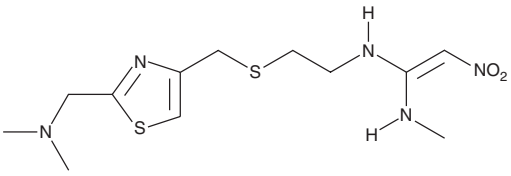
PRODUCT INFORMATION

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:	$C_{12}H_{21}N_5O_2S_2$
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 H_2 receptors mediate gastric acid secretion by coupling to $G\alpha_s$ proteins and increasing cAMP formation. Nizatidine is a histamine H_2 receptor antagonist that decreases gastric acid secretion (ED_{50} = 0.9 µM in isolated gastric mucosa of bullfrog and ED_{50}s = 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 H_2-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. Histamine$_2$-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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM