Supplementary Table 4. Statistics: Whole Cell Electrophysiology - pertaining to Figure 2.

Test:	Kruskal-Wallis (Non-Parametric ANOVA)			
Variable	I_{max} (pA) by Genotype	I_{max} (pA pF^{-1}) by Genotype	G_{max} (pA mV^{-1}) by Genotype	G_{max} (pA pF^{-1} mV^{-1}) by Genotype
chi-squared	20.895	19.81	19.94	18.718
df	2	2	2	2
p-value	0.000029	0.00004993	0.00004677	0.0000862
Observations	77	77	76	76

Variable	E_{rev} (mV)	E_m at I_{max} (pA pF^{-1}) by Genotype	E_m (mV, $I_{window,peak}$) by Genotype	Fraction $I_{window,peak}$ by Genotype
chi-squared	2.1027	3.9776	1.6093	2.5406
df	2	2	2	2
p-value	0.349500	0.1369	0.4472	0.2808
Observations	77	77	68	68

Variable	$V^{act}_{1/2}$ (mV) by Genotype	k^{act} (mV) by Genotype	$V^{inact}_{1/2}$ (mV) by Genotype	k^{inact} (mV) by Genotype
chi-squared	2.6801	5.3346	1.8052	1.4302
df	2	2	2	2
p-value	0.261800	0.06944	0.4055	0.4891
Observations	79	79	84	84

Variable	RFI_{slope} (ms mV^{-1}) by Genotype	Tau_{oofi} (ms) by Genotype	G_{slope} (pA pF^{-1} mV^{-1}) by Genotype	Cell Capacitance (pF) by Genotype
chi-squared	4.7273	8.0805	1.3142	0.089097
df	2	2	2	2
p-value	0.094080	0.01759	0.5184	0.9564
Observations	61	57	77	115

Definitions:		Definitions:	
I_{max} (pA)	Max. macroscopic sodium current developed	$V^{act}_{1/2}$ (mV)	The voltage at which half-maximal steady-state activation is achieved
I_{max} (pA pF^{-1})	Max. current density developed, adjusted for capacitance	k^{act} (mV)	The rate of current development over the voltage range through $V^{act}_{1/2}$
G_{max} (pA mV^{-1})	Max. conductance developed, adjusted for driving force	$V^{inact}_{1/2}$ (mV)	The voltage at which half-maximal steady-state inactivation is achieved
G_{max} (pA pF^{-1} mV^{-1})	Max. conductance density developed, adjusted for driving force & capacitance	k^{inact} (mV)	The rate of current decay over the voltage range through $V^{inact}_{1/2}$
E_{rev} (mV)	Observed reversal potential of the sodium current-voltage relationship	RFI_{slope} (ms mV^{-1})	The rate of recovery from inactivation (RFI) over the voltage range -100 to -80mV
E_m at I_{max} (pA pF^{-1})	Membrane potential at which Max. current is developed	Tau_{oofi} (ms)	The time constant of onset of inactivation while exposed to near-peak window current potential
E_m (mV, $I_{window,peak}$)	Membrane potetial a which the peak window current is achieved	G_{slope} (pA pF^{-1} mV^{-1})	This is the slope of the linear portion of the macroscopic IV relationship through E_{rev}
Fraction $I_{window,peak}$	The magnitude of the peak window current (fraction current developed)	Cell Capacitance (pF)	Whole cell capacitance calculated as the factor of peak instantaneous current and decay constant

*Note: Shaded values represent adjusted p-values falling below the predetermined cutoff ($\alpha = 0.05$).