

α-Conotoxin PIA TFA

Cat. No.:	HY-P1268A
Molecular Formula:	C ₈₅ H ₁₂₈ F ₉ N ₂₇ O ₃₁ S ₄
Molecular Weight:	2323.33
Sequence:	Arg-Asp-Pro-Cys-Cys-Ser-Asn-Pro-Val-Cys-Thr-Val-His-Asn-Pro-Gln-Ile-Cys-NH ₂ (Disulfide bridge:Cys4-Cys10;Cys5-Cys18) <small>RDPCCSNPVCTVHNPQIC-NH₂ (Disulfide bridge:Cys4-Cys10;Cys5-Cys18) (TFA salt)</small>
Sequence Shortening:	RDPCCSNPVCTVHNPQIC-NH ₂ (Disulfide bridge:Cys4-Cys10;Cys5-Cys18)
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 : ≥ 250 mg/mL (107.60 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		0.4304 mL	2.1521 mL	4.3042 mL
	5 mM		0.0861 mL	0.4304 mL	0.8608 mL
	10 mM		0.0430 mL	0.2152 mL	0.4304 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (0.90 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (0.90 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (0.90 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

α-Conotoxin PIA TFA is a nicotinic acetylcholine receptor (nAChR) antagonist that targets nAChR subtypes containing α6 and α3 subunits. α-Conotoxin PIA has the potential for the research of Parkinson's disease, and schizophrenia^[1]

REFERENCES

[1]. Seung-Wook Chi , et al. Solution Structure of Alpha-Conotoxin P1A, a Novel Antagonist of alpha6 Subunit Containing Nicotinic Acetylcholine Receptors. Biochem Biophys Res Commun. 2005 Dec 30;338(4):1990-7.

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

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