

PrecisION[®] hHCN1 Recombinant Stable Cell Line

Catalog Number CYL3040

Lot Number

See Vial

Contents 2 Vials, 2 x 10⁶ to 4 x 10⁶ in 1 mL

Background Information

Hyperpolarization-activated, cyclic nucleotide-modulated (HCN) channels contribute to rhythmic spontaneous electrical activity in the heart and CNS. Interference with HCN1 activity can lead to various forms of arrhythmias. The spontaneous neuronal activity of HCN channels have also been implicated in the development and maintenance of a wide range of pain states and an inherited loss of HCN1 channel expression is involved in generalized idiopathic epileptic seizures.

Product Information

Description Recombinant HEK 293 cell line expressing the human hyperpolarization-activated, cyclic nucleotide-gated potassium channel 1 (HCN1)

Family HCN, Hyperpolarized

Target HCN1

	Target Protein	Accession Number
1	HCN1	NM_021072
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A

Species Human

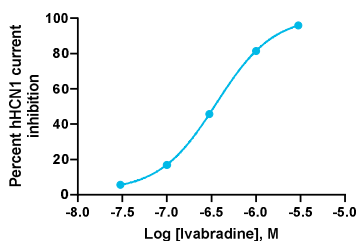
Host Cell Type HEK 293

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 hHCN1 were characterized in terms of their pharmacological and biophysical properties using whole-cell patch clamp techniques.



Electrophysiology Method QPatch

Reference Agonist

Reference Antagonist Ivabradine

Antagonist IC₅₀ (μM) 0.36

Passage Stability

This cell line has been confirmed to be stable through at least 12 passages with no significant drop in assay window or change in pharmacology.

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 Ivabradine

Vendor Name : Sigma-Aldrich

Vendor Catalog No. SML0281

Additional Background Information

N/A

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