

Nizatidine

Chemical Properties

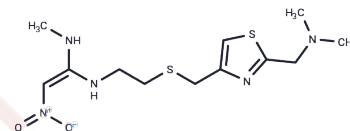
CAS No. : 76963-41-2

Formula: C₁₂H₂₁N₅O₂S₂

Molecular Weight: 331.46

Storage: Keep away from direct sunlight, Store under nitrogen
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Nizatidine (Acinon) is a competitive and reversible histamine H ₂ -receptor antagonist with antacid activity.
Targets(IC ₅₀)	Histamine Receptor, Cholinesterase (ChE)
In vitro	In rats, Nizatidine exhibits its maximum inhibitory effect on gastric acid secretion one hour after administration, with an EC ₅₀ value of 1.383 μMol/kg. Intravenous administration of Nizatidine (0.3-3 mg/kg) not only enhances gastrointestinal motility but also suppresses gastric acid secretion, achieving 50% of the maximal effect at a dose of 2.94 mg/kg and 90% at 19.6 mg/kg for rats.
In vivo	Nizatidine is a reversible, non-competitive inhibitor of acetylcholinesterase (IC ₅₀ =6.7 μM, K _i =7.4 μM) and a selective antagonist of the histamine H ₂ receptor, effectively inhibiting gastric acid secretion (IC ₅₀ =0.9 nM).

Solubility Information

Solubility	DMSO: 60 mg/mL (181.02 mM), Sonication is recommended. H ₂ O: 26 mg/mL (78.44 mM), Sonication is recommended. Ethanol: 15 mg/mL (45.25 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (9.96 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.017 mL	15.0848 mL	30.1696 mL
5 mM	0.6034 mL	3.017 mL	6.0339 mL
10 mM	0.3017 mL	1.5085 mL	3.017 mL
50 mM	0.0603 mL	0.3017 mL	0.6034 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Lin TM, et al. J Pharmacol Exp Ther, 1986, 239(2), 406-410.

Ueki S, et al. J Pharmacol Exp Ther, 1993, 264(1), 152-157.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481