NaV 1.7 models

Dynamic-clamp analysis of wild-type human Nav1.7 and erythromelalgia mutant channel L858H

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**Background:**

Activates at subthreshold membrane voltages to boost membrane responses to small depolarising stimuli. So it’s an amplifier.

“This approach permitted

us to vary the ratio of expression levels of WT and

L858H within the physiological range within single neurons.”

“These observations

on small DRG neurons within a physiologically relevant range

of levels of conductance provide a quantitative mechanistic

basis for understanding the role of WT Nav1.7 in healthy DRG

neurons and the enhanced excitability of primary nociceptors

expressing L858H channels that underlies the pain phenotype

in humans carrying this mutation.”

**Human?:**

“Human Nav1.7 channels were

stably expressed in HEK-293 cell line (Cummins et al. 1998).”

**Gating:**