

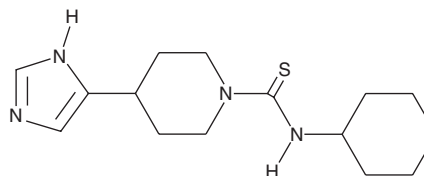
PRODUCT INFORMATION



Thioperamide

Item No. 45928

CAS Registry No.: 106243-16-7
Formal Name: N-cyclohexyl-4-(1H-imidazol-5-yl)-1-piperidinecarbothioamide
Synonym: MR12842
MF: C₁₅H₂₄N₄S
FW: 292.4
Purity: ≥98%
Supplied as: A 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

Thioperamide is supplied as a solid. A stock solution may be made by dissolving the thioperamide in the solvent of choice, which should be purged with an inert gas. Thioperamide is soluble (≥10 mg/ml) in ethanol and DMSO.

Description

Thioperamide is a histamine H₃ receptor antagonist (K_i = 4.3 nM).¹ It is selective for the histamine H₃ receptor over histamine H₁ and H₂ receptors (K_is = >10,000 nM for both) and a panel of 36 other receptors and ion channels. Thioperamide inhibits amygdaloid-kindled seizures (ED₅₀ = 3.43 mg/kg) and reverses antinociception induced by the histamine H₃ receptor agonist immepip (Item No. 29518) in rats.^{2,3} Thioperamide increases the time spent awake and decreases the time spent in deep slow wave sleep in rats.⁴ It decreases cognitive impairments in the APP/PS1 transgenic mouse model of Alzheimer's disease.⁵

References

1. Leurs, R., Tulo, M.T., Menge, W.M., *et al.* Evaluation of the receptor selectivity of the H₃ receptor antagonists, iodophenpropit and thioperamide: an interaction with the 5-HT₃ receptor revealed. *Br. J. Pharmacol.* **116**(4), 2315-2321 (1995).
2. Harada, C., Fujii, Y., Hirai, T., *et al.* Inhibitory effect of iodophenpropit, a selective histamine H₃ antagonist, on amygdaloid kindled seizures. *Brain Res. Bull.* **63**(2), 143-146 (2004).
3. Cannon, K.E., Leurs, R., and Hough, L.B. Activation of peripheral and spinal histamine H₃ receptors inhibits formalin-induced inflammation and nociception, respectively. *Pharmacol. Biochem. Behav.* **88**(1), 122-129 (2007).
4. Bonaventure, P., Letavic, M., Dugovic, C., *et al.* Histamine H₃ receptor antagonists: From target identification to drug leads. *Biochem. Pharmacol.* **73**(8), 1084-1096 (2007).
5. Wang, J., Liu, B., Xu, Y., *et al.* Thioperamide attenuates neuroinflammation and cognitive impairments in Alzheimer's disease via inhibiting gliosis. *Exp. Neurol.* **347**, 113870 (2022).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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