Diphenhydramine-d_6 hydrochloride

Cat. No.: HY-B0303AS

CAS No.: 1189986-72-8

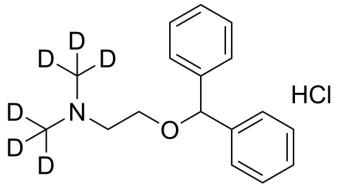
Molecular Formula: $C_{17}H_{16}D_6ClNO$

Molecular Weight: 297.85

Target: Histamine Receptor; Endogenous Metabolite; Isotope-Labeled Compounds

Pathway: GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling; Metabolic Enzyme/Protease; Others

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (335.74 mM; Need ultrasonic)
H2O : 100 mg/mL (335.74 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.3574 mL	16.7870 mL	33.5739 mL
5 mM	0.6715 mL	3.3574 mL	6.7148 mL
10 mM	0.3357 mL	1.6787 mL	3.3574 mL

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

BIOLOGICAL ACTIVITY

Description

Diphenhydramine-d_6 (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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