(R)-Lansoprazole-d_4

Cat. No.: HY-13662BS

Molecular Formula: $C_{16}H_{10}D_4F_3N_3O_2S$

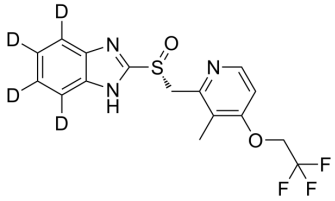
Molecular Weight: 373.39

Target: Proton Pump; Isotope-Labeled Compounds

Pathway: Membrane Transporter/Ion Channel; Others

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



BIOLOGICAL ACTIVITY

Description	(R)-Lansoprazole-d_4 is deuterium labeled (R)-Lansoprazole. (R)-Lansoprazole is the R enantiomer of Lansoprazole, Lansoprazole (AG 1749) 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	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

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

[4]. M Miura, et al. Pharmacokinetic differences between the enantiomers of lansoprazole and its metabolite, 5-hydroxylansoprazole, in relation to CYP2C19 genotypes. Eur J Clin Pharmacol. 2004 Nov;60(9):623-8.

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