



Supplementary Figure 1. A. Comparison of leak current amplitude in 115 mM and 145 mM extracellular  $\text{Na}^+$ . Data for p.S779N ( $n=4$ ) are normalised to current amplitude in response to voltage step to  $-140$  mV measured in 115 mM  $\text{Na}^+$ . Wild type data ( $n=4$ ) is normalised by comparing the mean current amplitudes of wild type and p.S779N pumps at  $-140$  mV and dividing the wild type currents with the fold difference. B. Charge-voltage relationships measured in loaded (open symbols) and unloaded (solid symbols) oocytes. The dataset for loaded oocytes is from experiments that were used to estimate the  $Q_{\text{tot}}$  in figure 3C. C. Current-voltage relationships of the steady state current in loaded (open symbols) and unloaded (solid symbols) oocytes. Data for only a subset of loaded oocytes that were studied at the same batches of oocytes as the unloaded oocytes are shown.