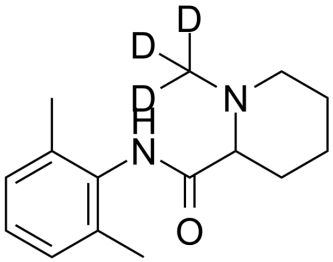
Mepivacaine-d_3

Cat. No.:	HY-B0517S
CAS No.:	1346597-90-7
Molecular Formula:	$C_{15}H_{19}D_3N_2O$
Molecular Weight:	249.37
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

Ethanol : ≥ 30 mg/mL (120.30 mM)
DMF : ≥ 30 mg/mL (120.30 mM)
DMSO : ≥ 25 mg/mL (100.25 mM)
Ethanol:PBS(pH 7.2) (1:1) : ≥ 0.5 mg/mL (2.01 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Mass / Solvent / Concentration	1 mg	5 mg	10 mg
1 mM	4.0101 mL	20.0505 mL	40.1011 mL
5 mM	0.8020 mL	4.0101 mL	8.0202 mL
10 mM	0.4010 mL	2.0051 mL	4.0101 mL

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

BIOLOGICAL ACTIVITY

Description

Mepivacaine-d_3 is the deuterium labeled Mepivacaine. 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

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

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

[3]. mepivacaine hydrochloride.

[4]. 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.

[5]. 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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA