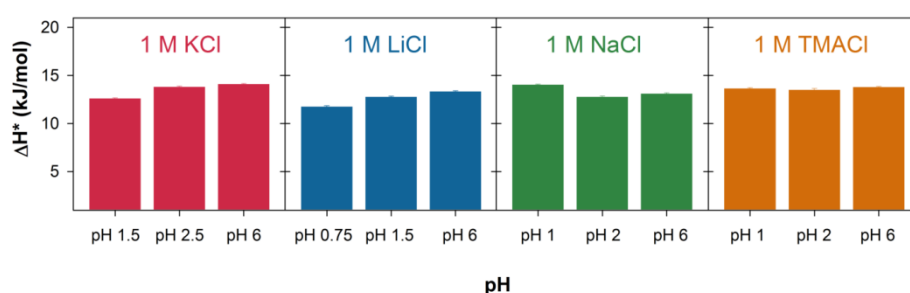


[Supplementary material]

Temperature effects on solution conductivity and channel conductance

For a complete characterization of the temperature-dependent electrophysiology, we measured the free solution conductivities as a function of both pH and temperature (Fig. S1).

(a)



(b)

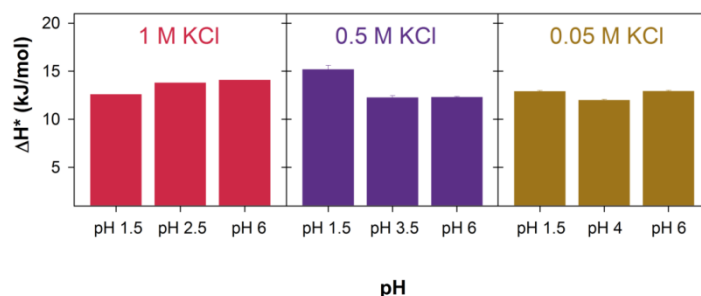


Figure. S1 Free solution enthalpies ΔH^* vs. pH obtained from Eq. (1) for all salts and concentrations under study.

We also show the Eyring plots of the channel conductance in KCl solutions of different concentration and the corresponding activation enthalpies ΔH^* at different pH values.

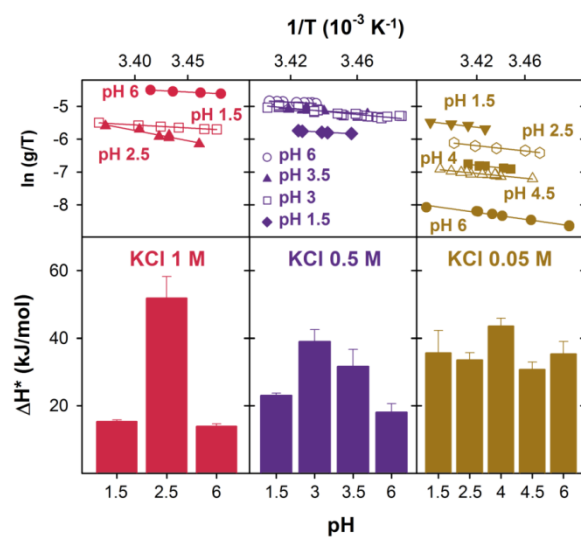


Figure. S2 Eyring plot of the channel conductance in KCl solutions of different concentration and activation enthalpies ΔH^* at different pH values.