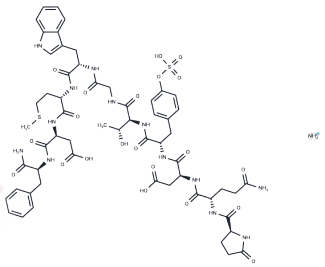
Data Sheet (Cat.No.T14932L1)

TargetMol

Ceruletide Ammonium Salt

Chemical Properties



CAS No. :

Formula: C58H77N14O21S2

Molecular Weight: 1370.44

Storage: Store at low temperature,Keep away from moisture
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	Ceruletide Ammonium Salt is a decapeptide, originating from the skin of tropical frogs, which is a potent cholecystokinin receptor agonist and a safe and effective cholecystokinin receptor agonist with direct spasmodic effects on the gallbladder muscle and bile ducts. Ceruletide Ammonium Salt has sedative activity and has been used in the study of chronic schizophrenia.Ceruletide Ammonium Salt is a decapeptide, originating from the skin of tropical frogs.
Targets(IC50)	Cholecystokinin Receptor
In vitro	Ceruletide Ammonium Salt shares chemical and biological similarities with the gastrointestinal hormones cholecystokinin (CCK) and gastrin II in humans. Ceruletide Ammonium Salt stimulates gallbladder contraction, pancreatic exocrine secretion, gastric fluid secretion, and motility in the distal duodenum, jejunum, ileum, and colon, while delaying gastric emptying and inhibiting motility in the proximal duodenum[2]. In vitro, Ceruletide Ammonium Salt activates NF-kappaB/Rel at supraphysiological doses rather than at physiological levels. This activation may induce a self-protective genetic program before cell damage occurs, potentially preventing a higher degree of injury to pancreatic acinar cells after excessive stimulation by secretagogues[1].
In vivo	Ceruletide Ammonium Salt can be utilized for animal modeling, specifically in constructing animal models of pancreatitis. Ceruletide Ammonium Salt (0.4-0.5 μg/kg, intravenous injection; 3-4 μg/kg, subcutaneous injection) induces conscious and complete vomiting and defecation in dogs, with full recovery observed 15-30 minutes and 2-4 hours after intravenous administration or subcutaneous injection, respectively. Ceruletide Ammonium Salt (5-15 ng/kg, intravenous) demonstrates a significant spasmogenic effect on the pylorus in rats. Additionally, Ceruletide Ammonium Salt can reduce blood pressure in anesthetized dogs[2]. Ceruletide Ammonium Salt-stimulated serum bile acids (SBA) evasion eliminates exogenous and endogenous influences associated with postprandial (PP) SBA stimulation. The effectiveness of Ceruletide Ammonium Salt-stimulated SBA in dogs with portosystemic shunts (PSS) may be as good as PP SBA stimulation, and it may be more sensitive in detecting hepatic dysfunction in dogs with upper respiratory disease (URD) [3].

Solubility Information

Solubility	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	0.7297 mL	3.6485 mL	7.2969 mL
5 mM	0.1459 mL	0.7297 mL	1.4594 mL
10 mM	0.073 mL	0.3648 mL	0.7297 mL
50 mM	0.0146 mL	0.073 mL	0.1459 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.

Reference

Bridger N, et al. Comparison of postprandial and ceruletide serum bile acid stimulation in dogs. J Vet Intern Med. 2008 Jul-Aug;22(4):873-8.
Vincent ME, et al. Pharmacology, clinical uses, and adverse effects of ceruletide, a cholecystokinetic agent. Pharmacotherapy. 1982 Jul-Aug;2(4):223-34.
Steinle AU, et al. NF-kappaB/Rel activation in cerulein pancreatitis. Gastroenterology. 1999 Feb;116(2):420-30.