Supplementary Figure 1. Step Repolarization Protocols for WT, S624A, and Y652A in the presence or absence of R-roscovitine.
A) Representative current traces elicited from the step repolarization voltage protocol shown to the left. WT, S624A, and Y652A tail currents were measured at their peak (◇) in the absence (top row) and presence of 200 µM R-roscovitine (bottom row). B) Maximal tail current amplitudes from A were plotted against the repolarization voltage to show reversal potentials, which were then compared between control and R-roscovitine. The shifts for WT ($E_{\text{rev}} = -80.16 \pm 1.31$ to $-76.7 \pm 1.33$ mV; $p = 0.0294$, paired t-test) and S624A ($E_{\text{rev}} = -82.25 \pm 1.27$ mV to $-77.17 \pm 2.00$ mV; $p = 0.0301$, paired t-test) were significant, but not for Y652A ($E_{\text{rev}} = -81.08 \pm 1.28$ mV to $-80.61 \pm 2.12$ mV; $p = 0.6238$, paired t-test). C) Percent inhibition of tail currents during the step repolarization protocol, which were calculated from the values in B (* = $P < 0.05$, ** = $P < 0.01$; one-way ANOVAs). $n_{\text{WT}} = 14$, and $n_{\text{S624A,Y652A}} = 9$. 

A

|       | WT | S624A | Y652A |
|-------|----|-------|-------|
|       | Control | 0.5 s | 0.5 s |
|       | 3 µA | 1 µA | 2 µA |

B

|       | WT | S624A | Y652A |
|-------|----|-------|-------|
|       | $I_{\text{peak,Ctrl}}$ | $I_{\text{peak,Rosc}}$ | $I_{\text{peak,Rosc}}$ |
|       | $E_{\text{rev}} = -80.16 \pm 1.31$ mV | $-82.25 \pm 1.27$ mV | $-81.08 \pm 1.28$ mV |
|       | $p = 0.0294$ | $0.0301$ | 0.6238 |

C

|       | WT | S624A | Y652A |
|-------|----|-------|-------|
|       | % Tail Inhibition | % Tail Inhibition | % Tail Inhibition |
|       | $P = 0.05$, ** $P = 0.01$ | one-way ANOVAs | $n_{\text{WT}} = 14$, and $n_{\text{S624A,Y652A}} = 9$. |