Product Data Sheet

Product Name: Omeprazole-d3-1
Cat. No.: GC64070

Chemical Properties

Cas. No.	934293-92-2		
Formula	C17H16D3N3O3S	M.Wt	348.43
Solubility	DMSO : ≥ 30 mg/mL (86.10 mM); DMF : ≥ 30 mg/mL (86.10 mM); Ethanol : ≥ 5 mg/mL (14.35 mM)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Omeprazole-d3-1		

Background

Omeprazole-d_3 is intended for use as an internal standard for the quantification of omeprazole by GC- or LC-MS. Omeprazole is a selective and irreversible inhibitor of the gastric H^+/K^+ ATPase pump (IC_{50} = 1.1 μM).[1] It is a racemic mixture of two enantiomers, S-omeprazole and R-omeprazole (sodium salt) , which are prodrugs of the active sulfonamide which is formed by acid-stimulated conversion.[2,3] Both enantiomers are extensively metabolized by the cytochrome P450 (CYP) isomers CYP2C19 and CYP3A4.[3]

1.Smolka, A.J., Goldenring, J.R., Gupta, S., et al.Inhibition of gastric H,K-ATPase activity and gastric epithelial cell IL-8 secretion by the pyrrolizine derivative ML 3000BMC Gastroenterol.4(4)(2004) 2.Richardson, P., Hawkey, C.J., and Stack, W.A.Proton pump inhibitors. Pharmacology and rationale for use in gastrointestinal disordersDrugs56(3)307-335(1998) 3.Shi, S., and Klotz, U.Proton pump inhibitors: An update of their clinical use and pharmacokineticsEur. J. Clin. Pharmacol.64(10)935-951(2008)

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