

Supplemental Figure Legends.

Figure 1S. Spontaneous oscillations in outward current recorded from an on-cell patch with a pipette filled as stated in Methods. Oscillation frequency = 0.4 Hz.

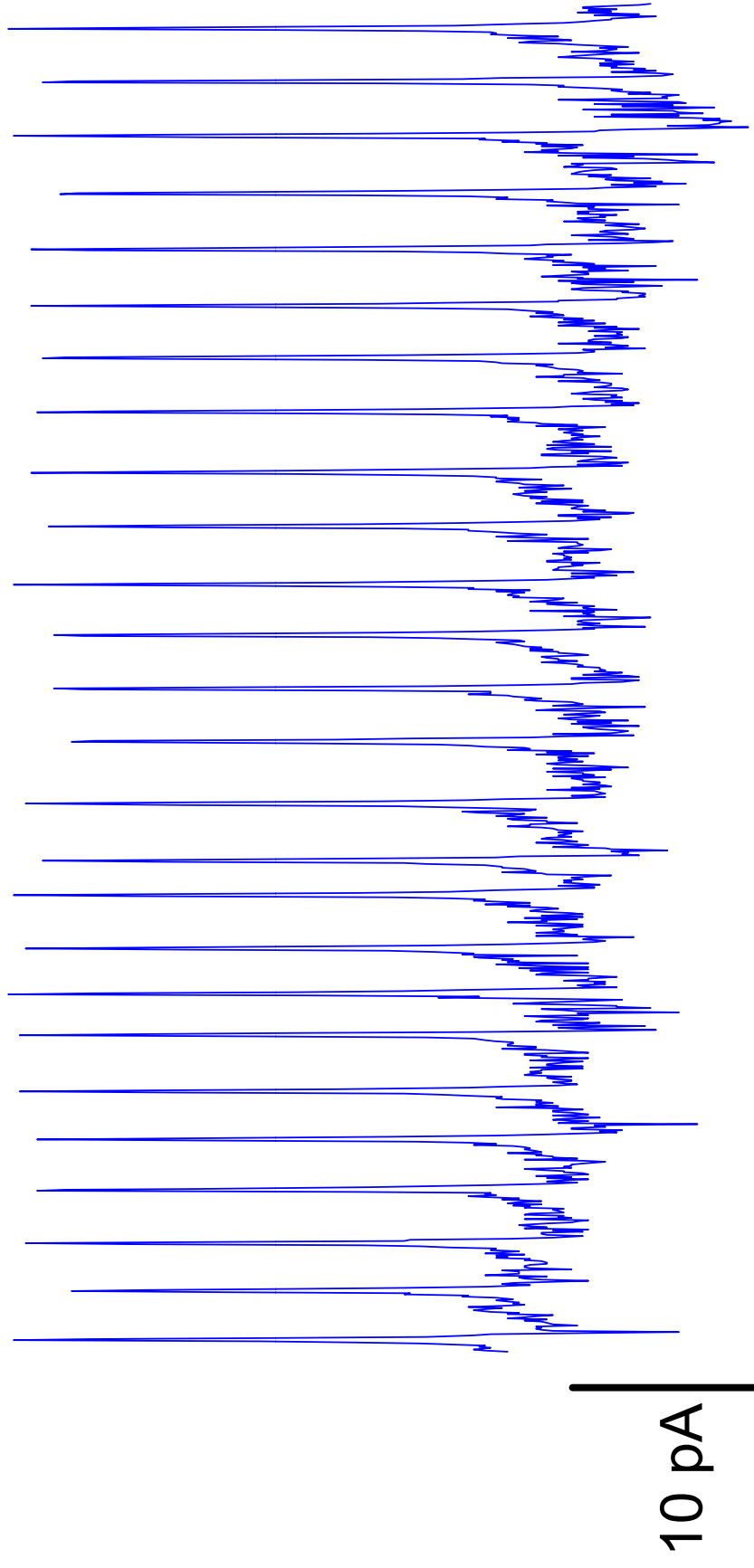
Figure 2S. Effect of Ca^{2+} -free external solution on $[\text{Ca}^{2+}]_i$ oscillations in HL-1 cells. **A.** Minimal restoration of $[\text{Ca}^{2+}]_i$ oscillations on restoring external Ca^{2+} . **B.** Restoration of $[\text{Ca}^{2+}]_i$ oscillations on restoring external Ca^{2+} .

