Data Sheet (Cat.No.T17030)

TargetMol

Tegoprazan

Chemical Properties

CAS No. : 942195-55-3

Formula: C20H19F2N3O3

Molecular Weight: 387.38

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	Tegoprazan is an orally active, highly selective gastric H+/K+-ATPase inhibitor that controls gastric acid secretion and motility, with an IC50 of 0.29-0.52 μM for porcine, canine, and human H+/K+-ATPase in vitro.
Targets(IC50)	ATPase,Proton pump,Potassium Channel
In vitro	**METHODS**: BMM cells were cultured with Tegoprazan (CJ-12420) (0, 0.0005, 0.001, 0.005, 0.01, 0.05, 0.1, 0.5, 1, 10, 100 and 1000 μg/mL, 24 hours) to investigate its effects on BMM cytotoxicity and nitric oxide (NO) production. **RESULTS** When the concentration of Tegoprazan was 0.5, 1, 10 and 100 μg/mL, the cell viability exceeded 80%; when the concentration was 1000 μg/mL, the cell viability was less than 80%; 100 μg/mL of Tegoprazan could significantly inhibit NO production in BMM cells. [3]
In vivo	**METHODS**: Tegoprazan (CJ-12420) (3, 10 mg/kg, oral, 5 days) was used to treat pylorus-ligated rats, and the effects of Tegoprazan and esomeprazole on gastric acid secretion in pylorus-ligated rats were observed. **RESULTS** The gastric fundus pH values of 3 mg/kg Tegoprazan were 4.13 and 4.34, respectively, and the gastric fundus pH values of 10 mg/kg Tegoprazan were 6.86 and 6.63, respectively. Tegoprazan can completely inhibit gastric acid secretion. [3]

Solubility Information

Solubility	DMSO: 22.5 mg/mL (58.08 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: 2 mg/mL (5.16 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5814 mL	12.9072 mL	25.8144 mL
5 mM	0.5163 mL	2.5814 mL	5.1629 mL
10 mM	0.2581 mL	1.2907 mL	2.5814 mL
50 mM	0.0516 mL	0.2581 mL	0.5163 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

Takahashi N,et al. Tegoprazan, a Novel Potassium-Competitive Acid Blocker to Control Gastric Acid Secretion and Motility. J Pharmacol Exp Ther. 2018 Feb;364(2):275-286.
Kim DK, et al. Effects of Tegoprazan, a Novel Potassium-Competitive Acid Blocker, on Rat Models of Gastric Acid-Related Disease. J Pharmacol Exp Ther. 2019 Jun;369(3):318-327.
Han GH, et al. Anti-Inflammatory Effects of Tegoprazan in Lipopolysaccharide-Stimulated Bone-Marrow-Derived Macrophages. Int J Mol Sci. 2023 Sep 26;24(19):14589.