α-Conotoxin M I

Cat. No.:	HY-P3653
CAS No.:	88217-10-1
Molecular Formula:	$C_{58}H_{88}N_{22}O_{17}S_4$
Molecular Weight:	1493.72
Sequence Shortening:	GRCCHPACGKNYSC-NH2 (Disulfide bridge:Cys3-Cys8;Cys4-Cys14)
Target:	mAChR; nAChR
Pathway:	GPCR/G Protein; Neuronal Signaling; Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	α-Conotoxin M I is a potent and selective inhibitor of mAChR and α1β1γδ nAChR, but has no effect on nicotine-stimulated dopamine release. α-Conotoxins are small, disulfide-rich peptides that competitively inhibit muscle and neuronal nicotinic AChRs[1][2].
IC_{50} & Target	mAChR[2]; α1β1γδ nAChR[1]
In Vitro	α-Conotoxin M I interacts with the α-δ site of the AChR through four hydrophobic residues in its N- and C-terminal loops. Furthermore, the key side chains in α-Conotoxin M I localize in a hydrophobic cluster that interacts with hydrophobic and aromatic residues from both the a and d subunits[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Kulak JM, et al. Alpha-conotoxin MII blocks nicotine-stimulated dopamine release in rat striatal synaptosomes. J Neurosci. 1997 Jul 15;17(14):5263-70.

[2]. Bren N, et al. Hydrophobic pairwise interactions stabilize alpha-conotoxin MI in the muscle acetylcholine receptor binding site. J Biol Chem. 2000 Apr 28;275(17):12692-700.

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