

PRODUCT INFORMATION

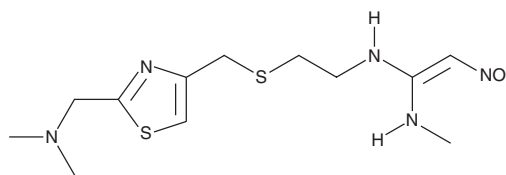


Nizatidine

Item No. 18861

CAS Registry No.: 76963-41-2
Formal Name: N'-[2-[[[2-[(dimethylamino)methyl]-4-thiazolyl]methyl]thio]ethyl]-N-methyl-2-nitro-1,1-ethenediamine

Synonym: LY139037
MF: C₁₂H₂₁N₅O₂S₂
FW: 331.5
Purity: ≥98%
UV/Vis.: λ_{max}: 241, 326 nm
Supplied as: A crystalline 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

Nizatidine is supplied as a crystalline solid. A stock solution may be made by dissolving the nizatidine in the solvent of choice. Nizatidine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of nizatidine in ethanol is approximately 5 mg/ml, and approximately 20 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of nizatidine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of nizatidine in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Histamine H₂ receptors mediate gastric acid secretion by coupling to G_{α_s} proteins and increasing cAMP formation. Nizatidine is a histamine H₂ receptor antagonist that decreases gastric acid secretion (ED₅₀ = 0.9 μM in isolated gastric mucosa of bullfrog and ED₅₀s = 1.383 and 0.08 μmol/kg in rats and dogs, respectively).¹ Its gastroprotective activity has been exploited in clinical studies of various gastric acid disorders.^{2,3}

References

1. Lin, T.-M., Evans, D.C., Warrick, M.W., *et al.* Actions of nizatidine, a selective histamine H₂-receptor antagonist, on gastric acid secretion in dogs, rats and frogs. *J. Pharmacol. Exp. Ther.* **239(2)**, 406-410 (1986).
2. Feldman, M. and Burton, M.E. Histamine₂-receptor antagonists. Standard therapy for acid-peptic diseases. (First of two parts). *N. Engl. J. Med.* **323(24)**, 1672-1680 (1990).
3. Tuskey, A. and Peura, D. The use of H₂ antagonists in treating and preventing NSAID-induced mucosal damage. *Arthritis Res. Ther.* **15(Suppl 3)**, 1-7 (2013).

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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