

**Table S1:** Properties of the Conductance-Voltage (G-V) relationships of L-Anap-incorporated spHCN channels in comparison to the wild type

	$V_{1/2}$ (mV)	$V_s$ (mV)	n
<i>spHCN WT</i>	$-58.0 \pm 0.8$	$6.6 \pm 0.2$	8
<i>spHCN S346Anap</i>	$-49.8 \pm 3.2^*$	$7.9 \pm 0.8$	4
<i>spHCN L348Anap</i>	$-65.1 \pm 2.6^*$	$8.7 \pm 1.8$	4
<i>spHCN S353Anap</i>	$-56.6 \pm 5.4$	$7.6 \pm 0.6$	4
<i>spHCN W355Anap</i>	$-65.0 \pm 2.3^*$	$8.5 \pm 0.7^*$	6
<i>spHCN F359Anap</i>	$< -100 \pm 1.0^{**}$	n.d.	3
<i>spHCN W218Anap</i>	$-60.9 \pm 2.6$	$9.2 \pm 1.4^*$	3

Statistical Significance: \*  $p < 0.05$ , \*\*  $p < 0.001$  compared to the wild type using two-tailed t-test