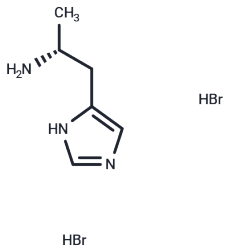
Data Sheet (Cat.No.T12630)

TargetMol

(R)-(-)-α-Methylhistamine dihydrobromide

Chemical Properties



CAS No. : 868698-49-1

Formula: C6H13Br2N3

Molecular Weight: 287

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	(R)-(-)-α-Methylhistamine dihydrobromide is a potent, selective, and brain-penetrant agonist of the H3 histamine receptor with high receptor affinity, capable of enhancing memory retention and attenuating cognitive impairment in rat models, making it a valuable pharmacological probe for elucidating central histaminergic signaling and H3 receptor-mediated modulation of learning and memory processes.
Targets(IC50)	Histamine Receptor
In vitro	(R)-(-)-α-Methylhistamine dihydrobromide is an H3-agonist with over 10 times the potency of histamine (HA). It exhibits weak affinities for H1 and H2 receptors, with pKi values of 4.8 and <3.5, respectively. The compound shows more than 1,000 times selectivity for H3-receptors compared to HA and over 200-fold selectivity over H4 receptors[1].
In vivo	In mouse and rat models, intraperitoneal (i.p.) administration of (R)-(-)-α-Methylhistamine dihydrobromide (e.g., 6.3 mg/kg) decreases the steady-state levels of tele-methylhistamine (t-MH), a primary histamine metabolite, without changing total histamine levels. This indicates an inhibition of histamine turnover. In a rat model of anesthesia-induced amnesia, pretreatment with 10 mg/kg (i.p.) reverses memory retention deficits caused by Propofol [2][3][4].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.4843 mL	17.4216 mL	34.8432 mL
5 mM	0.6969 mL	3.4843 mL	6.9686 mL
10 mM	0.3484 mL	1.7422 mL	3.4843 mL
50 mM	0.0697 mL	0.3484 mL	0.6969 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Mohammad Shahid, et al. Histamine, Histamine Receptors, and their Role in Immunomodulation: An Updated Systematic Review. The Open Immunology Journal, 2009, 2, 9-41.
Oishi R, et al. Effects of the histamine H3-agonist (R)-α-methylhistamine and the antagonist thioperamideon histamine metabolism in the mouse and rat brain. J Neurochem. 1989 May;52(5):1388-92.
Yamasaki S, et al. The disposition of (R)-α-methylhistamine, a histamine H3-receptor agonist, in rats. J Pharm Pharmacol. 1994 May;46(5):371-4.
Li WW, et al. (R)-α-methylhistamine suppresses inhibitory neurotransmission in hippocampal CA1 pyramidal neurons counteracting propofol-induced amnesia in rats. CNS Neurosci Ther. 2014 Sep;20(9):851-9.
Arrang JM, et al. Highly potent and selective ligands for histamine H3-receptors. Nature. 1987 May 14-20;327 (6118):117-23.