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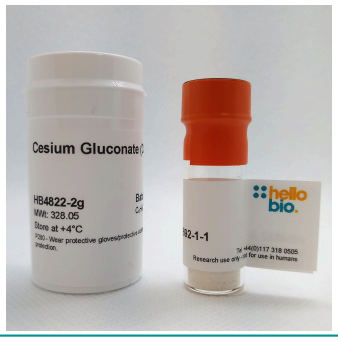
DATASHEET

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



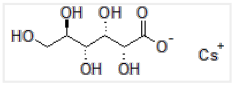
Biological Data

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

Solubility overview	Soluble in water (200 mM)
Storage instructions	+4 °C
Storage of solutions	Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.
Shipping Conditions	Stable for ambient temperature shipping. Follow storage instructions on receipt.
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	D-Gluconic acid cesium salt
Molecular Weight	328.05
Chemical structure	
Molecular Formula	$C_6H_{11}CsO_7$
PubChem identifier	0
SMILES	O[C@H]([C@@H](O)C(=O)O[Cs])[C@H](O)[C@H](O)CO
Source	Synthetic
InChi	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
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