PrecisION® hKv4.3/hKChIP1 Recombinant Stable Cell Line

Catalog Number CYL3027 **Lot Number** See Vial

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

Background Information

Rapidlly inactivating voltage sensitive potassium channels are found both in neurons (A-current) and cardiac myocytes (Ito) where they are responsible of the 'notch' in phase 1 of the cardiac action potential. The channels underlying Ito in humans are principally Kv4.3 and the regional differences in expression are thought to be governed by levels of the accessory protein KChIP2. Additional information can be found on page 2.

Product Information

Description Recombinant CHO-K1 cell line co-expressing the human Kv4.3 (voltage-gated potassium channel) and the human Kv channel interacting protein KChIP1

Family Potassium, Voltage-Gated

Target Kv4.3/KChIP1

	Target Protein	Accession Number
1	Kv4.3	NM_004980
2	KChIP1	NM_014592
3	N/A	N/A
4	N/A	N/A

Species Human

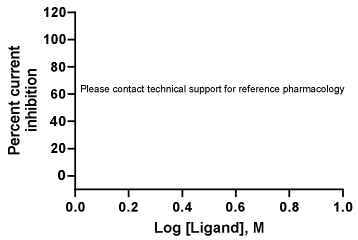
Host Cell Type CHO-K1

Application Electrophysiology assay (conventional and automated patch clamp platforms)

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

Functional Performance

CHO-K1 cells expressing hKv4.3/hKChIP1 were characterized in terms of their pharmacological and biophysical properties using whole-cell patch clamp techniques.



Electrophysiology Method MPC

Reference Agonist

Reference Antagonist Quinidine

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	Quinidine
Vendor Name :	Sigma-Aldrich
Vendor Catalog No.	Q0750

Additional Background Information

Due to their critical role in controlling the trajectory of the action potential to differing degrees in various regions of the heart, blockade of this channel could lead to increased arrhythmic risk. In cortical, hippocampal, and striatal interneurons, KChIP1 is frequently co localized with Kv4.3. This complex of human Kv4.3 and KChIP1 represents a physiologically relevant cell line.

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