Data Sheet (Cat.No.T13421)

TargetMol

(-)-Cevimeline hydrochloride hemihydrate

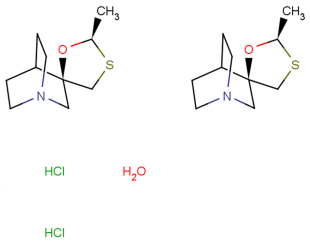
Chemical Properties

CAS No. :

Formula: C10H19ClNO1.5S

Molecular Weight: 244.78

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	Cevimeline hydrochloride hemihydrate ((-)-SNI-2011), a novel muscarinic receptor agonist, is being explored as a potential treatment for xerostomia in Sjogren's syndrome, exhibiting an IC50 value indicative of its affinity for mAChR. This compound's pharmacological effects on the gastrointestinal, urinary, and reproductive systems, alongside its impact on various tissues, were thoroughly examined in species including mice, rats, guinea pigs, rabbits, and dogs. The metabolic breakdown of (-)-SNI-2011 was studied in vitro using rat and dog liver microsomes to assess its biotransformation. Upon oral administration, peak plasma concentrations were reached within an hour in both rats and dogs, showcasing rapid absorption and a subsequent decrease in concentration with a half-life ranging from 0.4 to 1.1 hours. Bioavailability was noted at 50% in rats and 30% in dogs. Metabolic pathways highlighted significant species differences, with both S- and N-oxidized metabolites identified in rats, but only N-oxidized metabolites in dogs. Additionally, gender differences in pharmacokinetics were observed in rats but were absent in dogs. In vitro studies pinpointed the involvement of cytochrome P450 (CYP) and flavin-containing monooxygenase (FMO) in the metabolism of (-)-SNI-2011, specifically through sulfoxidation and N-oxidation processes, respectively. CYP2D and CYP3A were identified as the primary enzymes responsible for sulfoxidation in rat liver microsomes.
Targets(IC50)	AChR,ALK

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.0853 mL	20.4265 mL	40.853 mL
5 mM	0.8171 mL	4.0853 mL	8.1706 mL
10 mM	0.4085 mL	2.0427 mL	4.0853 mL
50 mM	0.0817 mL	0.4085 mL	0.8171 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.