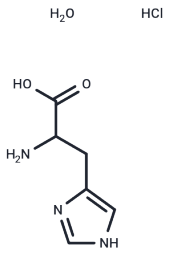
Data Sheet (Cat.No.T4826)

TargetMol

L-Histidine monohydrochloride monohydrat

Chemical Properties



CAS No. : 5934-29-2

Formula: C6H12ClN3O3

Molecular Weight: 209.63

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Histidine (abbreviated as His or H) is an alpha-amino acid. The L-isomer is one of the 22 proteinogenic amino acids, i.e., the building blocks of proteins. It is classified as a charged, polar because of the hydrophilic nature of the imidazole side chain. L-Histidine is a positively charged (pKa 6.5) aromatic amino acid. Histidine residues are often found in enzyme active sites, where the chemistry of the imidazole ring of histidine makes it a nucleophile and a good acid/base catalyzer. Histidine is special in that its biosynthesis is inherently linked to the pathways of nucleotide formation. In the first step of histidine synthesis, PRPP (5-phosphoribosyl-alpha-pyrophosphate) condenses with ATP to form a purine, N1-5'-phosphoribosyl ATP, in a reaction that is driven by the subsequent hydrolysis of the pyrophosphate that condenses out. Glutamine plays a role as an amino group donor resulting in the formation of 5-aminoamidazole-4-carboximide ribonucleotide (ACAIR), which is an intermediate in purine biosynthesis. Hisitidne is catabolized by the enzyme histidine ammonia-lyase which converts histidine into ammonia and urocanic acid.
Targets(IC50)	Endogenous Metabolite

Solubility Information

Solubility	DMSO: Slightly soluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.7703 mL	23.8515 mL	47.7031 mL
5 mM	0.9541 mL	4.7703 mL	9.5406 mL
10 mM	0.477 mL	2.3852 mL	4.7703 mL
50 mM	0.0954 mL	0.477 mL	0.9541 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.

Reference

De Sousa, G.P., Freire, P.T.C., Filho, J.M. et al. Braz J Phys (2013) 43: 137. https://doi.org/10.1007/s13538-013-0132-3