Small Cardioactive Peptide B (SCPB)

Cat. No.:	HY-P1495			
CAS No.:	84746-43-0			
Molecular Formula:	$C_{52}H_{80}N_{14}O_{11}S_{2}$			
Molecular Weight:	1141.41			
Sequence:	Met-Asn-Tyr-Leu-Ala-Phe-Pro-Arg-Met-NH2			
Sequence Shortening:	MNYLAFPRM-NH2			
Target:	Adenylate Cyclase			
Pathway:	GPCR/G Protein			
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



Description	Small Cardioactive Pentide B (SCPp) a neurally active pentide, stimulates adenylate cyclase activity in particulate fractions			
Description	of both heart and gill tissues with EC_{50} s of 0.1 and 1.0 μ M, respectively.			
IC ₅₀ & Target	EC50: 0.1 μ M (adenylate cyclase, in heart tissues), 1.0 μ M (adenylate cyclase, in gill tissues) ^[1]			
In Vitro	Small cardioactive peptide B (SCP _B) is a neurally active peptide endogenous to Aplysia. Small cardioactive peptide B (SCP _B) possesses cardioexcitatory effects in Aplysia and reported a threshold concentration of 0.01 nM for both native and synthetic Small cardioactive peptide B (SCP _B) stimulated effects on the isolated heart. Effects of Small Cardioactive Peptide B (SCP _B) on the physiology of the isolated heart and gill preparations from the mollusc Aplysia californica were examined. In addition, the effects of Small Cardioactive Peptide B (SCP _B) and FMRFamide (Phe-Met-Arg-Phe-NH2) on adenylate cyclase activity are compared in particulate fractions of heart and gill tissues, respectively. Small Cardioactive Peptide B (SCP _B) is found to exert dose-dependent, reversible changes in cardiac activity when perfused through the isolated heart. The EC ₅₀			



values effecting changes in heart rate and force of contraction are 0.03 and 0.3 nM, respectively; minimum concentrations find to effect changes in heart rate and force of contraction are normally 0.001 and 1 pM, respectively. When perfused through the isolated gill, Small Cardioactive Peptide B (SCP_B) is found to suppress the gill withdrawal response amplitude with a threshold concentration of 0.01 pM and an EC_{50} value of 0.03 nM. Suppression of the gill withdrawal response amplitude by Small Cardioactive Peptide B (SCP_B) is found to be dose dependent and reversible up to a concentration of 1nM. At higher concentrations, the suppression tended to persist irreversibly. Small Cardioactive Peptide B (SCP_B) stimulates adenylate cyclase activity in particulate fractions of both heart and gill tissues with an EC_{50} of 0.1 and 1.0µM, respectively^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Cawthorpe DR, et al. The effects of small cardioactive peptide B on the isolated heart and gill of Aplysia californica. Can J Physiol Pharmacol. 1985 Aug;63(8):918-24.

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

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