Supporting Information

Sandoz et al. 10.1073/pnas.0906267106

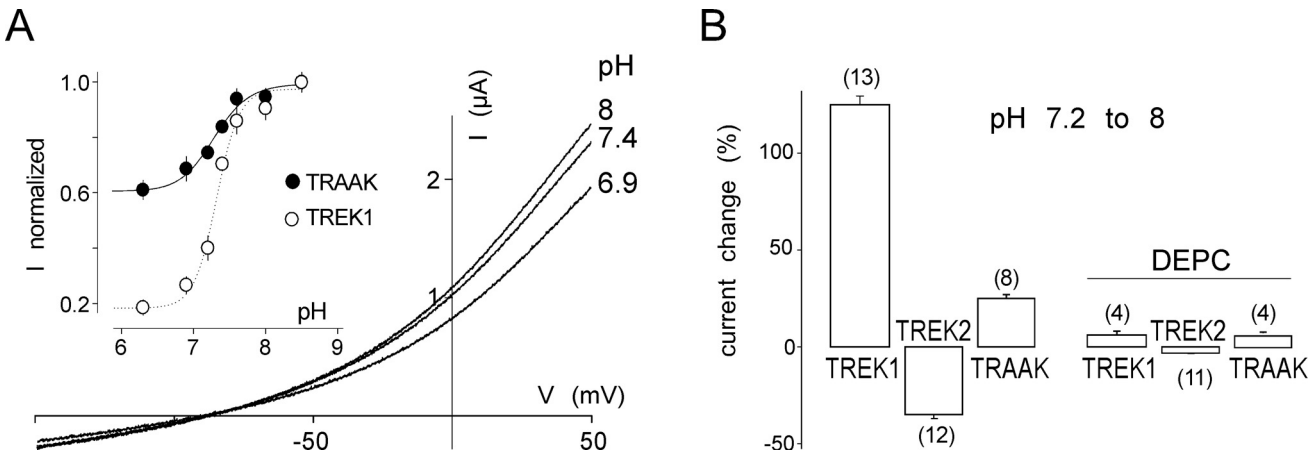

Fig. S1. TRAAK is inhibited by external acidification. (*A*) Inhibition by acidic pHs is characterized by an apparent pK of 7.30 ± 0.05 ($n = 8$) and a Hill coefficient of 1.8 ± 0.3 ($n = 8$). This value is very close to that observed for TREK1. But a major difference with TREK1 is the persistence of a large proportion of the maximal current even at pH 6.9. At pH 6.9, it remains 60% of the current recorded at pH 8.5. This fraction of TRAAK current is resistant to stronger acidifications suggesting two populations of TRAAK channels that can be discriminated on their sensitivity to pH. (B) The effects of pH on TRAAK are prevented by preincubating oocytes in a medium containing DEPC.

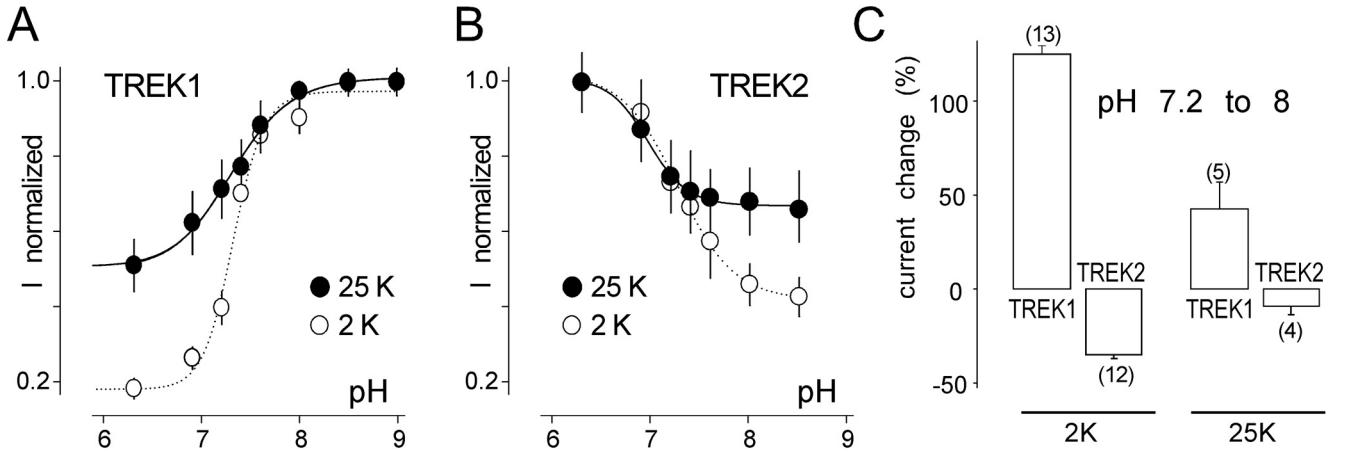

Fig. S2. TREK sensitivity to external pH variations is reduced by a high external K^+ concentration. pH-dependence of TREK1 (*A*) and TREK2 (*B*) channel activities in ND96 medium containing 2 mM K^+ (open circles) or 25 mM K^+ (black circles). (*C*) Percentage of current change obtained by increasing the pH of the external medium from 7.2 to 8 in 2 or 25 mM external K^+ as indicated. Error bars, SEM.