Supplement

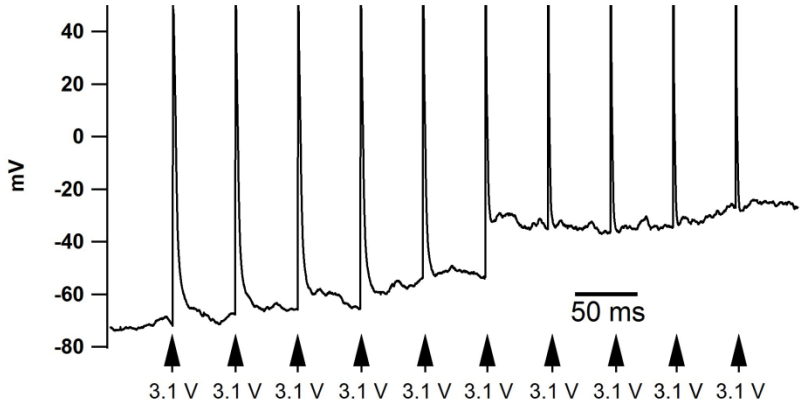

Fig. S1. Repetitive pulses lead to decreases in membrane resistance. Trains of voltage pulses were applied to chromaffin cells in order to stimulate trains of action potentials recorded with a patch-clamp pipette in current-clamp mode. The abrupt and continued steady-state depolarization after the sixth pulse is attributable to a drop in the membrane resistance.

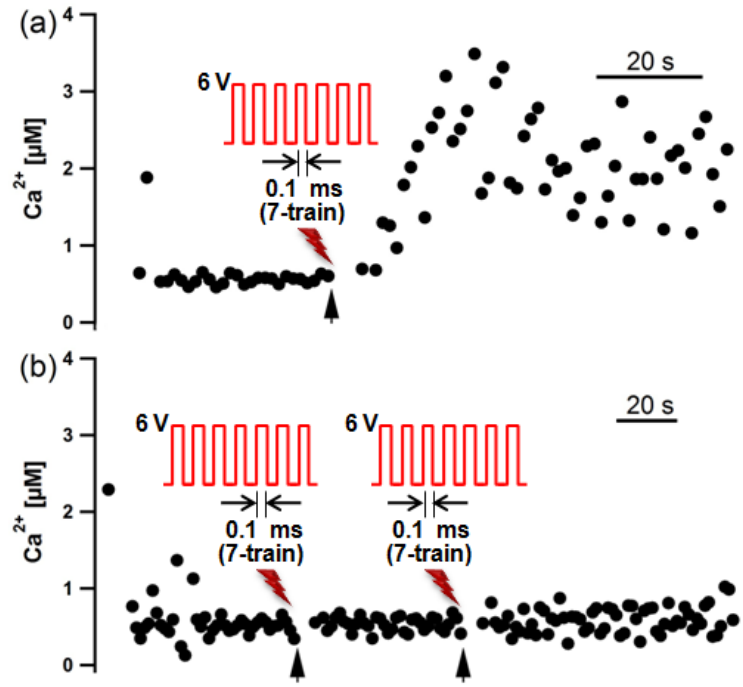

Fig. S2. Voltage pulses do not appear to release Ca^{2+} from internal stores. (a) Sample response where the stimulus protocol leads to a pronounced increase in $[Ca^{2+}]_i$ when the bath contains 2 mM $CaCl_2$. Similar increases in $[Ca^{2+}]_i$ were seen in two other cells, whereas two others did not show a clear increases in $[Ca^{2+}]_i$. (b) Sample recording where the stimulus protocol leads to no discernible increase in $[Ca^{2+}]_i$ when the bath solution contained zero added Ca^{2+} and 5 mM EGTA. Similarly, no discernible $[Ca^{2+}]_i$ increases were seen in four other cells in response to the stimulus protocol.