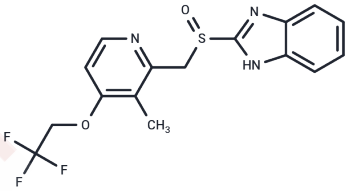
Data Sheet (Cat.No.T1021)

TargetMol

(R)-Lansoprazole

Chemical Properties



CAS No. : 138530-94-6

Formula: C16H14F3N3O2S

Molecular Weight: 369.36

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	(R)-Lansoprazole (T 168390) is the R-isomer of lansoprazole and a substituted benzimidazole prodrug with selective and irreversible proton pump inhibitor activity. Lansoprazole (AG 1749) is a potent brain penetrant neutral sphingomyelinase (N-SMase) inhibitor (exosome inhibitor)
Targets(IC50)	Proton pump
In vitro	Dexlansoprazole, constitutes >80% of circulating drug after oral administration of lansoprazole, provides lower clearance and 5-fold greater systemic exposure than the S-enantiomer following oral administration of lansoprazole. Dexlansoprazole MR is a modified release formulation of dexlansoprazole, which employs a novel Dual Delayed Release (DDR) technology that delivers the drug in two discrete phases of release, thereby inhibiting newly activated proton pumps that turn over following initial PPI inactivation of H+,K+-ATPase. Dexlansoprazole MR maintains plasma drug concentrations above the threshold level longer than lansoprazole at all doses, resulting in an optimized drug exposure-intragastric pH relationship. [1] Dexlansoprazole selectively suppresses gastric acid secretion by direct inhibition of the H+K+-ATPase proton pump in the gastric parietal cell, inhibition of this cell membrane enzyme ultimately blocks the final step in acid production. [2]

Solubility Information

Solubility	DMSO: 55 mg/mL (148.91 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: < 1 mg/mL (insoluble or slightly soluble), (< 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 (5.41 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	2.7074 mL	13.5369 mL	27.0739 mL
5 mM	0.5415 mL	2.7074 mL	5.4148 mL
10 mM	0.2707 mL	1.3537 mL	2.7074 mL
50 mM	0.0541 mL	0.2707 mL	0.5415 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

Metz DC, et al. Aliment Pharmacol Ther, 2009, 29(9), 928-937.
Kang D, Pang X, Lian W, et al. Discovery of VEGFR2 inhibitors by integrating naïve Bayesian classification, molecular docking and drug screening approaches. RSC Advances. 2018 Jan 8(10): 5286-5297.
Emerson CR, et al. Clin Ther, 2010, 32(9), 1578-1596.
Kang D, Pang X, Lian W, et al. Discovery of VEGFR2 inhibitors by integrating naïve Bayesian classification, molecular docking and drug screening approaches[J]. RSC Advances. 2018 Jan 8(10): 5286-5297.

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