

α -Conotoxin Vc1.1 TFA

Chemical Properties

CAS No. :

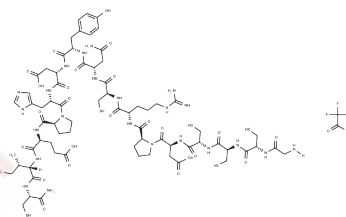
Formula: C73H108F3N23O27S4

Molecular Weight: 1925.03

Keep away from moisture, Store at low temperature

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	α -Conotoxin Vc1.1 TFA is a peptide isolated from <i>Conus victoriae</i> and a selective nAChR antagonist that inhibits $\alpha 3\alpha 5\beta 2$, $\alpha 3\beta 2$ and $\alpha 3\beta 4$, reversing mechanical allodynia in neuropathic pain models and can be used to study neuropathic chronic pain. α -Conotoxin Vc1.1 TFA inhibits human dorsal root ganglion nerve excitability and mouse colon nociception via GABA(B) receptors.
Targets(IC50)	AChR
In vitro	α -Conotoxin Vc1.1 TFA is a selective nAChR antagonist. α -Conotoxin Vc1.1 TFA inhibits $\alpha 3\alpha 5\beta 2$ (IC50=7.2 μ M), $\alpha 3\beta 2$ (IC50=7.3 μ M) and $\alpha 3\beta 4$ (IC50=4.2 μ M) and has less inhibitory effect on other nAChR subtypes. [1]
In vivo	Once-daily intramuscular injection of 0.18-18 μ g/ μ L α -Conotoxin Vc1.1 TFA for 7 consecutive days in male Sprague-Dawley rats suppressed pain behavior and accelerated functional recovery of damaged neurons in a sciatic nerve chronic compression injury (CCI) model. [2]

Solubility Information

Solubility	DMSO: 80 mg/mL (41.56 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.3 mg/mL (1.71 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.5195 mL	2.5974 mL	5.1947 mL
5 mM	0.1039 mL	0.5195 mL	1.0389 mL
10 mM	0.0519 mL	0.2597 mL	0.5195 mL
50 mM	0.0104 mL	0.0519 mL	0.1039 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

Clark RJ, et al. The synthesis, structural characterization, and receptor specificity of the alpha-conotoxin Vc1.J Biol Chem. 2006 Aug 11;281(32):23254-63.

Satkunanathan N, et al. Alpha-conotoxin Vc1.1 alleviates neuropathic pain and accelerates functional recovery of injured neurones. Brain Res. 2005 Oct 19;1059(2):149-58.

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