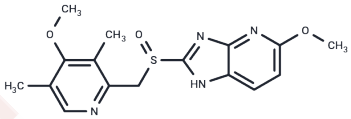
Data Sheet (Cat.No.T6700)

TargetMol

Tenatoprazole

Chemical Properties



CAS No. : 113712-98-4

Formula: C16H18N4O3S

Molecular Weight: 346.4

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Tenatoprazole (TU-199), a prodrug of the proton pump inhibitor (PPI) class, can inhibit proton transport (IC50: 3.2 μM).
Targets(IC50)	Proton pump
In vitro	Tenatoprazole labeled only the gastric H+,K+-ATPase alpha-subunit as has been found for other PPIs, approximately 2.6 nmol/mg of tenatoprazole is bound to the H+,K+-ATPase. The two enantiomers (R)- or (S)-tenatoprazole give the same stoichiometry of binding with 88% inhibition. Tenatoprazole labels only the peptide containing fifth and sixth transmembrane segments, these contain two cysteines, cysteine 813 in the luminal vestibule and cysteine 822 in the sixth transmembrane domain. [1]
In vivo	Tenatoprazole provides slow activation in vivo, which is predicted by its chemical activation rate in fasting rats. Tenatoprazole inhibits about 20–30% of enzyme activity even though acid secretion in fasting rats. (S)-tenatoprazole sodium salt hydrate provides a higher Cmax of 183 ng/mL, Tmax of 1.3 hours and AUC of 822 ng*h/mL in dog. [1]

Solubility Information

Solubility	DMSO: 11 mg/mL (31.76 mM),Sonication is recommended. Ethanol: 12 mg/mL (34.64 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8868 mL	14.4342 mL	28.8684 mL
5 mM	0.5774 mL	2.8868 mL	5.7737 mL
10 mM	0.2887 mL	1.4434 mL	2.8868 mL
50 mM	0.0577 mL	0.2887 mL	0.5774 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.

Reference

Shin JM, et al. Biochem Pharmacol, 2006, 71(6), 837-849.