Margatoxin TFA

Cat. No.: HY-P1280A

Molecular Formula: $C_{178}H_{286}N_{52}O_{50}S_7.xC_2HF_3O_2$

Sequence: Thr-Ile-Ile-Asn-Val-Lys-Cys-Thr-Ser-Pro-Lys-Gln-Cys-Leu-Pro-Pro-Cys-Lys-Ala-Gln-Phe-Gly-Gln-Ser-Ala-Gly-Ala-Lys-Cys-Met-Asn-Gly-Lys-Cys-Lys-Cys-Tyr-Pro-His (Disulfide bridge:Cys7-Cys29;Cys13-Cys34;Cys17-Cys36)

TIINVKCTSPKQCLPPCKAQFGQSAGAKCMNGKCKCYPH(Disulfide bridge:Cys7-Cys29;Cys13-Cys34;Cys17-Cys36) (TFA salt)

Sequence Shortening: TIINVKCTSPKQCLPPCKAQFGQSAGAKCMNGKCKCYPH(Disulfide bridge:Cys7-Cys29;Cys13-Cys34;Cys17-Cys36)

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	Margatoxin TFA, an alpha-KTx scorpion toxin, is a high affinity inhibitor of Kv1.3 (K_d=11.7 pM). Margatoxin TFA inhibits the Kv1.2 (K_d=6.4 pM) and Kv1.1 (K_d=4.2 nM). Margatoxin TFA, 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].
IC_{50} & Target	Kd: 11.7 pM (Kv1.3), 6.4 pM (Kv1.2) and 4.2 nM (Kv1.1)[1]
In Vivo	Margatoxin TFA (i.p.; 1 pmol/g) significantly decreases thiogycollate-induced leukocyte transmigration in the peritoneal cavity in 12-week-old C57BL6/J mice[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Bartok A, et al. Margatoxin is a non-selective inhibitor of human Kv1.3 K^+ channels. Toxicon. 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.

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