

PrecisION[®] hCav2.2 α 1B/ β 3/ α 2 δ 1 Recombinant Stable Cell Line

Catalog Number CYL3054

Lot Number

See Vial

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

Background Information

hCav2.2- α 1B is a voltage-gated calcium channel alpha subunit. It is expressed almost exclusively in neurons typically located at high densities in presynaptic terminals. Opening of these channels enables the rapid influx of the extracellular Ca²⁺, triggering exocytotic vesicle fusion with terminal membranes and subsequent neurotransmitter release. Evidence suggests that Cav2.2 channels have a fundamental role in instigating increased excitability and neurotransmitter release in various pain syndromes. Additional information can be found on page 2.

Product Information

Description Recombinant HEK 293 cell line expressing the human N-type calcium channel (Cav2.2) subunits α 1B, β 3 and α 2 δ 1

Family Calcium, Voltage-Gated

Target Cav2.2

	Target Protein	Accession Number
1	Cav2.2- α 1B	NM_000718
2	Cav2.2- β 3	NM_000725
3	Cav2.2- α 2 δ 1	NM_000722
4	N/A	N/A

Species Human

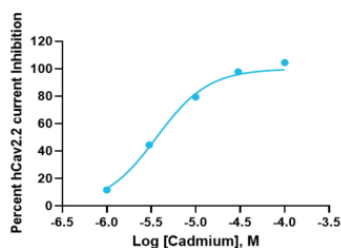
Host Cell Type HEK 293

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 hCav2.2 were characterized in terms of their pharmacological and biophysical properties using whole-cell patch clamp techniques.



Electrophysiology Method Qpatch

Reference Agonist

Reference Antagonist Cadmium

Antagonist IC₅₀ (μ M) 3.60

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 Cadmium

Vendor Name : Sigma-Aldrich

Vendor Catalog No. 655198-100G

Additional Background Information

The link between Cav2.2 and pain neurotransmission in humans has been further vindicated by the effectiveness of Prialtr (ziconotide), a synthetic version of ω -conotoxin MVIIA, in treating severe chronic pain.

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