Figure 3S. Effect of added isoproterenol (10 μM) on $[\text{Ca}^{2+}]_i$ oscillations in HL-1 cells. *Left* shows effect of addition on $[\text{Ca}^{2+}]_i$ oscillations in nine individual HL-1 cells. *Right* shows effect of addition average $[\text{Ca}^{2+}]_i$. Mean \pm SE (n = 32).

Figure 4S. **A.** Action potential recorded by stimulation of whole-cell current-clamped HL-1 cell. Current = 0.4 nA, 2 ms. **B.** Voltage-activated inward and outward currents in a whole-cell voltage-clamped HL-1 cell. N.B. Whole-cell pipette filling solution did not contain 10 mM TEA Cl. HP = -80 mV **C.** Current traces showing voltage inactivation of the voltage-activated inward current component of an HL-1 cell. HP = -80 mV.

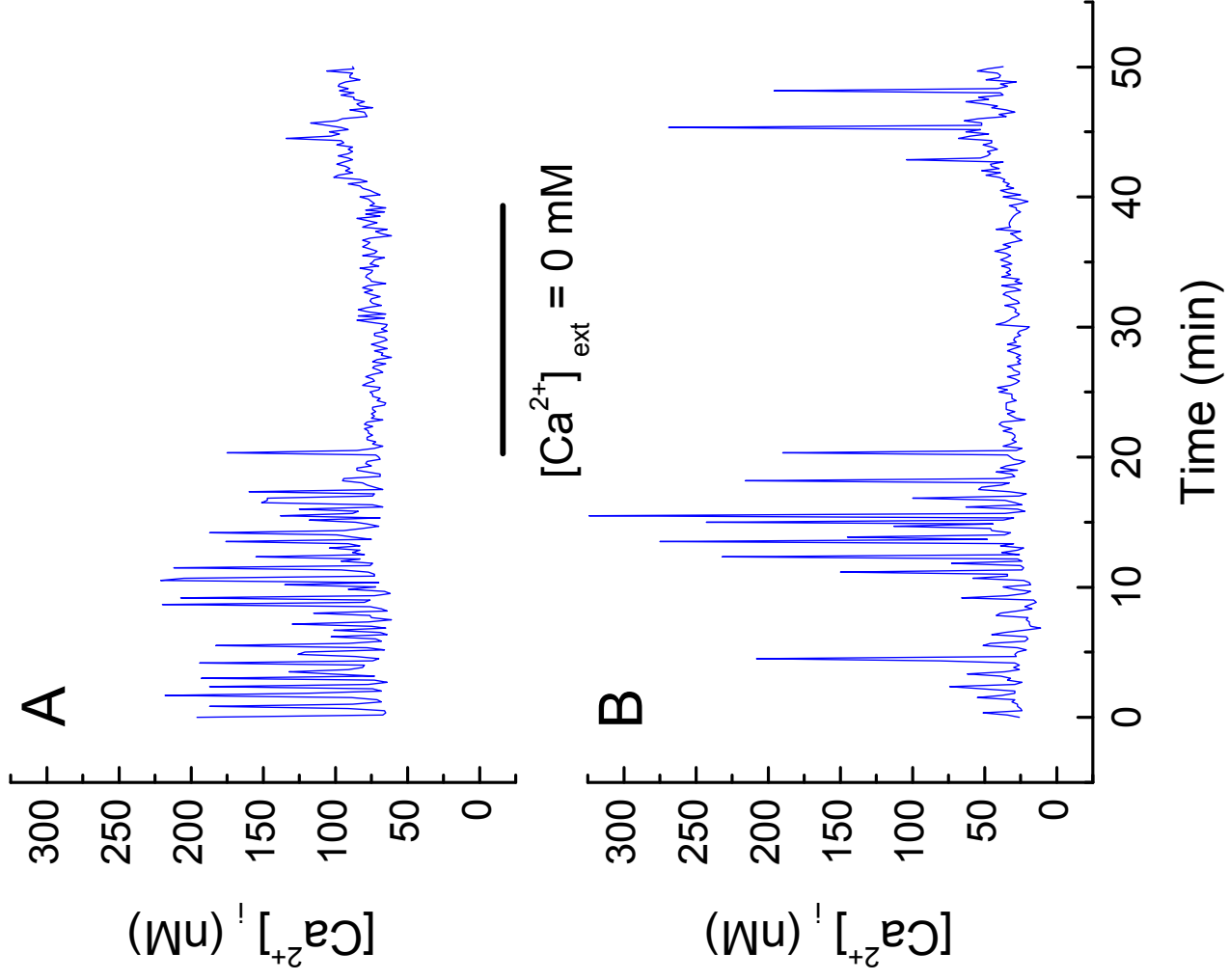
Figure 5S. Representative traces of the protocols used to measure: 1) hyperpolarization-activated I_f (*left*) and 2) tail currents of fully activated I_f (right) in HL-1 cells. *Top traces:* currents; *Bottom traces:* voltages. Time and current traces apply to all figures.

