

α-Conotoxin PnIA TFA

Cat. No.:	HY-P1267A		
Molecular Formula:	C ₆₇ H ₉₆ F ₃ N ₁₉ O ₂₄ S ₄		
Molecular Weight:	1736.82		
Sequence:	Gly-Cys-Cys-Ser-Leu-Pro-Pro-Cys-Ala-Ala-Asn-Asn-Pro-Asp-Tyr-Cys-NH ₂ (Disulfide bridge:Cys2-Cys8;Cys3-Cys16)	GCCSLPPCAANNPDYC-NH ₂ (Disulfide bridge:Cys ₂ -Cys ₈ ;Cys ₃ -Cys ₁₆) (TFA salt)	
Sequence Shortening:	GCCSLPPCAANNPDYC-NH ₂ (Disulfide bridge:Cys2-Cys8;Cys3-Cys16)		
Target:	nAChR		
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling		
Storage:	Sealed storage, away from moisture		
	Powder	-80°C	2 years
		-20°C	1 year
	* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)		

SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (57.58 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		1 mM		0.5758 mL	2.8788 mL	5.7576 mL
		5 mM		0.1152 mL	0.5758 mL	1.1515 mL
		10 mM		0.0576 mL	0.2879 mL	0.5758 mL
Please refer to the solubility information to select the appropriate solvent.						
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 (1.44 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (1.44 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (1.44 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	α-Conotoxin PnIA TFA, a potent and selective antagonist of the mammalian α7 nAChR, has the potential for the research of neurological conditions such as neuropathic pain and Alzheimer's disease ^[1] .
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REFERENCES

[1]. Gene Hopping, et al. Hydrophobic Residues at Position 10 of α -conotoxin PnIA Influence Subtype Selectivity Between $\alpha 7$ and $\alpha 3\beta 2$ Neuronal Nicotinic Acetylcholine Receptors. *Biochem Pharmacol.* 2014 Oct 15;91(4):534-42.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA