

Calcicludine

Cat. No.:	HY-P3065
CAS No.:	178036-64-1
Molecular Formula:	C ₃₂₁ H ₄₇₆ N ₈₆ O ₇₈ S ₆
Molecular Weight:	6980.13
Sequence:	Trp-Gln-Pro-Pro-Trp-Tyr-Cys-Lys-Glu-Pro-Val-Arg-Ile-Gly-Ser-Cys-Lys-Lys-Gln-Phe-Ser-Ser-Phe-Tyr-Phe-Lys-Trp-Thr-Ala-Lys-Lys-Cys-Leu-Pro-Phe-Leu-Phe-Ser-Gly-Cys-Gly-Gly-Asn-Ala-Asn-Arg-Phe-Gln-Thr-Ile-Gly-Glu-Cys-Arg-Lys-Lys-Cys-Leu-Gly-Lys (Disulfide bridge: Cys7-Cys57; Cys16-Cys40; Cys32-Cys53)
Sequence Shortening:	WQPPWYCKEPRVIGSCKKQFSSFYFKWTAKKCLPFLFSGCGGNANRFQTIGECRKKCLGK (Disulfide bridge: Cys7-Cys57; Cys16-Cys40; Cys32-Cys53)
Target:	Calcium Channel
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Calcicludine is a protein toxin from the venom of the green mamba <i>Dendroaspis angusticeps</i> that inhibits high-voltage-activated calcium channel, especially L-type calcium channel with the IC ₅₀ of 88 nM. Calcicludine has role in excitatory synaptic transmission ^{[1][2]} .
IC ₅₀ & Target	L-type calcium channel 88 nM (IC ₅₀)

REFERENCES

- [1]. H Schweitz, et al. Calcicludine, a venom peptide of the Kunitz-type protease inhibitor family, is a potent blocker of high-threshold Ca²⁺ channels with a high affinity for L-type channels in cerebellar granule neurons. *Proc Natl Acad Sci U S A.* 1994 Feb 1;91(3):878-82.
- [2]. S C Stotz, et al. Block of Voltage-dependent Calcium Channel by the Green Mamba Toxin Calcicludine. *J Membr Biol.* 2000 Mar 15;174(2):157-65.

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

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