

## Rabeprazole

## Chemical Properties

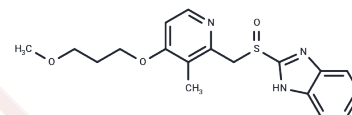
CAS No. : 117976-89-3

Formula: C<sub>18</sub>H<sub>21</sub>N<sub>3</sub>O<sub>3</sub>S

Molecular Weight: 359.44

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	Rabeprazole (LY307640) is an H <sup>+</sup> /K <sup>+</sup> -ATPase inhibitor that inhibits cell proliferation in gastric epithelial cells by targeting STAT3-mediated glycolysis and can be used in the study of gastric ulcers.
Targets(IC50)	Apoptosis,Proton pump,Antibacterial,STAT,Potassium Channel
In vitro	Rabeprazole was administered to three gastric cancer cell lines, KATO III, MKN-28, and MKN-45, at a dosage of 0.2 mM under acidic conditions for 16 hours. The results showed that rabeprazole exerted a strong inhibitory effect on the proliferation of gastric cancer cells[2].
In vivo	The results of rabeprazole (10 mg/kg; oral administration; every 48 hours for 18 weeks) showed significantly lower serum calcium levels compared to the vehicle-treated group in Swiss albino mice[3].

## Solubility Information

Solubility	DMSO: 31.3 mg/mL (87.08 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7821 mL	13.9105 mL	27.8211 mL
5 mM	0.5564 mL	2.7821 mL	5.5642 mL
10 mM	0.2782 mL	1.3911 mL	2.7821 mL
50 mM	0.0556 mL	0.2782 mL	0.5564 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

Tara A Shea, et al. Identification of Proton-Pump Inhibitor Drugs That Inhibit *Trichomonas Vaginalis* Uridine Nucleoside Ribohydrolase. *Bioorg Med Chem Lett*. 2014 Feb 15;24(4):1080-4.

Mengli Gu, et al. Rabeprazole Exhibits Antiproliferative Effects on Human Gastric Cancer Cell Lines. *Oncol Lett*. 2014 Oct;8(4):1739-1744.

Aly A M Shaalan, et al. Supplement With Calcium or Alendronate Suppresses Osteopenia Due to Long Term Rabeprazole Treatment in Female Mice: Influence on Bone TRAP and Osteopontin Levels. *Front Pharmacol*. 2020 May 13;11:583.

Kinoshita Y, Kato M, Fujishiro M, Masuyama H, Nakata R, Abe H, Kumagai S, Fukushima Y, Okubo Y, Hojo S, Kusano M. Efficacy and safety of twice-daily rabeprazole maintenance therapy for patients with reflux esophagitis refractory to standard once-daily proton pump inhibitor: the Japan-based EXTEND study. *J Gastroenterol*. 2017 Nov 29. doi: 10.1007/s00535-017-1417-z. [Epub ahead of print] PubMed PMID: 29188387.

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