PrecisION® hKv1.5 Recombinant Stable Cell Line

Catalog Number CYL3018 **Lot Number** See Vial

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

Background Information

Kv1.5 is expressed in the brain (hippocampus, pituitary, microglia, oligodendrocytes and Schwann cells) as well as kidney, colon, aorta, pulmonary artery and smooth muscle. This ion channel is involved in the maintenance of the resting membrane potential and therefore regulates the activity electrically excitable cells. Additional information can be found on page 2.

Product Information

Description Recombinant CHO-K1 cell line expressing the human Kv1.5 potassium channel

Family Potassium, Voltage-Gated

Target Kv1.5

	Target Protein	Accession Number
1	Kv1.5	NM_002234
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A

Species Human

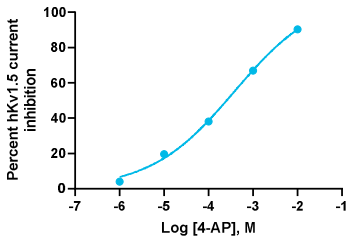
Host Cell Type CHO-K1

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 hKv1.5 were characterized in terms of their pharmacological and biophysical properties using whole-cell patch clamp techniques.



Electrophysiology Method QPatch

Reference Agonist

Reference Antagonist 4-AP

Antagonist IC_{50} (μM) 382.70

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 4-AP

Vendor Name : Sigma-Aldrich

Vendor Catalog No. 275875

Additional Background Information

Kv1.5 is potentially a target for the management of atrial fibrillation. Since they are not found in the ventricles, drugs selective for this channel may be beneficial in the treatment of atrial fibrillation without the risk of causing ventricular arrhythmias. Apart from these instances where the purpose is to develop a cardiovascular drug targeted to Kv1.5, an interaction of lead development compounds with this channel is best avoided. This is due to the fact that the channel has such a widespread distribution and controls membrane excitability.

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