

Product Name: Famotidine

Catalog No.: 7290

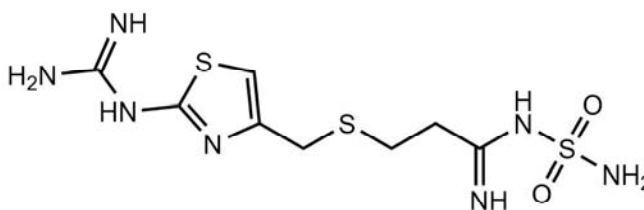
Batch No.: 1

CAS Number: 76824-35-6

IUPAC Name: 3-[[[2-[(Aminoiminomethyl)amino]-4-thiazolyl]methyl]thio]-N-(aminosulfonyl)propanimidamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₈H₁₅N₇O₂S₃
Batch Molecular Weight: 337.44
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.5% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	28.48	4.48	29.06
Found	28.55	4.5	29.33

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

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Description:

Potent and high affinity histamine H₂ receptor biased inverse agonist (K_d = 14 nM, IC₅₀ = 33 nM). Reduces basal receptor activity by 75%. Inhibits G_s-mediated pathways but acts as a partial agonist of β-arrestin recruitment (EC₅₀ = 105 nM). Inhibits gastric acid secretion and histamine-induced mast cell activation. Also inhibits HIV replication in vitro.

Physical and Chemical Properties:

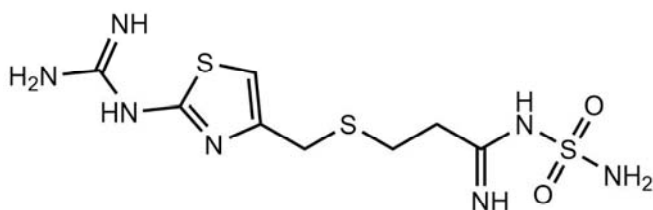
Batch Molecular Formula: C₈H₁₅N₇O₂S₃

Batch Molecular Weight: 337.44

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO 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:

Malone et al (2020) COVID-19: Famotidine, histamine, mast cells, and mechanisms. Res.Sq. - Paper not yet peer reviewed. PMID: 32702719.

Bourinbaier & Fruhstorfer (1996) The effect of histamine type 2 receptor antagonists on human immunodeficiency virus (HIV) replication: identification of a new class of antiviral agents. Life Sci. **59** 365. PMID: 8950301.

Pendleton et al (1985) Effects of H₂-receptor antagonists upon physiological acid secretory states in animals. J.Pharmacol.Exp.Ther. **233** 64. PMID: 2858583.

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