

Certificate of Analysis

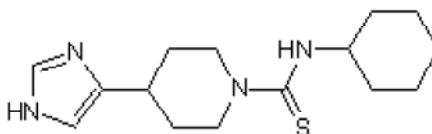
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Product Name: Thioperamide
CAS Number: 106243-16-7
IUPAC Name: *N*-Cyclohexyl-4-(imidazol-4-yl)-1-piperidinecarbothioamide

Catalog No.: 0644 **Batch No.:** 16

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅H₂₄N₄S
Batch Molecular Weight: 292.44
Physical Appearance: White solid
Solubility: DMSO to 100 mM
 ethanol to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.44 (Ethyl acetate:Methanol [9:1])
HPLC: Shows 99.3% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	61.61	8.27	19.16
Found	61.88	8.41	19.21

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

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Description:

Potent histamine H₃ and H₄ antagonist/inverse agonist. K_i values are 25 and 27 nM for human recombinant H₃ and H₄ receptors respectively. Blocks eosinophil shape change (IC₅₀ = 1.4 μM) and chemotaxis (IC₅₀ = 519 nM) induced by histamine. Freely crosses the blood-brain barrier.

Physical and Chemical Properties:

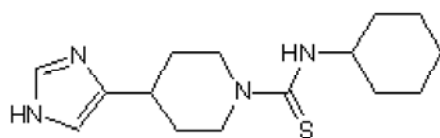
Batch Molecular Formula: C₁₅H₂₄N₄S

Batch Molecular Weight: 292.44

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol 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:

Gbahou *et al* (2006) Compared pharmacology of human H₃ and H₄ receptors: structure-activity relationships of histamine derivatives. *Br.J.Pharmacol.* **147** 744. PMID: 16432504.

Ling *et al* (2004) Histamine H₄ receptor mediates eosinophil chemotaxis with cell shape change and adhesion molecule upregulation. *Br.J.Pharmacol.* **142** 161. PMID: 15131002.

Liu *et al* (2001) Cloning and pharmacological characterization of a fourth histamine receptor (H₄) expressed in bone marrow. *Mol. Pharmacol.* **59** 420. PMID: 11179434.

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