Method

- Electrophysiology

Voltage-gated Ca\textsuperscript{2+} currents (I\textsubscript{Ca}) were recorded using conventional whole-cell techniques. Electrode resistances varied from 3–5 MΩ when filled with internal solution. Measurements were performed using an Axopatch 200 A patch-clamp amplifier (Molecular Devices, Sunnyvale, CA). Voltage and current commands and the digitization of membrane voltages and currents were controlled using a Digidata 1322A interfaced with Clampex 10.2 of the pClamp software package (Molecular Devices, Sunnyvale, CA), on an IBM-compatible computer. Data was analyzed using Clampfit (Molecular Devices, Sunnyvale, CA) and Prism 5.0 (GraphPad, San Diego, CA). The cells were moved from the incubator to a recording chamber, visualized using an inverted microscope, and subjected to voltage clamp experiments using the whole cell technique. Currents were low-pass filtered at 2 kHz using the four-pole Bessel filter of the amplifier. Capacitance (Cm) values were automatically calculated during recordings by the pClamp 10.2 software. Multiple independently controlled syringes served as reservoirs for a gravity-driven fast drug perfusion system. Switching between solutions was accomplished by manually controlled valves. All experiments were conducted at room temperature.

- Solutions and drugs

The internal (pipette) solution contained the following (in mM): 140 CsCl, 1.2 MgCl\textsubscript{2}, 4 MgATP, 0.4 Na\textsubscript{2}GTP, 10 phosphocreatine, 10 HEPES, and 10 EGTA; the solution was adjusted to pH 7.2 with CsOH. The external (bath) solution contained (in mM) 155 tetraethylammonium (TEA)-Cl, 2.5 CaCl\textsubscript{2}, 1.2 MgCl\textsubscript{2}, 14 glucose, and 10.5 HEPES; the solution was adjusted to pH 7.4 with TEA-OH.
Supplementary Fig. 1

Figure S1. Effect of 2-APB on myometrial contraction evoked by high K-solution and voltage-dependent Ca\textsuperscript{2+} current in pregnant rat myometrium.

(A) Left: a representative trace of 2-APB (10 μM) effect on myometrial contraction evoked by high-K (70 mM) solution. The high K-evoked contraction was completely abolished by 10 μM nifedipine. Right: summary of 2-APB effect on the high K-evoked contraction. (B) Left: a representative trace of 2-APB (10 mM) effect on voltage-dependent Ca\textsuperscript{2+} current in pregnant rat myocyte. Right: summary of 2-APB effect on voltage-dependent Ca\textsuperscript{2+} current.