(S)-Lansoprazole

Cat. No.: HY-13662C

CAS No.: 138530-95-7

Molecular Formula: $C_{16}H_{14}F_3N_3O_2S$

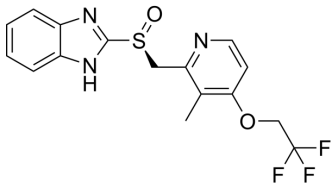
Molecular Weight: 369.36

Target: Proton Pump; Phospholipase; Bacterial

Pathway: Membrane Transporter/Ion Channel; Metabolic Enzyme/Protease; Anti-infection

Storage: -20°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (338.42 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	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

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

BIOLOGICAL ACTIVITY

Description

(S)-Lansoprazole (Levolansoprazole) is an isoform of Lansoprazole (HY-13662), which is an orally active proton pump inhibitor which prevents the stomach from producing acid. Lansoprazole (AG 1749) is a potent brain penetrant neutral sphingomyelinase (N-SMase) inhibitor (exosome inhibitor)[1][2].

In Vitro

Lansoprazole from 0.3 to 3 μM inhibits gastric acid formation in a concentration-dependent manner (IC_{50} of 0.76 μM)[4].
?Lansoprazole (30-300 μM) both induced concentration-dependent, reversible and reproducible relaxations of arteries[5].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Lansoprazole (20-40 mg/kg) treatment significantly attenuated STZ and HFD -induced memory deficits, biochemical and histopathological alterations[3].
Lansoprazole (20 mg/kg and 40 mg/kg, p.o.) significantly reduces the STZ and HFD- induced increase in AChE activity[3].
Lansoprazole (20 mg/kg and 40 mg/kg, p.o.) significantly reduces the STZ and HFD- induced rise in brain MPO level[3].
Further HFD mice treated with lansoprazole (20 mg/kg and 40 mg/kg, p.o.) shows a marked decrease in the body weight in comparison to the control animals[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Kokufu, T., et al., Effects of lansoprazole on pharmacokinetics and metabolism of theophylline. Eur J Clin Pharmacol, 1995. 48(5): p. 391-5.

[2]. Huarui Zhang, et al. Advances in the discovery of exosome inhibitors in cancer. J Enzyme Inhib Med Chem. 2020 Dec;35(1):1322-1330.

[3]. Rupinder K Sodhi, et al. Defensive effect of lansoprazole in dementia of AD type in mice exposed to streptozotocin and cholesterol enriched diet. PLoS One. 2013 Jul 31;8(7):e70487.

[4]. Jun Matsukawa, et al. A comparative study on the modes of action of TAK-438, a novel potassium-competitive acid blocker, and lansoprazole in primary cultured rabbit gastric glands. Biochem Pharmacol. 2011 May 1;81(9):1145-51.

[5]. Erdinc Naseri, et al. Proton pump inhibitors omeprazole and lansoprazole induce relaxation of isolated human arteries. Eur J Pharmacol. 2006 Feb 15;531(1-3):226-31.

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