

Dendrotoxin-I

Cat. No.:	HY-P3055
CAS No.:	107950-33-4
Molecular Formula:	C ₃₁₂ H ₄₉₁ N ₉₉ O ₈₃ S ₆
Molecular Weight:	7149.24
Sequence:	Gln-Pro-Leu-Arg-Lys-Leu-Cys-Ile-Leu-His-Arg-Asn-Pro-Gly-Arg-Cys-Tyr-Gln-Lys-Ile-Pro-Ala-Phe-Tyr-Tyr-Asn-Gln-Lys-Lys-Lys-Gln-Cys-Glu-Gly-Phe-Thr-Trp-Ser-Gly-Cys-Gly-Gly-Asn-Ser-Asn-Arg-Phe-Lys-Thr-Ile-Glu-Glu-Cys-Arg-Arg-Thr-Cys-Ile-Arg-Lys (Disulfide bridge:Cys7-Cys57;Cys16-Cys40;Cys32-Cys53)
Sequence Shortening:	QPLRKLCILHRNPGRCYQKIPAFYNNQKKKQCEGFTWSGCGGNSNRFKTIIECRRTCIRK (Disulfide bridge:Cys7-Cys57;Cys16-Cys40;Cys32-Cys53)
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Dendrotoxin-I is a potent K ⁺ channels blocker and targets voltage-gated potassium channel subunits KV1.1 and KV1.2. Dendrotoxin-I is a neurotoxin isolated from the venom of Dendroaspis snakes ^{[1][2][3]} .								
In Vivo	Dendrotoxin-I (5 mg/kg; IV) displays a significant tumor growth inhibition effect combined with hyperthermia ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. <table border="1"> <tr> <td>Animal Model:</td> <td>Nude mice with MCF-7 cells^[3]</td> </tr> <tr> <td>Dosage:</td> <td>5 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>IV</td> </tr> <tr> <td>Result:</td> <td>Displayed a significant tumor growth inhibition effect combined with hyperthermia. Could not keep on inhibiting the growth of tumor at the later period of treatment.</td> </tr> </table>	Animal Model:	Nude mice with MCF-7 cells ^[3]	Dosage:	5 mg/kg	Administration:	IV	Result:	Displayed a significant tumor growth inhibition effect combined with hyperthermia. Could not keep on inhibiting the growth of tumor at the later period of treatment.
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REFERENCES

- [1]. H Rehm, et al. Purification and subunit structure of a putative K⁺-channel protein identified by its binding properties for dendrotoxin I. Proc Natl Acad Sci U S A. 1988 Jul;85(13):4919-23.
- [2]. Tess Wright, et al. Firing frequency and entrainment maintained in primary auditory neurons in the presence of combined BDNF and NT3. Sci Rep. 2016 Jun 23;6:28584.
- [3]. Hui Zhang, et al. Preparation, characterization, and pharmacodynamics of thermosensitive liposomes containing docetaxel. J Pharm Sci. 2014 Jul;103(7):2177-2183.

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

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