

ω-Agatoxin TK

Cat. No.:	HY-P1079
CAS No.:	158484-42-5
Molecular Formula:	C ₂₁₅ H ₃₃₇ N ₆₅ O ₇₀ S ₁₀
Molecular Weight:	5273.02
Sequence:	Glu-Asp-Asn-Cys-Ile-Ala-Glu-Asp-Tyr-Gly-Lys-Cys-Thr-Trp-Gly-Gly-Thr-Lys-Cys-Cys-Arg-Gly-Arg-Pro-Cys-Arg-Cys-Ser-Met-Ile-Gly-Thr-Asn-Cys-Glu-Cys-Thr-Pro-Arg-Leu-Ile-Met-Glu-Gly-Leu-Ser-Phe-Ala (Disulfide bridge: Cys4-Cys20, Cys12-Cys25, Cys19-Cys36, Cys27-Cys34)
Sequence Shortening:	EDNCIAEDYGKCTWGGTKCCGRPCRCSMIGTNCECTPRLIMEGLSFA (Disulfide bridge: Cys4-Cys20, Cys12-Cys25, Cys19-Cys36, Cys27-Cys34)
Target:	Calcium Channel
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)

BIOLOGICAL ACTIVITY

Description	ω-Agatoxin TK, a peptidyl toxin of the venom of <i>Agelenopsis aperta</i> , is a potent and selective P/Q type Ca ²⁺ channel blocker. ω-Agatoxin TK inhibits the high K ⁺ depolarisation-induced rise in internal Ca ²⁺ in cerebral isolated nerve endings with an IC ₅₀ of 60 nM. ω-Agatoxin TK has no effect on L-type, N-type, or T-type calcium channels ^{[1][2][3]} .
IC₅₀ & Target	P/Q type Ca ²⁺ channel

REFERENCES

- [1]. María Sitges, et al. Omega-agatoxin-TK is a useful tool to study P-type Ca²⁺ channel-mediated changes in internal Ca²⁺ and glutamate release in depolarised brain nerve terminals. *Neurochem Int.* 2005 Jan;46(1):53-60.
- [2]. M Kimura, et al. Involvement of P-type calcium channels in high potassium-elicited release of neurotransmitters from rat brain slices. *Neuroscience.* 1995 Jun;66(3):609-15.
- [3]. M Kuwada, et al. Omega-agatoxin-TK containing D-serine at position 46, but not synthetic omega-[L-Ser46]agatoxin-TK, exerts blockade of P-type calcium channels in cerebellar Purkinje neurons. *Mol Pharmacol.* 1994 Oct;46(4):587-93.

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

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