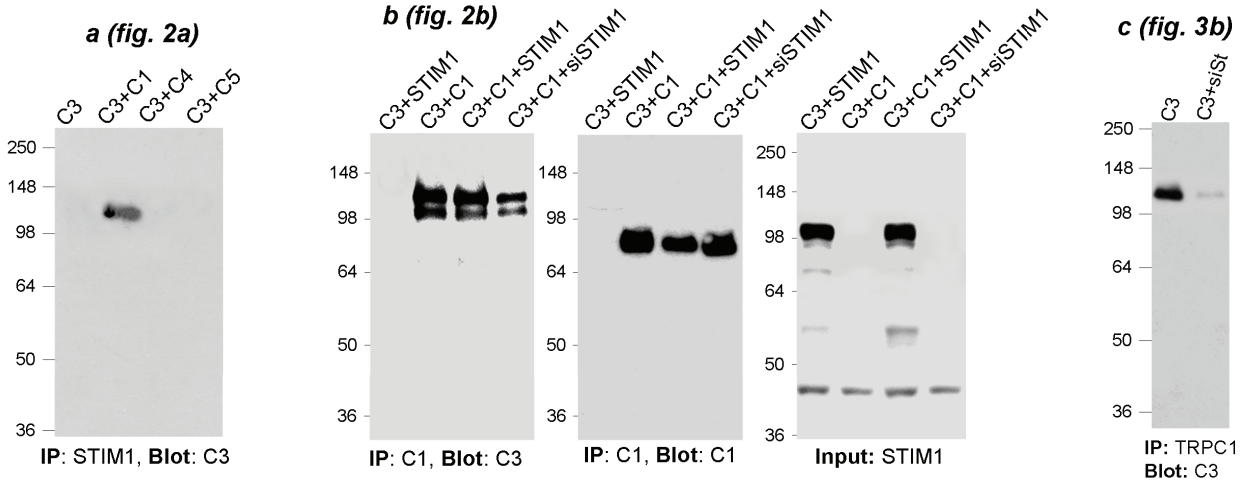

Figure S1 Full gel scans of protein blots representing key experiments. **(a),** is the full blot of the truncated upper blot in Fig. 2a in which extract from HEK cells transfected with Flag-TRPC3 alone (C3); Flag-TRPC3+HA-TRPC1 (+C1), HA-TRPC4 (+C4) or HA-TRPC5 (+C5) were used to IP native STIM1 and probed for co-IP of TRPC3. **(b),** are the full length blots of the truncated blots in Fig. 2b in which HEK cells treated with scrambled (first three lanes) and STIM1 siRNA were transfected with Flag-TRPC3 and myc-STIM1 (C3+STIM1); Flag-TRPC3+HA-TRPC1 (C3+C1) or Flag-TRPC3+HA-TRPC1+myc-STIM1 (C3+C1+STIM1) (last two lanes) and the extracts were used to IP TRPC1 with α-HA antibody and probe for co-IP of TRPC3 (left blot) and TRPC1 (middle blot). The blot on the right is the input of myc-STIM1. **(c),** is the full blot of the truncated upper blot in Fig. 3b in which the native TRPC1 was immunoprecipitated with the Sigma anti-TRPC1 and probed for co-IP of TRPC3 expressed at low levels. The full length blots demonstrate the specificity of the antibodies for these and other experiments. Full length blot for TRPC6 is given in the insert of Fig. 4c and full length blot for the anti-TRPC3 antibodies used in Fig. 3c can be found in Kim JY et al., J Biol Chem. 2006, 281:32540-9.

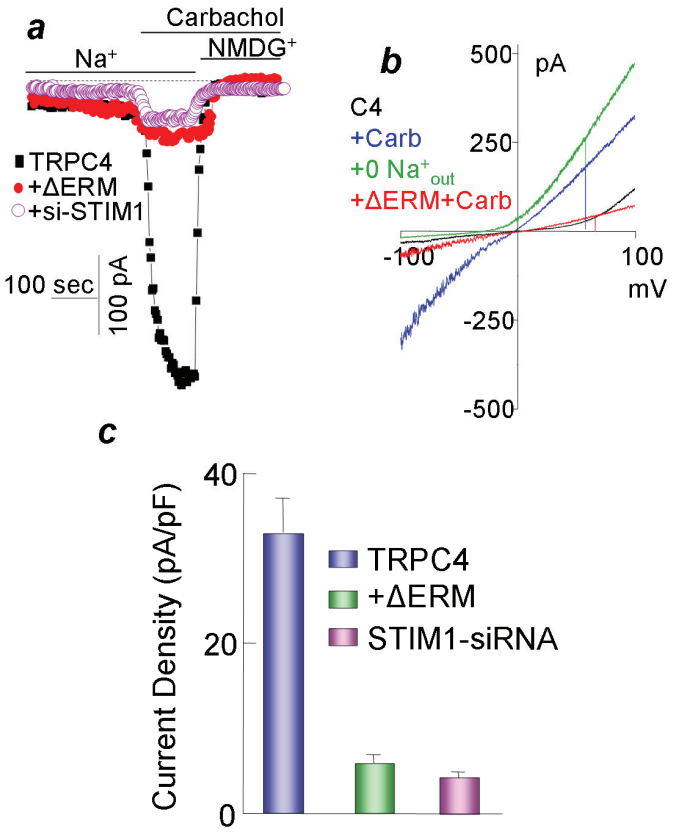

Figure S2 STIM1 regulates TRPC4. **(a),** Control HEK cells and cells treated with siSTIM1 (maroon, ○) were transfected with TRPC4 alone (black ■) or with TRPC4+ΔERM-STIM1(D76A) (red ●). Spontaneous and agonist stimulated TRPC4 currents were measured with the protocol described in Fig. 1 legend. **(b),** shows the I/V relationships at the indicated conditions and **(c),** is the mean±s.e of 4 experiments.