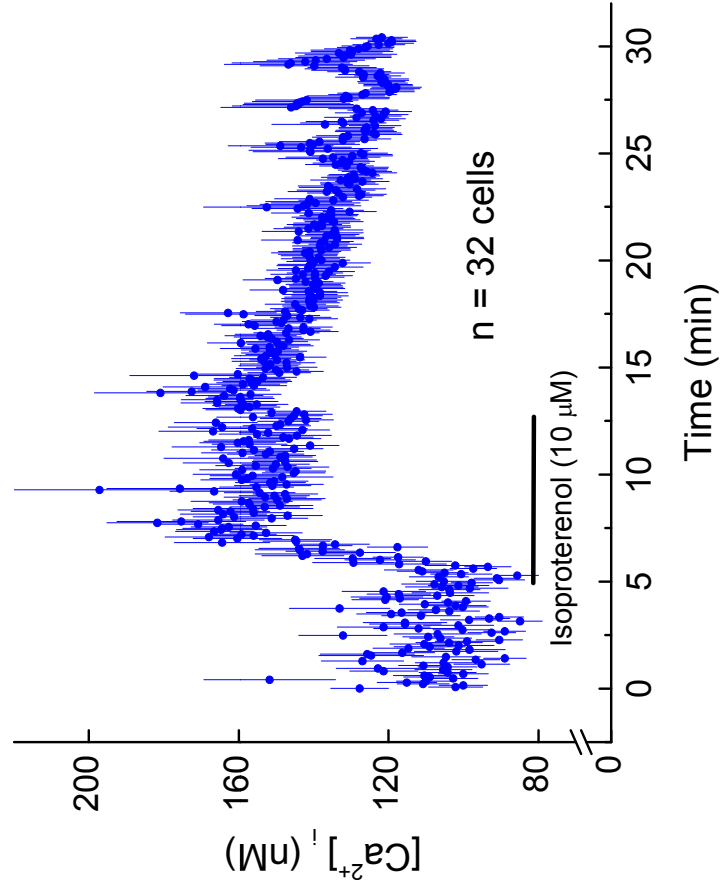
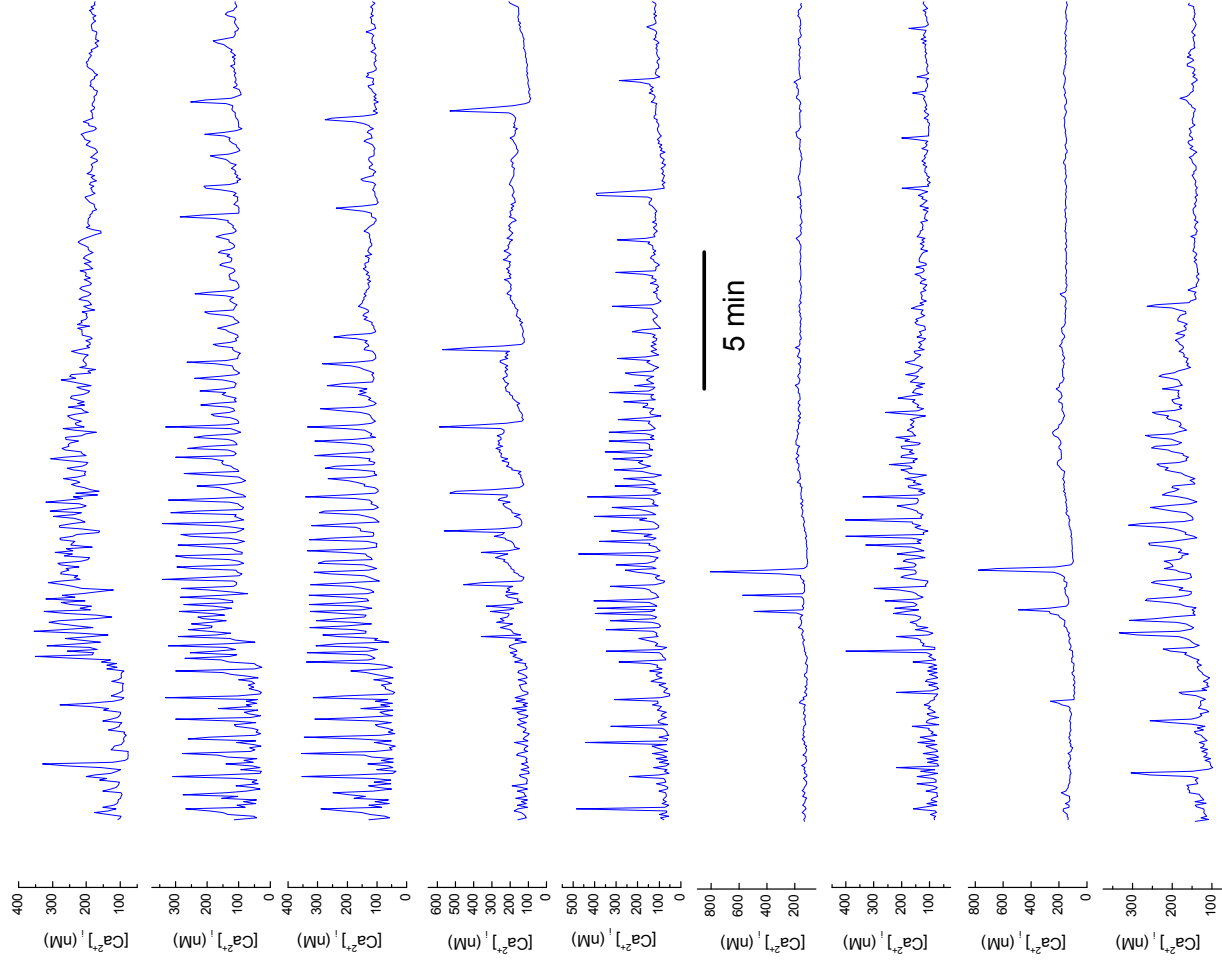
Figure 6S. Effect of LPS on long-lasting, L-type Ca^{2+} currents in HL-1 cells. **A.** Overlay of three current traces generated by voltage clamp of the same cell. **Black-** voltage activation of inward current of cell bathed with standard salt solution containing Na^+ ; **Red-** voltage activation of inward current of cell bathed with Na^+ -free/5-mM Ca^{2+} solution; **Blue-** voltage activation of inward current of cell bathed with Na^+ -free/5-mM Ca^{2+} solution plus LPS ($1\mu\text{g/ml}$ *E. Coli*). **B.** Current-voltage (I-V) plot of voltage-activated L-type Ca^{2+} current without and with added LPS ($1\mu\text{g/ml}$ *E. Coli*).



10 pA

10 s





Isoproterenol (10 μ M)

