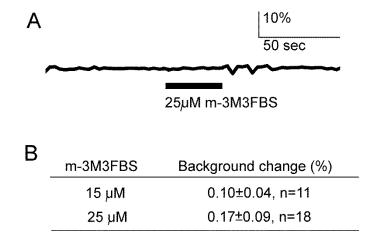


**Supplementary figure1** A representative record from a mouse olfactory sensory neuron showing increases in intracellular Ca<sup>2+</sup> levels in the soma (red trace) and dendritic knob (blue trace) in response to bath application of high K<sup>+</sup> (40 mM) saline, the PLC activator m-3M3FBS (25  $\mu$ M), and adenylyl cyclase activator forskolin (3  $\mu$ M). Black bars on the top of each response indicate stimulus time.



**Supplementary figure2 A:** A representative record from background region of a fluorescence image showing <0.5% changes in the fluorescence intensity during m-3M3FBS (25  $\mu$ M) application (black bar). **B:** Mean peak values of fluorescence level changes in solution (cell-free background regions) during application of m-3M3FBS (15 and 25  $\mu$ M).