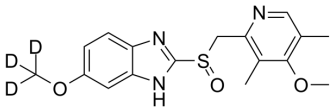
Omeprazole-d_3

Cat. No.:	HY-B0113S
CAS No.:	922731-01-9
Molecular Formula:	$C_{17}H_{16}D_3N_3O_3S$
Molecular Weight:	348.43
Target:	Proton Pump; Bacterial; Autophagy
Pathway:	Membrane Transporter/Ion Channel; Anti-infection; Autophagy
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (358.75 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.8700 mL	14.3501 mL	28.7002 mL
5 mM	0.5740 mL	2.8700 mL	5.7400 mL
10 mM	0.2870 mL	1.4350 mL	2.8700 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.97 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.97 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Omeprazole-d_3 is deuterium labeled Omeprazole. Omeprazole, a proton pump inhibitor (PPI), is available for treatment of acid-related gastrointestinal disorders. Omeprazole shows competitive inhibition of CYP2C19 activity with a Ki of 2 to 6 μM[1]. Omeprazole also inhibits growth of Gram-positive and Gram-negative bacteria[2].

REFERENCES

[1]. Li XQ, et al. Comparison of inhibitory effects of the proton pump-inhibiting drugs omeprazole, esomeprazole, lansoprazole, pantoprazole, and rabeprazole on human cytochrome P450 activities. Drug Metab Dispos. 2004 Aug;32(8):821-7.

[2]. Jonkers D, et al. Omeprazole inhibits growth of gram-positive and gram-negative bacteria including Helicobacter pylori in vitro. J Antimicrob Chemother. 1996 Jan;37(1):145-50.

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