

## Certificate of Analysis

**Product Name:** Amthamine dihydrobromide

**Catalog No.:** 0668

**Batch No.:** 2

CAS Number: 142457-00-9

IUPAC Name: 2-Amino-5-(2-aminoethyl)-4-methylthiazole dihydrobromide

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>6</sub>H<sub>11</sub>N<sub>3</sub>S.2HBr

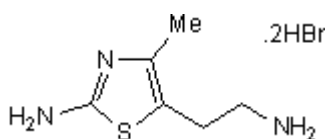
**Batch Molecular Weight:** 319.06

**Physical Appearance:** White solid

**Solubility:** water to 100 mM

**Storage:** Desiccate at -20°C

**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.25 (Dichloromethane:Methanol:Ammonia soln. [9:1:0.1])

**Melting Point:** At 275°C(dec)

**HPLC:** Shows >99.1% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	22.59	4.11	13.17
Found	22.8	4.06	12.82

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**Description:**

Highly selective H<sub>2</sub> agonist, slightly more potent than histamine itself. Only a weak antagonist at H<sub>3</sub> and has no activity at H<sub>1</sub> receptors. Induces vasodilation of cerebral arteries and decreases myogenic tone in vitro.

**Physical and Chemical Properties:**

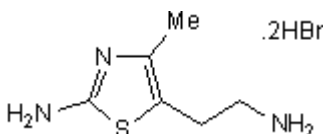
Batch Molecular Formula: C<sub>6</sub>H<sub>11</sub>N<sub>3</sub>S.2HBr

Batch Molecular Weight: 319.06

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Desiccate at -20°C

**Solubility & Usage Info:**

water to 100 mM

**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:**

**Eriks et al** (1992) Histamine H<sub>2</sub>-receptor agonists. Synthesis, in vitro pharmacology, and qualitative structure-activity relationships of substituted 4- and 5-(2-aminoethyl)thiazole. *J.Med.Chem.* **35** 3239. PMID: 1507209.

**Coruzzi et al** (1993) The new potent and selective histamine H<sub>2</sub> receptor agonist amthamine as a tool to study gastric secretion. *Naunyn Schmiedebergs Arch.Pharmacol.* **348** 77. PMID: 8377843.

**Poli et al** (1993) *In vitro* cardiac pharmacology of the new histamine H<sub>2</sub> receptor agonist amthamine; comparisons with histamine and dimaprit. *Agents Actions* **40** 44. PMID: 8147269.

**Jarajapu et al** (2006) Histamine decreases myogenic tone in rat cerebral arteries by H<sub>2</sub>-receptor-mediated Kv channel activation, independent of endothelium and cyclic AMP. *Eur.J.Pharmacol.* **547** 116. PMID: 16920098.

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