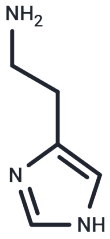
Data Sheet (Cat.No.T0965)

TargetMol

Histamine

Chemical Properties



CAS No. : 51-45-6

Formula: C5H9N3

Molecular Weight: 111.15

Storage: Store at low temperature
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	Histamine (Ergamine) is an amine derived from histamine through enzymatic decarboxylation; it acts as a histamine receptor agonist and vasodilator. Histamine is an organic nitrogen compound that participates in local immune responses and regulates intestinal physiological functions. Histamine is a potent stimulant of gastric secretion, a bronchoconstrictor, a vasodilator, and a centrally acting neurotransmitter. Histamine influences the p38 MAPK/Akt signaling pathway and exhibits antitumor, antioxidant, and anti-inflammatory activities. Histamine can be used in research on acute myeloid leukemia, malignant melanoma, and renal cell carcinoma.
Targets(IC50)	5-HT Receptor,Endogenous Metabolite,Histamine Receptor
In vitro	**Methods**: Sympathetic preganglionic neurons (SPNs) in thoracolumbar spinal cord slices from newborn (6–14 days old) Wistar Kyoto rats were perfused with histamine (100 μM) for 15–120 seconds in the bath. Whole-cell current clamp recordings measured membrane potential and input resistance changes. **Results**: Histamine treatment induced depolarization in 69.6% (16/23) of cells (mean 4.5 mV), accompanied by an increase in input resistance (16.9%).[1]
In vivo	**Methods**: Adult C57BL/6J mice were first administered LPS (1 or 2 mg/kg) via intraperitoneal injection. Two days later, they received an intracerebroventricular injection of histamine (100 μM) or a control solution into the hippocampus. After an additional two days, the mice were euthanized. Western blot analysis was performed to detect hippocampal tissue levels of GFAP (astrocytes) and Iba-1 (microglia) proteins. **Results**: LPS (2 mg/kg) alone significantly increased GFAP and Iba-1 expression. Histamine treatment significantly reversed LPS-induced elevation of GFAP and Iba-1. [2]

Solubility Information

Solubility	DMSO: 260 mg/mL (2339.18 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	8.9969 mL	44.9843 mL	89.9685 mL
5 mM	1.7994 mL	8.9969 mL	17.9937 mL
10 mM	0.8997 mL	4.4984 mL	8.9969 mL
50 mM	0.1799 mL	0.8997 mL	1.7994 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

Whyment AD, et al. Histamine excites neonatal rat sympathetic preganglionic neurons in vitro via activation of H1 receptors. J Neurophysiol. 2006 Apr;95(4):2492-500.
Saraiva C, et al. Histamine modulates hippocampal inflammation and neurogenesis in adult mice. Sci Rep. 2019 Jun 10;9(1):8384.