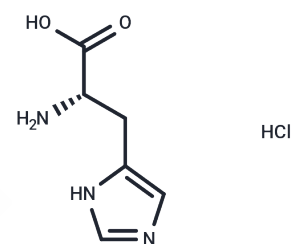


## L-Histidine monohydrochloride

## Chemical Properties

CAS No. :	645-35-2
Formula:	C <sub>6</sub> H <sub>10</sub> ClN <sub>3</sub> O <sub>2</sub>
Molecular Weight:	191.62
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	L-Histidine monohydrochloride is the essential amino acid. It is highly water-soluble and is commonly used in cell culture media, buffer systems, and biochemical research. Its imidazole side chain can participate in metal ion binding and acid-base buffering, playing a crucial role in protein structural stability and enzymatic catalysis.
Targets(IC50)	Endogenous Metabolite
In vitro	L-Histidine monohydrochloride significantly reduced air-liquid biofilm formation and adhesion to polystyrene in Flor yeast, but did not affect the transcriptional levels of the FLO11 gene. L-Histidine monohydrochloride completely inhibited growth, and its effect on survival was inversely proportional to FLO11 expression. L-Histidine monohydrochloride did not affect the survival of the Δflo11 and S288c strains. L-Histidine monohydrochloride also altered the content of chitin and polysaccharides in the cell walls of Flor yeast.
In vivo	L-Histidine monohydrochloride (100 mg/kg) completely inhibited cerebral edema in rats treated with thioacetamide. In the L-Histidine monohydrochloride diet group, histamine release in hypothalamic tissue induced by high potassium ions was only 60% of that in the control group; no significant changes were observed in the concentrations of other monoamines and their metabolites. The open field test indicated that the L-Histidine monohydrochloride-fed group spent less time in the central area. In the light/dark box test, the L-Histidine monohydrochloride-fed group also spent less time in the light compartment, suggesting that the L-Histidine monohydrochloride diet may induce anxiety-like behavior.

## Solubility Information

Solubility	DMSO: 40 mg/mL (208.75 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	---

### Preparing Stock Solutions

---

	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	5.2187 mL	26.0933 mL	52.1866 mL
5 mM	1.0437 mL	5.2187 mL	10.4373 mL
10 mM	0.5219 mL	2.6093 mL	5.2187 mL
50 mM	0.1044 mL	0.5219 mL	1.0437 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

Bou Zeidan M, et al. L-histidine inhibits biofilm formation and FLO11-associated phenotypes in *Saccharomyces cerevisiae* flor yeasts. *PLoS One*. 2014 Nov 4;9(11):e112141.

Rama Rao KV, et al. Brain edema in acute liver failure: inhibition by L-histidine. *Am J Pathol*. 2010 Mar;176(3):1400-8.

Yoshikawa T, et al. Insufficient intake of L-histidine reduces brain histamine and causes anxiety-like behaviors in male mice. *J Nutr*. 2014 Oct;144(10):1637-41.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481