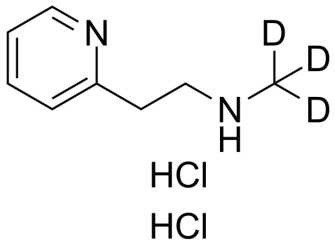
Betahistine-d_3 dihydrochloride

Cat. No.:	HY-B0524AS
CAS No.:	244094-72-2
Molecular Formula:	$C_8H_{11}D_3Cl_2N_2$
Molecular Weight:	212.13
Target:	Histamine Receptor
Pathway:	GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H2O : ≥ 50 mg/mL (235.70 mM)
DMSO : 33.33 mg/mL (157.12 mM; Need ultrasonic)
DMF : 5 mg/mL (23.57 mM; Need ultrasonic)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.7141 mL	23.5705 mL	47.1409 mL
5 mM	0.9428 mL	4.7141 mL	9.4282 mL
10 mM	0.4714 mL	2.3570 mL	4.7141 mL

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

BIOLOGICAL ACTIVITY

Description

Betahistine-d_3 (dihydrochloride) is the deuterium labeled Betahistine dihydrochloride. Betahistine dihydrochloride is an orally active histamine H1 receptor agonist and a H3 receptor antagonist[1]. Betahistine dihydrochloride is used for the study of rheumatoid arthritis (RA)[3].

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]. Poyurovsky M, et al. The effect of betahistine, a histamine H1 receptor agonist/H3 antagonist, on olanzapine-induced weight gain in first-episode schizophrenia patients. Int Clin Psychopharmacol. 2005 Mar;20(2):101-3.

[3]. Gbahou F, et al. Effects of betahistine at histamine H3 receptors: mixed inverse agonism/agonism in vitro and partial inverse agonism in vivo.J Pharmacol Exp Ther. 2010 Sep 1;334(3):945-54.

[4]. Tang KT, et al. Betahistine attenuates murine collagen-induced arthritis by suppressing both inflammatory and Th17 cell responses.Int Immunopharmacol. 2016 Oct;39:236-245.

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