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# **DATASHEET**

Cesium Gluconate (Cs-Gluc)

## **Product overview**

Name Cat No Alternative names Biological action Customer comments	Cesium Gluconate (Cs-Gluc) HB4822 CeGlu, Cs-Gluc, Cs-Gluconate, CsGluconate Blocker 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".
Description	Verified customer, the University of Dundee 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<sup>+</sup>) channels and K<sup>+</sup> 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 Molecular Weight Chemical structure

**Molecular Formula** 

**PubChem identifier** 

SMILES

Source

InChiKey

Appearance

InChi

328.05  $HO \rightarrow HOHO \rightarrow Cs^{*}$   $C_{6}H_{11}CsO_{7}$  O O[C@H]([C@@H](O)C(=O)O[Cs])[C@H](O)[C@H](O)COSynthetic InChI=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 IDGWYOYDRLQSAS-JJKGCWMISA-M White solid

### References

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

D-Gluconic acid cesium salt

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)PubMedID2582077