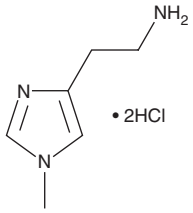
PRODUCT INFORMATION

1-Methylhistamine (hydrochloride)

Item No. 19516

CAS Registry No.: 6481-48-7
Formal Name: 1-methyl-H-imidazole-4-ethanamine, dihydrochloride
Synonyms: N^1-Methylhistamine, Ntau-Methylhistamine, *tele*-Methylhistamine
MF: $C_6H_{11}N_3 \bullet 2HCl$
FW: 198.1
Purity: ≥95%
UV/Vis.: λ_{max}: 217 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

1-Methylhistamine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-methylhistamine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. 1-Methylhistamine (hydrochloride) is soluble in organic solvents such as ethanol and DMSO. The solubility of 1-methylhistamine (hydrochloride) in these solvents is approximately 1 and 20 mg/ml, respectively.

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 1-methylhistamine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 1-methylhistamine (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

1-Methylhistamine is a major metabolite of histamine by histamine N-methyltransferase in the pathway of histidine metabolism.[1] It has been used as a biomarker of histaminergic system activity in the brains of Alzheimer's disease patients as well as those with hypersomnia and other neurological conditions.[2,3]

References

1. Lindell, S.-E. and Schayer, R.W. Metabolism of injected [^{14}C] histamine in the kidney of the dog. *Br. J. Pharmacol. Chemother.* **13(1)**, 52-53 (1958).
2. Motawaj, M., Peoc'h, K., Callebert, J., *et al.* CSF levels of the histamine metabolite tele-methylhistamine are only slightly decreased in Alzheimer's disease. *J. Alzheimers Dis.* **22(3)**, 861-871 (2010).
3. Dauvilliers, Y., Delallée, N., Jaussent, I., *et al.* Normal cerebrospinal fluid histamine and tele-methylhistamine levels in hypersomnia conditions. *Sleep* **35(10)**, 1359-1366 (2016).

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