Mepivacaine

Cat. No.: HY-B0517

CAS No.: 96-88-8

Molecular Formula: $C_{15}H_{22}N_2O$

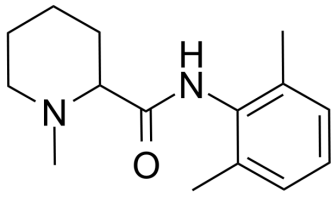
Molecular Weight: 246.35

Target: Sodium Channel

Pathway: Membrane Transporter/Ion Channel

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (135.30 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
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

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Mepivacaine is an amide-type local anesthetic agent. Mepivacaine binds to specific voltage-gated sodium ion channels in neuronal cell membranes, which inhibits both sodium influx and membrane depolarization[1][2].

In Vitro

Mepivacaine binds to specific voltage-gated sodium ion channels in neuronal cell membranes, which inhibits both sodium influx and membrane depolarization. This leads to a blockage of nerve impulse initiation and conduction and results in a reversible loss of sensation. Compared to other local anesthetics, this agent has a more rapid onset and moderate duration of action[2].

Mepivacaine has a reasonably rapid onset (more rapid than that of procaine) and medium duration of action (shorter than that of procaine)[3].

Mepivacaine displays a preferential use-dependent block of Na(v)1.8, S(-)-bupivacaine displays a preference for TTXs Na(+) channels[4].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Froehle M, et al. ECMO for Cardiac Rescue after Accidental Intravenous Mepivacaine Application. Case Rep Pediatr. 2012;2012:491692.

[2]. mepivacaine hydrochloride.

[3]. Burm, A.G., et al., Pharmacokinetics of the enantiomers of mepivacaine after intravenous administration of the racemate in volunteers. Anesth Analg, 1997. 84(1): p. 85-9.

[4]. Leffler, A., J. Reckzeh, and C. Nau, 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): p. 19-28.

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