PrecisION® hKv12.2 Recombinant Stable Cell Line

Catalog Number CYL3089 **Lot Number** See Vial

Contents 2 Vials, 2 x 10^6 to 4 x 10^6 in 1 mL

Background Information

The human KCNH3 gene encodes for the pore-forming subunit of the subfamily H (eag-related) voltage-gated potassium channel #3, a protein known as the Kv12.2 potassium ion channel. The gene was cloned & first described as BEC1 by Miyake et al. 1999. Gene deletion experiments in mice showed KCNH3 knock-out mice performed better in working memory, reference memory, and attention-related behavioral assays than their wild-type littermates; enhanced performance was also observed in heterozygous mutants. Additional information can be found on page 2.

Product Information

Description Recombinant HEK 293 cell line expressing the human voltage-gated potassium channel Kv12.2

Family Potassium, Voltage-Gated

Target Kv12.2

	Target Protein	Accession Number
1	Kv12.2	NM_012284
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A

Species Human

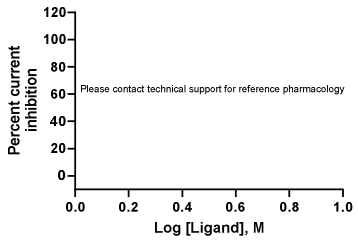
Host Cell Type HEK 293

Application Electrophysiology assay (conventional and automated patch clamp platforms)

Storage Vials are to be stored in vapor phase of liquid nitrogen

Functional Performance

HEK293 cells expressing hKv12.2 were characterized in terms of their pharmacological and biophysical properties using whole-cell patch clamp techniques.



Electrophysiology Method MPC

Reference Agonist

Reference Antagonist

Antagonist IC_{50} (μM)

Passage Stability

Please contact technical support.

Mycoplasma Testing

This lot was tested and found to be free of mycoplasma contamination. Data available upon request.

Notes

Additional functional (pharmacological and electrophysiological) validation on multiple platforms is available upon request.

Additional Ligand Information

Control Compound

Vendor Name :

Vendor Catalog No.

Additional Background Information

Interestingly, when KCNH3 was overexpressed in the forebrain impaired performance was observed in the behavioral assays. Altering KCNH3 expression changed hippocampal neuronal excitability and synaptic plasticity; suggesting that Kv12.2 could be an interesting target for cognitive enhancement (Miyake et al. 2009) or perhaps epilepsy.

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