

**Supplementary Figure 4.** (a) Averaged  $[Ca^{2+}]_{cyt}$  at indicated time points after application of adenosine (10µM) followed by DNP-HSA (100ng/ml) to anti-DNP-HSA IgE pre-treated  $Trpm4^{+/+}$  (n=89) and  $Trpm4^{-/-}$  (n=82) BMMCs in  $Ca^{2+}$ -free, 5mM EGTA extracellular medium. All measurements are representative of at least three independent experiments; n value represents number of cells. (b) Membrane potential change upon application of 156mM KCl solution. Membrane potential was measured using the current clamp configuration, in perforated patch clamp mode. Extracellular solution was changed from normal Krebs (156mM NaCl) to a solution where  $Na^+$  was replaced completely by  $K^+$  (156mM KCl). Representative trace from six experiments using  $Trpm4^{+/+}$  BMMCs. Identical results were obtained with  $Trpm4^{-/-}$  BMMCs (not shown). (c) Averaged  $[Ca^{2+}]_{cyt}$  at indicated time points after application of adenosine (10µM) followed by DNP-HSA (100ng/ml) to anti-DNP-HSA IgE pre-treated  $Trpm4^{+/+}$  (n=110) and  $Trpm4^{-/-}$  (n=122) BMMCs, with  $Na^+$  replaced by  $K^+$  in the extracellular medium.