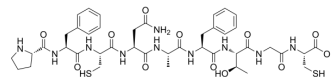


Crustacean cardioactive peptide free acid

Cat. No.:	HY-P0303
CAS No.:	309247-84-5
Molecular Formula:	C ₄₂ H ₅₈ N ₁₀ O ₁₂ S ₂
Molecular Weight:	959.1
Sequence:	Pro-Phe-Cys-Asn-Ala-Phe-Thr-Gly-Cys
Sequence Shortening:	PFCNAFTGC
Target:	Others
Pathway:	Others
Storage:	Sealed storage, away from moisture and light, under nitrogen
	Powder -80°C 2 years
	-20°C 1 year



* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen)

SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 0.67 mg/mL (0.70 mM; Need ultrasonic)
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (2.61 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (2.61 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (2.61 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Crustacean cardioactive peptide free acid is a highly conserved, amidated cyclic nonapeptide, first isolated from the pericardial organs of the shore crab <i>Carcinus maenas</i> , where it has a role in regulating heartbeat; Crustacean cardioactive peptide free acid also modulates the neuronal activity in other arthropods.
In Vitro	Ultrabithorax and Abdominal-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] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
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] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[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.

[2]. Moris-Sanz M, et al. The study of the Bithorax-complex genes in patterning CCAP neurons reveals a temporal control of neuronal differentiation by Abd-B. Biol Open. 2015 Aug 14;4(9):1132-42.

Caution: Product has not been fully validated for medical applications. For research use only.

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