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## DATASHEET

### Cesium Gluconate (Cs-Gluc)

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#### Product overview

<b>Name</b>	Cesium Gluconate (Cs-Gluc)
<b>Cat No</b>	HB4822
<b>Alternative names</b>	CeGlu, Cs-Gluc, Cs-Gluconate, CsGluconate
<b>Biological action</b>	Blocker
<b>Customer comments</b>	<i>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".</i>
<b>Description</b>	<b>Verified customer, the University of Dundee</b> Potassium channel blocker. Component in cesium gluconate-based internal solutions used for patch clamp electrophysiology.

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#### Images



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#### Biological Data

<b>Biological description</b>	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).
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#### Solubility & Handling

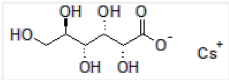
<b>Storage instructions</b>	+4 °C
<b>Solubility overview</b>	Soluble in water (200 mM)

**Important**

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

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## Chemical Data

<b>Chemical name</b>	D-Gluconic acid cesium salt
<b>Molecular Weight</b>	328.05
<b>Chemical structure</b>	
<b>Molecular Formula</b>	C <sub>6</sub> H <sub>11</sub> CsO <sub>7</sub>
<b>PubChem identifier</b>	0
<b>SMILES</b>	<chem>O[C@H]([C@@H](O)C(=O)O[Cs])[C@H](O)[C@H](O)CO</chem>
<b>Source</b>	Synthetic
<b>InChi</b>	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
<b>InChiKey</b>	IDGWYQYDRLQSAS-JJKGCWMISA-M
<b>Appearance</b>	White solid

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## 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](#)

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