Human Kv4.2/KChIP2.2 Potassium Channel Cell Line

Catalog #CT6142

SPECIFICATIONS:

Class: Voltage-gated potassium channels
Expression system: HEK293 cells, constitutive expression
Gene name: KCND2/KCNIP2
Mycoplasma status: Negative (MycoAlert Kit)
Packaging: Cryopreserved cells, $6x10^6$ cells/vial
Storage recommendation: Liquid nitrogen
Validated assay: Manual patch clamp

BACKGROUND: The human KCND2 gene encodes the pore-forming subunit of Kv4.2, a voltage-gated potassium channel. The KCNIP2 gene encodes an auxiliary subunit of the channel. Kv4.2/KChIP2.2 channels expressed in neurons are therapeutic targets in nociceptive and inflammatory pain.

REPRESENTATIVE DATA:

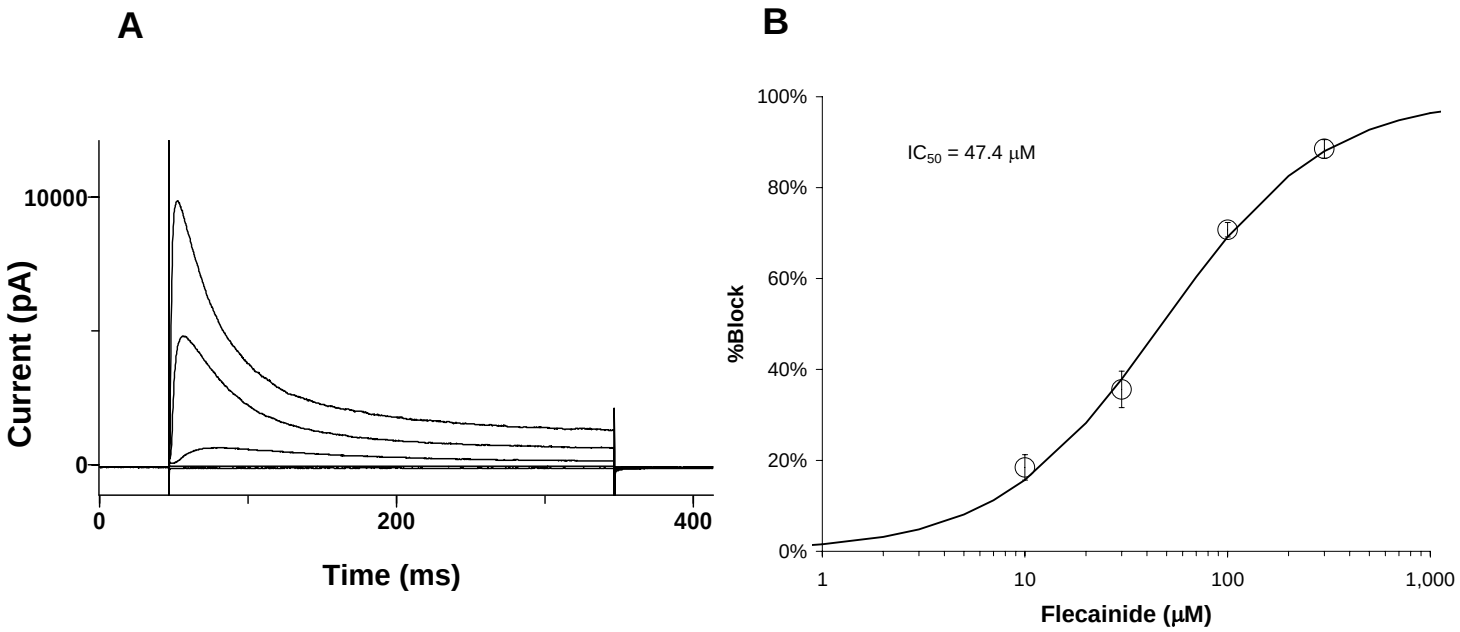

Figure 1. A: hKv4.2 current-voltage family recorded by manual patch clamp. Whole-cell currents were elicited by test pulses from -60 to +60 mV in 40 mV increments from a holding potential of -80 mV. **B:** Concentration-response relationship for flecainide inhibition of peak hKv4.2 currents at a test potential of +20 mV. The IC_{50} value was 47.4 µM.

REFERENCE: Gutman GA, et al. 2005. Pharmacol Rev. 57:473-508. International Union of Pharmacology. LIII. Nomenclature and molecular relationships of voltage-gated potassium channels.

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