

Small Cardioactive Peptide B SCPB acetate

Chemical Properties

CAS No. :

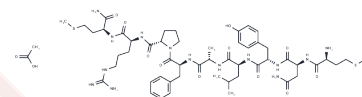
Formula: C54H84N14O13S2

Molecular Weight: 1201.47

Keep away from moisture

Storage: 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	Small Cardioactive Peptide B SCPB acetate (Small Cardioactive Peptide B SCPB acetate (84746-43-0 free base)) is a neurally active peptide, stimulates adenylate cyclase activity in particulate fractions of both heart and gill tissues with EC50s of 0.1 and 1.0 μ M, respectively.
Targets(IC50)	Others
In vitro	Small cardioactive peptide B (SCPB) is a neurally active peptide endogenous to Aplysia. Small cardioactive peptide B (SCPB) possesses cardioexcitatory effects in Aplysia and reported a threshold concentration of 0.01 nM for both native and synthetic Small cardioactive peptide B (SCPB) stimulated effects on the isolated heart. Effects of Small Cardioactive Peptide B (SCPB) 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 (SCPB) and FMRFamide (Phe-Met-Arg-Phe-NH ₂) on adenylate cyclase activity are compared in particulate fractions of heart and gill tissues, respectively. Small Cardioactive Peptide B (SCPB) 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 (SCPB) 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 (SCPB) 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 (SCPB) stimulates adenylate cyclase activity in particulate fractions of both heart and gill tissues with an EC ₅₀ of 0.1 and 1.0 μ M, respectively[1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.8323 mL	4.1616 mL	8.3231 mL
5 mM	0.1665 mL	0.8323 mL	1.6646 mL
10 mM	0.0832 mL	0.4162 mL	0.8323 mL
50 mM	0.0166 mL	0.0832 mL	0.1665 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

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.

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