

PrecisION[®] hCav1.2 α 1C/ β 2a/ α 2 δ 1 Recombinant Cell Line

Catalog Number CYL3051

Lot Number

See Vial

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

Background Information

hCav1.2- α 1C is a voltage-gated calcium channel alpha subunit (L-type channel). It is the predominant cardiac calcium channel responsible for calcium entry and subsequent release of calcium from intracellular stores via the ryanodine receptor. Cav1.2 is responsible for the plateau phase of the cardiac action potential. It is also recommended by the FDA as part of the CiPA panel of cardiac channels in drug safety testing. Cav1.2 is known to be sensitive to dihydropyridines.

Product Information

Description Recombinant HEK 293 cell line expressing the human L-type calcium channel (Cav1.2) subunits α 1C, β 2a and α 2 δ 1

Family Calcium, Voltage-Gated

Target Cav1.2 α 1C/ β 2a/ α 2 δ 1

	Target Protein	Accession Number
1	Cav1.2- α 1C	AJ224873
2	Cav1.2- β 2a	AF423189
3	Cav1.2- α 2 δ 1	NM_000722
4	N/A	N/A

Species Human

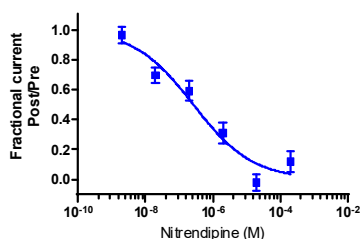
Host Cell Type HEK 293

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 hCav1.2 α 1C/ β 2a/ α 2 δ 1 were characterized in terms of their pharmacological and biophysical properties using whole-cell patch clamp techniques.



Electrophysiology Method Synchropatch

Reference Agonist N/A

Reference Antagonist Nitrendipine

Antagonist IC₅₀ (μM) 263.00

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 Nitrendipine

Vendor Name : Sigma-Aldrich

Vendor Catalog No. N-144

Additional Background Information

Cav1.2 is part of the fight-or-flight response caused by beta-adrenergic stimulation leading to protein kinase A phosphorylation of this channel.

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