

HsTX1

Cat. No.:	HY-P5182
CAS No.:	201948-00-7
Molecular Formula:	C ₁₄₉ H ₂₄₆ N ₅₄ O ₄₆ S ₉
Molecular Weight:	3818.47
Sequence:	Ala-Ser-Cys-Arg-Thr-Pro-Lys-Asp-Cys-Ala-Asp-Pro-Cys-Arg-Lys-Glu-Thr-Gly-Cys-Pro-Tyr-Gly-Lys-Cys-Met-Asn-Arg-Lys-Cys-Lys-Cys-Asn-Arg-Cys-NH ₂ (Disulfide Bridge: Cys3-Cys24; Cys9-Cys29; Cys13-Cys31; Cys19-Cys34)
Sequence Shortening:	ASCRTPKDCADPCRKETGCPYGKCMNRKCKNRC-NH ₂ (Disulfide Bridge: Cys3-Cys24; Cys9-Cys29; Cys13-Cys31; Cys19-Cys34)
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	HsTX1, from the scorpion <i>Heterometrus spinnifer</i> , is a 34-residue, C-terminally amidated peptide cross-linked by four disulfide bridges. HsTX1, an the inhibitor of potassium channel, with IC ₅₀ for Kv1.3 of 12 pM inhibits T _{EM} cell activation and attenuates inflammation in autoimmunity ^{[1][2][3]} .
IC₅₀ & Target	Kv1.3 12 pM (IC ₅₀)

REFERENCES

- [1]. M Harunur Rashid, et al. A potent and Kv1.3-selective analogue of the scorpion toxin HsTX1 as a potential therapeutic for autoimmune diseases. *Sci Rep.* 2014 Mar 28;4:4509. doi: 10.1038/srep04509.
- [2]. Lebrun, Bruno, et al. A four-disulphide-bridged toxin, with high affinity towards voltage-gated K⁺ channels, isolated from *Heterometrus spinnifer* (Scorpionidae) venom. *Biochemical Journal.* 328 (Pt 1): 321–327.
- [3]. Mark R. Tanner, et al. Prolonged immunomodulation in inflammatory arthritis using the selective Kv1.3 channel blocker HsTX1[R14A] and its PEGylated analog. *Immunol.* 2017 Jul; 180: 45–57. Published online 2017 Apr 4.

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

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