

PrecisION[®] hKCNQ1/hminK Recombinant Stable Cell Line

Catalog Number CYL3007

Lot Number

See Vial

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

Background Information

KCNQ1 and minK form the slow delayed rectifier potassium current, I_{Ks} in the heart. This multimeric ion channel contributes to cardiac action potential repolarization and determines the heartbeat rate. Mutations in either KCNQ1 or minK that reduce I_{Ks} have been shown to cause long-QT syndrome (LQTS), a disorder of ventricular repolarization that can result in cardiac arrhythmia and sudden death. A well-recognized potential treatment for LQTS caused by reduction of I_{Ks} is to enhance functional activation of cardiac KCNQ1/minK channels.

Product Information

Description Recombinant CHO-K1 cell line co-expressing the human KCNQ1 (potassium voltage-gated channel, KQT-like subfamily, member 1) and human minK (delayed rectifier potassium channel)

Family Potassium, Voltage-Gated

Target KCNQ1/hminK

	Target Protein	Accession Number
1	KCNQ1	AF000571
2	hminK	L33815
3	N/A	N/A
4	N/A	N/A

Species Human

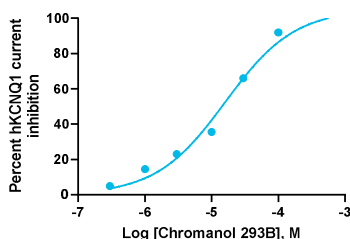
Host Cell Type CHO-K1

Application Electrophysiology assay (conventional and automated patch clamp platforms)

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

Functional Performance

CHO cells expressing hKCNQ1/hminK were characterized in terms of their pharmacological and biophysical properties using whole-cell patch clamp techniques.



Electrophysiology Method QPatch

Reference Agonist

Reference Antagonist Chromanol 293B

Antagonist IC₅₀ (μM) 16.10

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 Chromanol 293B

Vendor Name : Sigma-Aldrich

Vendor Catalog No. C2615

Additional Background Information

N/A

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