

Data Sheet

Product Name:	Margatoxin
Cat. No.:	CS-0029220
CAS No.:	145808-47-5
Molecular Formula:	C ₁₇₈ H ₂₈₆ N ₅₂ O ₅₀ S ₇
Molecular Weight:	4178.95
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
Solubility:	10 mM in DMSO

[TIINVKCTSPKQCLPPCKAQFGQSAGAKCMNGKCKCYPH(Disulfide bridge:Cys7-Cys29;Cys13-Cys34;Cys17-Cys36)]

BIOLOGICAL ACTIVITY:

Margatoxin, an alpha-KTx scorpion toxin, is a high affinity inhibitor of **Kv1.3** ($K_d=11.7$ pM). Margatoxin inhibits the Kv1.2 ($K_d=6.4$ pM) and Kv1.1 ($K_d=4.2$ nM). Margatoxin, a 39 amino-acid-long peptide, is isolated from the venom of the scorpion *Centruroides margaritatus* and widely used in ion channel research.^{[1][2]} IC50 & Target: Kd: 11.7 pM (Kv1.3), 6.4 pM (Kv1.2) and 4.2 nM (Kv1.1)^[1]
In Vivo: Margatoxin (i.p.; 1 pmol/g) significantly decreases thioglycollate-induced leukocyte transmigration in the peritoneal cavity in 12-week-old C57BL6/J mice^[2].

References:

[1]. Bartok A, et al. Margatoxin is a non-selective inhibitor of human Kv1.3 K⁺ channels. *Toxicol.* 2014 Sep;87:6-16.

[2]. Chen YC, et al. Preimplantation factor prevents atherosclerosis via its immunomodulatory effects without affecting serum lipids. *Thromb Haemost.* 2016 May 2;115(5):1010-24.

CAIndexNames:

L-Histidine, L-threonyl-L-isoleucyl-L-isoleucyl-L-asparaginyL-L-valyl-L-lysyl-L-cysteinyL-L-threonyL-L-seryl-L-prolyL-L-lysyl-L-glutaminyL-L-cysteinyL-L-leucyl-L-p
rolyL-L-prolyL-L-cysteinyL-L-lysyl-L-alanyl-L-glutaminyL-L-phenylalanyLglycyl-L-glutaminyL-L-seryl-L-alanyLglycyl-L-alanyl-L-lysyl-L-cysteinyL-L-methionyl-L-asp
raginyLglycyl-L-lysyl-L-cysteinyL-L-lysyl-L-cysteinyL-L-tyrosyl-L-prolyL-, cyclic (7→29),(13→34),(17→36)-tris(disulfide)

SMILES:

[TIINVKCTSPKQCLPPCKAQFGQSAGAKCMNGKCKCYPH(Disulfide bridge:Cys7-Cys29;Cys13-Cys34;Cys17-Cys36)]

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

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