

FRG8701

Chemical Properties

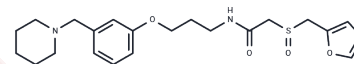
CAS No. : 108498-50-6

Formula: C₂₂H₃₀N₂O₄S

Molecular Weight: 418.55

Storage: 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	FRG8701 is a new Histamine H ₂ -receptor antagonist with an IC ₅₀ of ranging from 0.25 to 0.43 μM.
Targets(IC ₅₀)	Histamine Receptor
In vitro	The inhibitory potency of FRG8701 is almost the same as that of famotidine and approximately 33 times greater than that of cimetidine. Positive chronotropic response to histamine at 10 ⁻⁵ M is dose dependently inhibited by FRG8701 (FRG-8701) famotidine or cimetidine; and the IC ₅₀ values of FRG8701, famotidine and cimetidine are 3.3, 3.0 and 108.6 (×10 ⁻⁷ M), respectively.
In vivo	FRG8701 effectively inhibits the formation of gastric lesions induced by various necrotizing agents, demonstrating its protective effects on the gastrointestinal tract. Oral administration of FRG8701 produces a dose-dependent reduction in the development of gastric lesions caused by stress, indomethacin, and the formation of duodenal ulcers due to mepirizole, with ED ₅₀ values ranging from 1.1 to 9.4 mg/kg for gastric lesions and 1.7 to 6.9 mg/kg for each ulcer model. Additionally, in pylorus-ligated rats, intraduodenal delivery of FRG8701 dose-dependently decreases total acid output. Furthermore, FRG8701, whether administered orally or intraperitoneally at doses of 10 or 30 mg/kg, significantly prevents gastric mucosal lesions induced by 0.4 N HCl+50% ethanol, underscoring its potential as a protective agent against gastrointestinal damage.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3892 mL	11.946 mL	23.892 mL
5 mM	0.4778 mL	2.3892 mL	4.7784 mL
10 mM	0.2389 mL	1.1946 mL	2.3892 mL
50 mM	0.0478 mL	0.2389 mL	0.4778 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

Shibata M, et al. Effects of FRG-8701 on gastric acid secretion, gastric mucosal lesions by necrotizing agents and experimental gastric or duodenal ulcer in rats. *Jpn J Pharmacol.* 1990 Nov;54(3):277-85.

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