

Certificate of Analysis

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Product Name: (R)-(-)- α -Methylhistamine dihydrobromide

Catalog No.: 0569

Batch No.: 12

CAS Number: 868698-49-1

IUPAC Name: (R)-(-)- α -Methyl-1*H*-imidazole-4-ethanamine dihydrobromide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆H₁₁N₃.2HBr.¼H₂O

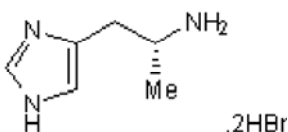
Batch Molecular Weight: 291.5

Physical Appearance: White solid

Solubility: water to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.16 (Dichloromethane:Methanol:Ammonia soln. [4:1:0.1])

HPLC: Shows 99.8% purity

Chiral HPLC: Shows 99.3% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = -3 (Concentration = 1, Solvent = Water)

Microanalysis:

| | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 24.72 | 4.67 | 14.42 |
| Found | 24.78 | 4.7 | 14.12 |

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Very potent, high affinity H₃ agonist (K_D = 50.3 nM) that displays > 200-fold selectivity over H₄ receptors. Inhibits H₃-mediated histamine synthesis and release in the CNS and stimulates H₄-mediated eosinophil shape change (EC₅₀ = 66 nM). S-enantiomer also available.

Physical and Chemical Properties:

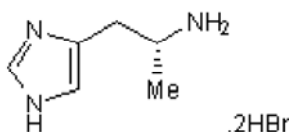
Batch Molecular Formula: C₆H₁₁N₃·2HBr·¼H₂O

Batch Molecular Weight: 291.5

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM

CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival. Solutions should be made up as soon as the vial is opened.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Shahid et al (2009) Histamine, histamine receptors, and their role in immunomodulation: An updated systematic review. *Open Immunol.J.* **2** 9.

Buckland et al (2003) Histamine induces cytoskeletal changes in human eosinophils via the H₄ receptor. *Br.J.Pharmacol.* **140** 1117. PMID: 14530216.

Hew et al (1990) Characterization of histamine-H₃ receptors in guinea pig ileum with H₃-selective ligands. *Br.J.Pharmacol.* **101** 621. PMID: 1963802.

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