Inhibition of Navβ4 peptide-mediated resurgent sodium currents in Nav1.7 channels by carbamazepine, riluzole and anandamide

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Supplemental Table 1. Decay time constant and voltage-dependence of steady-state fast inactivation for PEPD Nav1.7 channels.

	τ_h (ms)[a]	$V_{1/2}$ inactivation (mV)[b]	*n*
WT			
Ctrl	0.83 ± 0.09	-55.2 ± 2.0	5
CBZ 200 µm	0.67 ± 0.06*	-67.1 ± 3.5*	
Ctrl	0.90 ± 0.18	-55.5 ± 3.7	6
RZ 30 µm	0.62 ± 0.06	-83.4 ± 2.0*	
Ctrl	0.64 ± 0.04	-58.4 ± 0.5	4
RZ 3 µm	0.65 ± 0.07	-65.0 ± 1.5*	
Ctrl	0.74 ± 0.03	-54.4 ± 1.1	6
AEA 5 µM	0.67 ± 0.03*	-64.5 ±2.7*	
Ctrl	0.63 ± 0.03	-57.7 ± 0.4	5
AEA 500 nM	0.66 ± 0.04*	-56.8 ± 0.7	
T1464I			
Ctrl	1.83 ± 0.08	-43.9 + 1.8	6
CBZ 200 µm	1.71 ± 0.08	-50.7 ± 2.5*	
Ctrl	1.90 ± 0.13	-48.6 ± 3.2	5
RZ 30 µm	1.27 ± 0.07*	-68.4 ± 2.7*	
Ctrl	2.02 ± 0.18	-44.0 ± 0.8	4
RZ 3 µm	1.94 ± 0.24	-47.0 ± 1.0*	
Ctrl	1.96 ± 0.14	-45.7 ± 1.3	5
AEA 5 µM	1.57 ± 0.12*	-52.7 ± 1.2*	
Ctrl	1.98 ± 0.08	-45.8 ± 2.0	5
AEA 500 nM	1.86 ± 0.11	-45.5 ± 2.1	
M1627K			
Ctrl	2.23 ± 0.15	-33.1 ± 1.9	6
CBZ 200 µm	1.94 ± 0.08*	-42.2 ± 1.9*	
Ctrl	2.01 ± 0.25	-35.9 + 2.5	6
RZ 30 µm	1.36 ± 0.13*	-65.1 ± 2.8*	
Ctrl	2.07 ± 0.22	-34.8 ± 1.3	5
RZ 3 µm	1.92 ± 0.18	-41.5 ± 2.2*	
Ctrl	2.22 ± 0.11	-31.8 ± 1.5	5
AEA 5 µM	1.81 ± 0.07*	-41.3 ± 1.7*	
Ctrl	2.28 ± 0.11	-32.9 ± 0.5	4
AEA 500 nM	2.18 ± 0.05	-33 ± 1.8	

[a]The decay time constant was measured using the transient current elicited at +20 mV and fit to a single-exponential. [b]The voltage dependence of steady-state fast inactivation was examined using a series of 200 ms conditioning pre-pulses from -120 mV to +30 mV, followed by a 20 ms test pulse to +15 mV to assess channel availability. The midpoint of activation was estimated by fitting the data with a Bolztmann function. *$p < 0.05$ from control by paired student's t-test.