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Supporting Material

Measuring ion channels on solid supported membranes

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Supplemental Material

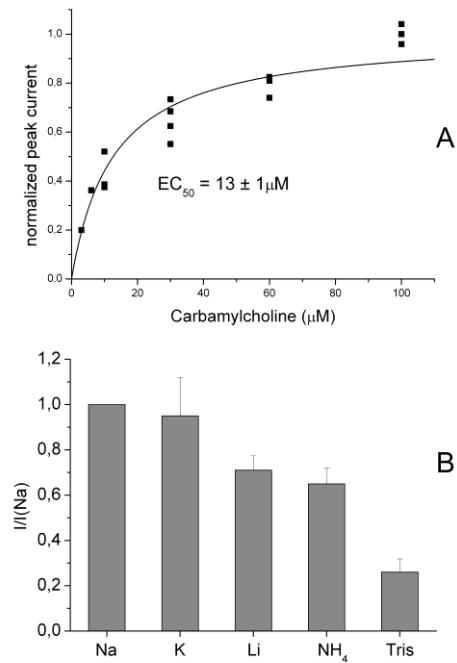


Fig. S1: Kinetic properties of the nAChR on the SSM. A) CCh dose-response relationship of the normalized peak currents. Four independent measurements are combined, each was fitted using a hyperbolic function and the data were normalized to the saturation value given by the fit. Finally the 4 datasets were fitted together using a hyperbolic function (solid line) yielding an EC_{50} of $13 \pm 1 \mu\text{M}$. B) Ion specificity of the peak currents at a cation concentration of 100 mM. For each ion the peak currents of three separate experiments were normalized to the Na^+ current and mean values and errors (SEM) are given.

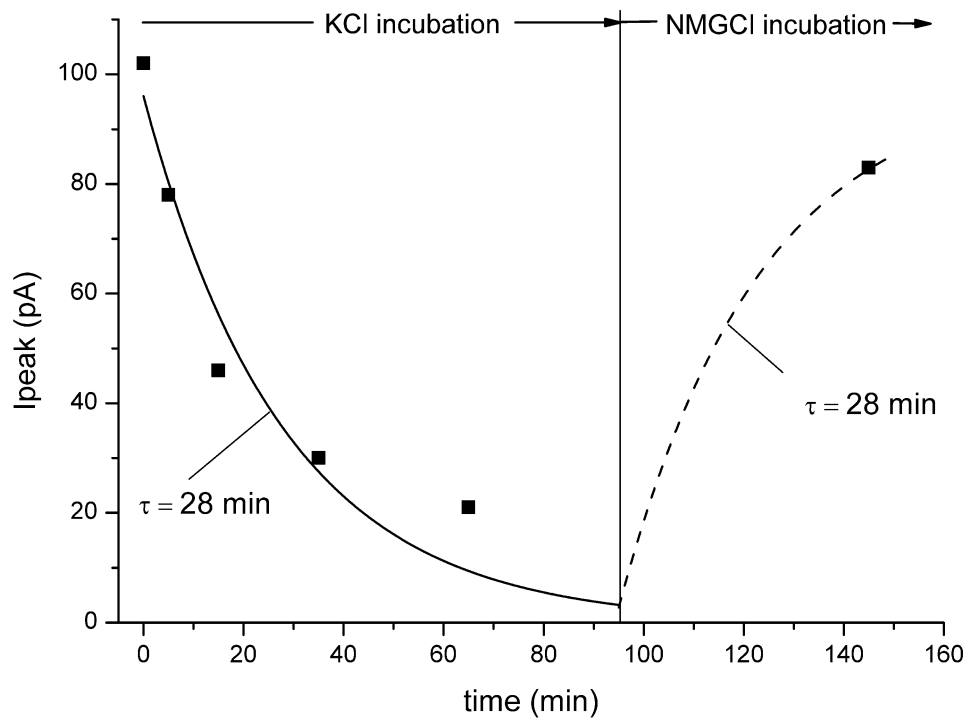


Fig. S2: Stability of the cation gradient across the membrane of the nAChR containing vesicles. Conditions as in Fig. 3 with K^+ instead of Na^+ . At $t = 0$ the NMG phase ($t = 3 - 4$ s in Fig. 3) was omitted leading to a gradual decline of the cation gradient and a concomitant decrease of the signal. The solid line is an exponential fit yielding a time constant of 28 min. At $t = 96$ min the NMG phase was re-established leading to restoration of the signal. For comparison an exponential increase with a time constant of 28 min is included in the figure (dashed line).