Data Sheet (Cat.No.T0946)

TargetMol

Mepivacaine hydrochloride

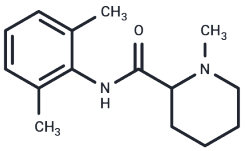
Chemical Properties

CAS No. : 1722-62-9

Formula: C15H22N2O·HCl

Molecular Weight: 282.81

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	Mepivacaine hydrochloride (Mepivacaine HCl) is the hydrochloride salt form of mepivacaine, an amide derivative with local anesthetic properties.
Targets(IC50)	Sodium Channel
In vivo	The tests made in horse show greater diffusion of mepivacaine between adjacent synovial structures than assumed from previous anatomical, latex injection and contrast arthrographic studies. [1] Ultrasound provides a 37% reduction in the minimum effective anesthetic volume (MEAV50) of 1.5% mepivacaine required to block the sciatic nerve compared with neurostimulation in patients undergoing knee arthroscopy. [2] The use of 3% mepivacaine provides a shorter duration of anesthesia than the lidocaine formulations with epinephrine in the canines and premolars. [3]
Kinase Assay	Phosphatase Assay: Purified bovine brain calcineurin and calmodulin are purchased. Reaction mixtures with purified enzyme contains 100 nM calcineurin, 100 nM calmodulin, and 5 μM 32P-labeled phosphopeptide, in 60 μl (total volume) of assay buffer containing 20 mM Tris (pH 8), 100 mM NaCl, 6 mM MgCl2, 0.5 mM dithiothreitol, 0.1 mg of bovine serum albumin per ml, and either 0.1 mM CaCl2 or 5 mM EGTA. Reaction mixtures with cell lysates contains 20 μl of undiluted lysate, 5 μM 32P-labeled phosphopeptide, and 40 μl of assay buffer. Where indicated, reaction mixtures contains 50 μM peptide 412 or 413 and/or 500 nM okadaic acid, a specific inhibitor of phosphatases 1 and 2A; 500 nM okadaic acid is sufficient for inhibition of Ca2+-independent phosphatases, whereas higher concentrations partially inhibit Ca2+-dependent activity as well. After 15 min at 30°C, reactions are terminated by the addition of 0.5 ml of 100 mM potassium phosphate buffer (pH 7.0) containing 5% trichloroacetic acid. Free inorganic phosphate is isolated by Dowex cation-exchange chromatography and quantitated by scintillation counting as described.

Solubility Information

Solubility	DMSO: 3 mg/mL (10.61 mM),Sonication is recommended. Ethanol: 8 mg/mL (28.29 mM),Sonication is recommended. H2O: 255 mg/mL (901.67 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5359 mL	17.6797 mL	35.3594 mL
5 mM	0.7072 mL	3.5359 mL	7.0719 mL
10 mM	0.3536 mL	1.768 mL	3.5359 mL
50 mM	0.0707 mL	0.3536 mL	0.7072 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Gough MR, et al. Equine Vet J, 2002, 34(1), 80-84.
Danelli G, et al. Anesth Analg, 2009, 109(5), 1674-1678.
Berberich G, et al. J Endod, 2009, 35(11), 1498-1504.
Singelyn FJ, et al. Reg Anesth, 1992, 17(3), 148-150.
Kapral S, et al. Anesth Analg, 1999, 88(4), 853-856.