was depleted. Data points are mean \pm SEM from seven terminals.

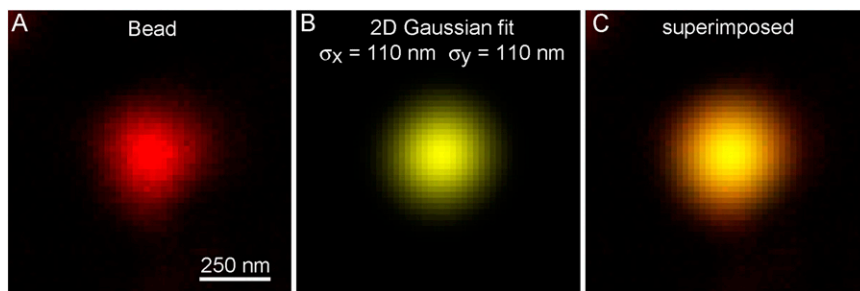


Fig. S2. Measurement of the point-spread function of the microscope. (A) Image of a single 27-nm bead. (B) Two-dimensional Gaussian fitted to A by using Igor Pro. The indicated SD (110 nm) corresponds to a FWHM of 259 nm. (C) Superposition of fit (yellow) with bead image (red).

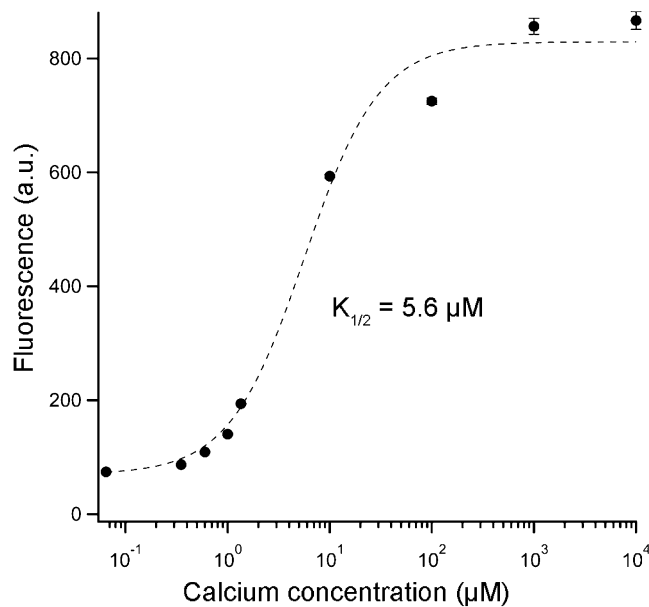


Fig. S3. Calibration of Fluo-2LA calcium indicator dye. Calcium concentration standards (World Precision Instruments; Invitrogen/Molecular Probes) were mixed with 100 μ M Fluo-2LA and loaded into patch pipettes. Confocal images were then acquired in a 4.1μ m \times 4.1μ m region in the center of the shank of the pipette to measure the fluorescence at each calcium concentration. Data points represent the average (\pm SEM) of six measurements. The dashed line indicates a Hill equation with $K_{1/2} = 5.6 \mu$ M and a Hill coefficient of 1.2, fitted to the data by using Igor Pro.