

Data Sheet (Cat.No.TP1413)

Crustacean Cardioactive Peptide CCAP

Chemical Properties

CAS No.:	309247-84-5
Formula:	C42H58N10O12S2
Molecular Weight:	959.1
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	Crustacean cardioactive peptide (CCAP) is a highly conserved, amidated cyclic nonapeptide with the primary structure PFCNAFTGC-NH ₂ (ProPheCysAsnAlaPheTyrGlyCys-NH ₂) and a disulfide bridge between Cys3 and Cys9. It is found in crustaceans and insects where it behaves as a cardioaccelerator, neuropeptide transmitter for other areas of the nervous system and a hormone.
In vitro	Ultrabithorax and Abdomil-A are not necessary for specification of the CCAP-interneurons, but are absolutely required to prevent the death by apoptosis of the CCAP-efferent neurons[2].
In vivo	CCAP, FMRFamide and SALDKNFMRFamide increase the mosquito antennal accessory pulsatile organ (APO) and heart contraction rates, increase hemolymph flow velocity in the antennal space[1].

Solubility Information

Solubility	H ₂ O: < 0.1 mg/mL (insoluble) DMSO: 50 mg/mL (52.13 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.043 mL	5.213 mL	10.426 mL
5 mM	0.209 mL	1.043 mL	2.085 mL
10 mM	0.104 mL	0.521 mL	1.043 mL
50 mM	0.021 mL	0.104 mL	0.209 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Suggs JM, et al. CCAP and FMRFamide-like peptides accelerate the contraction rate of the antennal accessory pulsatile organs (auxiliary hearts) of mosquitoes. *J Exp Biol.* 2016 Aug 1;219(Pt 15):2388-95.

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