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DATASHEET

Cesium Gluconate (Cs-Gluc)

Product overview

Name Cesium Gluconate (Cs-Gluc)

Cat No HB4822

Alternative names CeGlu, Cs-Gluc, Cs-Gluconate, CsGluconate

Biological action Blocker

Customer comments We prepared a variety of Cesium Gluconate-based intracellular solutions to record excitatory

synaptic currents from brain slices using whole-cell patch clamp. All solutions prepared using the Hello Bio Cesium Gluconate performed exactly as expected, saving us the time and trouble of

synthesising the salt "in-house".

Verified customer, the University of Dundee

Description Potassium channel blocker. Component in cesium gluconate-based internal solutions used for patch

clamp electrophysiology.

Images





Biological Data

Biological description

Cesium gluconate is used as a component in cesium gluconate-based internal (intracellular) solutions for patch clamp electrophysiology.

Cesium blocks potassium (K⁺) channels and K⁺ currents to help provide a good space clamp.

Cesium-gluconate based internal solutions are commonly used for voltage-clamp applications and are useful when studying EPSCs (excitatory postsynaptic currents) / IPSCs (inhibitory postsynaptic currents).

Solubility & Handling

Storage instructions Solubility overview +4°C

Soluble in water (200 mM)

Chemical Data

Chemical name D-Gluconic acid cesium salt

Molecular Weight 328.05

Chemical structure OH OH OH OHO

HO OH OH

C₆H₁₁CsO₇

Molecular Formula

PubChem identifier

SMILES O[C@H]([C@@H](O)C(=O)O[Cs])[C@H](O)CO

Source Synthetic

InChl=1S/C6H12O7.Cs/c7-1-2(8)3(9)4(10)5(11)6(12)13;/h2-5,7-11H,1H2,(H,12,13);/q;+1/p-1/t2-,3-,4

+,5-;/m1./s1

InChiKey IDGWYOYDRLQSAS-JJKGCWMISA-M

Appearance White solid

References

Analysis of the effects of cesium ions on potassium channel currents in biological membranes.

Clay and Shlesinger (1984) J Theor Biol 107(2) **PubMedID**6325824

Voltage clamp studies on the effect of internal cesium ion on sodium and potassium currents in the squid giant axon.

Adelman and Senft (1966) J Gen Physiol 50(2) **PubMedID**11526829

An ion's view of the potassium channel. The structure of the permeation pathway as sensed by a variety of blocking ions.

French and Shoukimas (1985) J Gen Physiol 85(5) **PubMedID** 2582077