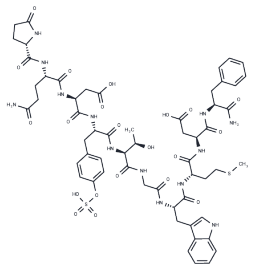
Data Sheet (Cat.No.T14932)

TargetMol

Ceruletide

Chemical Properties



CAS No. : 17650-98-5

Formula: C58H73N13O21S2

Molecular Weight: 1352.4

Storage: Keep away from moisture,Store at low temperature
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 is a decapeptide that serves as a safe and effective cholecystokinin receptor agonist, exerting a direct spasmogenic effect on the gallbladder muscle and bile ducts, and is commonly used to establish pancreatitis models.
Targets(IC50)	Cholecystokinin Receptor
In vitro	Ceruletide is biologically and chemically identical to the human gastrointestinal hormones cholecystokinin-pancreatin (CCK) and gastrin II; Ceruletide stimulates gallbladder contraction while delaying gastric emptying and inhibiting motility of the proximal duodenum [1]. Ceruletide activates NF-κB/Rel in vitro at high doses (but not physiological doses), which may induce a self-defense gene program before cell damage occurs and may protect pancreatic acinar cells from further damage after secretagogue overstimulation [2].
In vivo	Ceruletide (5-15 ng/kg intravenously) has a significant spasmodic effect on the pylorus in rats[1]; Ceruletide (0.4-0.5 mcg/kg intravenously; 3-4 mcg/kg subcutaneously) causes vomiting and defecation in conscious dogs [3].

Solubility Information

Solubility	DMSO: 255 mg/mL (188.55 mM),Sonication is recommended. H2O: 5 mg/mL (3.7 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (3.7 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.7394 mL	3.6971 mL	7.3943 mL
5 mM	0.1479 mL	0.7394 mL	1.4789 mL
10 mM	0.0739 mL	0.3697 mL	0.7394 mL
50 mM	0.0148 mL	0.0739 mL	0.1479 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

Vincent ME, et al. Pharmacology, clinical uses, and adverse effects of ceruletide, a cholecystokinetic agent. Pharmacotherapy. 1982 Jul-Aug;2(4):223-34.
Li M, Yuan Y, Han X, et al. Antioxidant Mitoquinone Alleviates Chronic Pancreatitis via Anti-Fibrotic and Antioxidant Effects. Journal of Inflammation Research. 2022, 15: 4409
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.
Steinle AU, et al. NF-kappaB/Rel activation in cerulein pancreatitis. Gastroenterology. 1999 Feb;116(2):420-30.
Zarrindast MR, et al. Effects of cholecystokinin receptor agonist and antagonists on morphin dependence in mice. Pharmacol Toxicol. 1995 Dec;77(6):360-4.