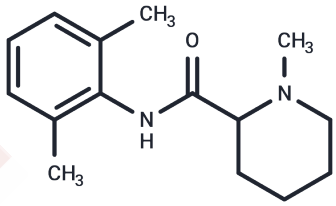
Data Sheet (Cat.No.T22361)

TargetMol

Mepivacaine

Chemical Properties



CAS No. : 96-88-8

Formula: C15H22N2O

Molecular Weight: 246.35

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 (Carbocaine) is an amide compound for local anaesthesia that causes transient loss of self-consciousness in humans or animals. mepivacaine acts by binding to specific voltage-gated sodium channels in nerve cell membranes, inhibiting sodium inward flow and membrane depolarisation. mepivacaine is indicated for nerve blocks and epidurals.
Targets(IC50)	Sodium Channel
In vitro	Mepivacaine exhibits a usage-dependent blockade of Na(v)1.8 channels, while S(-)-bupivacaine shows a preference for TTX-sensitive Na(+) channels.[2]
In vivo	Intratesticular mepivacaine (10 mL ； injection) when compared with intratesticular lidocaine results in improved cremaster muscle relaxation when only waiting five min prior to the start of the procedure.[2]

Solubility Information

Solubility	DMSO: 65 mg/mL (263.85 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.0593 mL	20.2963 mL	40.5927 mL
5 mM	0.8119 mL	4.0593 mL	8.1185 mL
10 mM	0.4059 mL	2.0296 mL	4.0593 mL
50 mM	0.0812 mL	0.4059 mL	0.8119 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

Froehle M, et al. ECMO for Cardiac Rescue after Accidental Intravenous Mepivacaine Application. Case Rep Pediatr. 2012 ; 2012:491692.
Crandall A, et al. Intratesticular mepivacaine versus lidocaine in anaesthetised horses undergoing Henderson castration. Equine Vet J. 2020 ; 52(6):805-810.
Burm AG, et al. Pharmacokinetics of the enantiomers of mepivacaine after intravenous administration of the racemate in volunteers. Anesth Analg. 1997 ; 84(1):85-89.
Leffler A, et al. Block of sensory neuronal Na+ channels by the secreolytic ambroxol is associated with an interaction with local anesthetic binding sites. Eur J Pharmacol. 2010 ; 630(1-3):19-28.
Alexander K, et al. Intrathecal mepivacaine after general anesthesia is an effective method of equine euthanasia when compared to intravenous pentobarbital. Am J Vet Res. 2023 ; 84(5): 201.