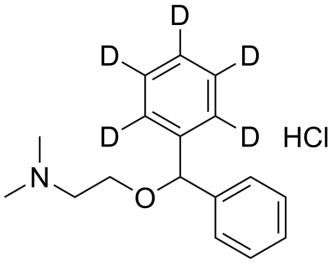
Diphenhydramine-d5 hydrochloride

Cat. No.:	HY-B0303AS1
CAS No.:	1219795-16-0
Molecular Formula:	$C_{17}H_{17}D_5ClNO$
Molecular Weight:	296.85
Target:	Histamine Receptor; Endogenous Metabolite
Pathway:	GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling; Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



BIOLOGICAL ACTIVITY

Description	Diphenhydramine-d_5 (hydrochloride) is the deuterium labeled Diphenhydramine hydrochloride. Diphenhydramine hydrochloride is a first-generation histamine H1-receptor antagonist with anti-cholinergic effect. Diphenhydramine hydrochloride can across the ovine blood-brain barrier (BBB)[1][2].
IC_{50} & Target	H_1 Receptor
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]. Simons FE. H1-receptor antagonists. Comparative tolerability and safety. Drug Saf. 1994;10(5):350-380.

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