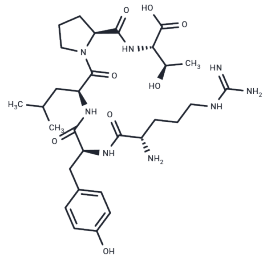
Data Sheet (Cat.No.TP1868)

TargetMol

Proctolin

Chemical Properties



CAS No. : 57966-42-4

Formula: C30H48N8O8

Molecular Weight: 648.75

Storage: 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	Proctolin is a bioactive neuropeptide that modulates interneuronal and neuromuscular synaptic transmission in a wide variety of arthropods.
Targets(IC50)	Others,Endogenous Metabolite
In vitro	Proctolin, an insect neuropeptide prevalent in arthropods, plays a significant role as a neuromodulator and potentially a neurohormone, although it doesn't act as a conventional neurotransmitter. It enhances action potential frequency, amplifies muscle contraction, and activates dormant systems. Structurally, Proctolin is a pentapeptide featuring the sequence RYLPT, notable for being the first insect neuropeptide with both sequenced and chemically characterized attributes. Identified first in D. melanogaster through the Proctolin precursor gene CG7105, it was previously undetected in B. mori due to lack of a mature peptide—attributed to missing cleavage sites around the RYLPT sequence. Recent proteomic analyses in B. mori wings have identified this pentapeptide, yet similar genetic characteristics in C. suppressalis suggest the absence of functional Proctolin in both species.

Solubility Information

Solubility	DMSO: 10 mM,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5414 mL	7.7071 mL	15.4143 mL
5 mM	0.3083 mL	1.5414 mL	3.0829 mL
10 mM	0.1541 mL	0.7707 mL	1.5414 mL
50 mM	0.0308 mL	0.1541 mL	0.3083 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

McGrath LL, et al. De novo transcriptome assembly for the lobster Homarus americanus and characterization of differential gene expression across nervous system tissues. BMC Genomics. 2016 Jan 16;17:63.