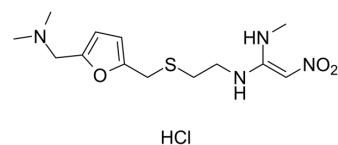


Ranitidine hydrochloride

Cat. No.:	HY-B0281A
CAS No.:	66357-59-3
Molecular Formula:	C ₁₃ H ₂₃ ClN ₄ O ₃ S
Molecular Weight:	350.86
Target:	Histamine Receptor; Bacterial; Cytochrome P450
Pathway:	GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling; Anti-infection; Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H₂O : ≥ 50 mg/mL (142.51 mM)
 DMSO : 50 mg/mL (142.51 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.8501 mL	14.2507 mL	28.5014 mL
	5 mM	0.5700 mL	2.8501 mL	5.7003 mL
	10 mM	0.2850 mL	1.4251 mL	2.8501 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: PBS
Solubility: 110 mg/mL (313.52 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (5.93 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (5.93 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (5.93 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ranitidine hydrochloride is a potent, selective and orally active histamine H₂-receptor antagonist with an IC₅₀ of 3.3 μM that inhibits gastric secretion. Ranitidine hydrochloride is a weak inhibitor of CYP2C19 and CYP2C9^{[1][2]}.

REFERENCES

- [1]. Herling, A.W., et al., Inhibition of ¹⁴C-aminopyrine accumulation in isolated rabbit gastric glands by the H₂-receptor antagonist HOE 760 (TZU-0460). *Agents Actions*, 1987. 20(1-2): p. 35-9.
- [2]. Leucuta, A., et al., A pharmacokinetic interaction study between omeprazole and the H₂-receptor antagonist ranitidine. *Drug Metabol Drug Interact*, 2004. 20(4): p. 273-81.
- [3]. Antonio Francesco Ciccaglione, et al. Pylera® plus ranitidine vs Pylera® plus esomeprazole in first-line treatment of *Helicobacter pylori* infection: Two pilot studies. *Helicobacter*. 2019 Oct;24(5):e12606.
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA