PrecisION® hKv7.3/hKv7.5 Recombinant Stable Cell Line

Catalog Number CYL3060 **Lot Number** See Vial

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

Background Information

In Mammals, one of the most physiologically-relevant and studied currents is the M current, named this because it is a current observed in neurons in response to addition of muscarine (Brown & Adams 1980; Adams et al 1982). The M current is inhibited by various brain peptides and M1 muscarinic acetycholine GPCRS (Brown 1988). M currents are recorded from brain tissue are all thought to contain Kv7.3, and one combination that appears to be responsible for making M current in neurons in Kv 7.3 with Kv 7.5 (Lerche et al. 2000). Additional information can be found on page 2.

Product Information

Description Recombinant CHO-K1 cell line co-expressing the human Kv7.3 (voltage-gated potassium channel) and the human Kv7.5 (voltage-gated potassium channel)

Family Potassium, Voltage-Gated

Target Kv7.3/Kv7.5

	Target Protein	Accession Number
1	Kv7.3	NM_004519
2	Kv7.5	NM_001160133
3	N/A	N/A
4	N/A	N/A

Species Human

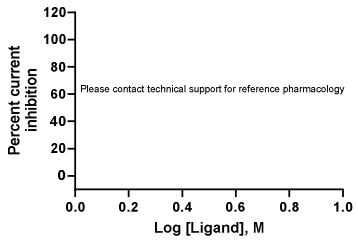
Host Cell Type CHO-K1

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 hKv7.3/hKv7.5 were characterized in terms of their pharmacological and biophysical properties using whole-cell patch clamp techniques.



Electrophysiology Method MPC

Reference Agonist

Reference Antagonist Linopirdine

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	Linopirdine
Vendor Name :	Tocris
Vendor Catalog No.	1999

Additional Background Information

These subunits are preferentially expressed in brain & sympathetic ganglia (Schroeder et al. 2000). Openers active on brain currents limit repetitive firing, and their ability to modulate overactivity in dopaminergic & serotonergic pathways is of therapeutic interest for schizophrenia, drug abuse and anxiety (Hansen et al. 2008).

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