

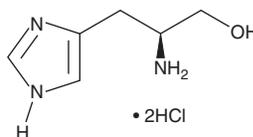
# PRODUCT INFORMATION



## L-Histidinol (hydrochloride)

Item No. 18739

**CAS Registry No.:** 1596-64-1  
**Formal Name:** (βS)-amino-1H-imidazole-5-propanol, dihydrochloride  
**Synonym:** (S)-Histidinol  
**MF:** C<sub>6</sub>H<sub>11</sub>N<sub>3</sub>O • 2HCl  
**FW:** 214.1  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 210 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

For long term storage, we suggest that L-histidinol (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

L-Histidinol (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the L-histidinol (hydrochloride) in the solvent of choice. L-Histidinol (hydrochloride) is soluble in the organic solvent DMSO, which should be purged with an inert gas. The solubility of L-histidinol (hydrochloride) in DMSO is approximately 5 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of L-histidinol (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of L-histidinol (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

L-Histidinol is a natural amino alcohol that serves as an intermediate in the biosynthesis of the amino acid L-histidine in bacteria, archaeobacteria, fungi, and plants.<sup>1,2</sup> It is generated from its immediate precursor, L-histidinol phosphate, by a phosphatase.<sup>3,4</sup> L-Histidinol is oxidized to L-histidinal, which in turn is oxidized to L-histidine, by a single enzyme, histidinol dehydrogenase.<sup>2</sup>

### References

1. Barbosa, J.A.R.G., Sivaraman, J., Li, Y., *et al.* Mechanism of action and NAD<sup>+</sup>-binding mode revealed by the crystal structure of L-histidinol dehydrogenase. *Proc. Natl. Acad. Sci. USA* **99**(4), 1859-1864 (2002).
2. Kulis-Horn, R.K., Persicke, M., and Kalinowski, J. Histidine biosynthesis, its regulation and biotechnological application in *Corynebacterium glutamicum*. *Microb. Biotechnol.* **7**(1), 5-25 (2014).
3. Bromke, M. Amino acid biosynthesis pathways in diatoms. *Metabolites* **3**(2), 294-311 (2013).
4. Petersen, L.N., Marineo, S., Mandalà, S., *et al.* The missing link in plant histidine biosynthesis: Arabidopsis *myoinositol monophosphatase-like2* encodes a functional histidinol-phosphate phosphatase. *Plant Physiol.* **152**(3), 1186-1196 (2010).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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