

Inhibition of Rac1 reduces store overload-induced calcium release and protects against ventricular arrhythmia

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Supplemental videos

Videos of isolated adult cardiomyocytes were taken using an inverted Nikon Eclipse TE300 phase contrast microscope, and images were captured using Image Master 5 Software (Photon Technology International).

Supplemental Video 1. Normal uniform contractions elicited by pacing isolated adult Rac1^{f/f} cardiomyocytes. Cardiomyocytes were incubated with Krebs-Ringer-Hepes (KRH) buffer containing 1 mM Ca²⁺. Under control conditions myocytes are quiescent, and uniform contractions are evoked when cell is paced at 0.5 Hz. Video plays at twice actual speed. Width of frame is 270 μm.

Supplemental Video 2. Spontaneous waves in isolated adult Rac1^{f/f} cardiomyocytes. Cardiomyocytes were incubated with Krebs-Ringer-Hepes (KRH) buffer containing 6 mM Ca²⁺ to induce Ca²⁺ overload and subsequent spontaneous Ca²⁺ release, which gives rise to Ca²⁺ waves and waves of contraction. Video plays at twice actual speed. Width of frame is 270 μm.