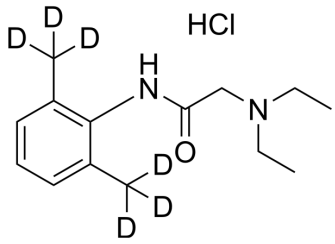
Lidocaine-d_6 hydrochloride

Cat. No.:	HY-B0185AS1
CAS No.:	2517378-96-8
Molecular Formula:	$C_{14}H_{17}D_6ClN_2O$
Molecular Weight:	276.84
Target:	Apoptosis; ERK; NF-κB; MEK; Sodium Channel
Pathway:	Apoptosis; MAPK/ERK Pathway; Stem Cell/Wnt; NF-κB; Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Lidocaine-d_6 (hydrochloride) is deuterium labeled Lidocaine (hydrochloride). Lidocaine hydrochloride (Lignocaine hydrochloride) inhibits sodium channels involving complex voltage and using dependence[1]. Lidocaine hydrochloride decreases growth, migration and invasion of gastric carcinoma cells via up-regulating miR-145 expression and further inactivation of MEK/ERK and NF-κB signaling pathways. Lidocaine hydrochloride is an amide derivative and a agent to treat ventricular arrhythmia and an effective tumor-inhibitor[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]. Cummins TR, et al. Setting up for the block: the mechanism underlying lidocaine's use-dependent inhibition of sodium channels. J Physiol. 2007 Jul 1;582(Pt 1):11.

[3]. Li Z, et al. Evaluation of the antinociceptive effects of lidocaine and bupivacaine on the tail nerves of healthy rats. Basic Clin Pharmacol Toxicol. 2013 Jul;113(1):31-6.

[4]. Sui H, et al. Lidocaine inhibits growth, migration and invasion of gastric carcinoma cells by up-regulation of miR-145. BMC Cancer. 2019 Mar 15;19(1):233.

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