PRODUCT INFORMATION

Tertiapin Q (trifluoroacetate salt)

Item No. 36907

Formal Name: L-alanyl-L-leucyl-L-cysteinyl-L-asparaginyl-L-cysteinyl-L-asparaginyl-L-arginyl-L-isoleucyl-L-isoleucyl-L-isoleucyl-L-prolyl-L-histidyl-L-glutaminyl-L-cysteinyl-L-tryptophyl-L-lysyl-L-lysyl-L-cysteinylglycyl-L-lysyl-L-lysinamide, cyclic (3→14),(5→18)-*bis*(disulfide), trifluoroacetate salt

Synonyms: TPN(M13Q), TPNQ

Peptide Sequence: ALCNCNRIIIPHQCWKKCGKK-NH_2

MF: $C_{106}H_{175}N_{35}O_{24}S_4 \bullet XCF_3COOH$

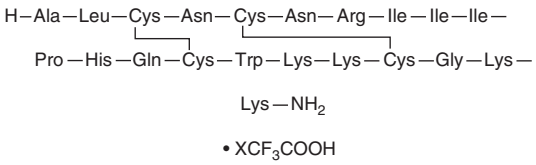
FW: 2,452.0

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Tertiapin Q (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the tertiapin Q (trifluoroacetate salt) in water. We do not recommend storing the aqueous solution for more than one day.

Description

Tertiapin Q is a peptide derivative of the honeybee venom peptide and inhibitor of inwardly rectifying potassium (K_{ir}) channels, tertiapin.[1] It inhibits heteromultimeric potassium channels composed of G protein-activated inward rectifier potassium channel 1 (GIRK1) and GIRK4, also known as $K_{ir}3.1$ and $K_{ir}3.4$, respectively, as well as the inward-rectifier potassium channel 1 ($K_{ir}1.1$; K_is = 13.3 and 1.3 nM, respectively).[2] Tertiapin Q inhibits voltage-stimulated hyperpolarization and increases action potential duration in mouse dorsal root ganglion neurons in a concentration-dependent manner.[3] It inhibits BK-type potassium channels in *Xenopus* oocytes expressing the human BK channel α subunit (IC_{50} = 5.8 nM).

References

1. Jin, W., Klem, A.M., Lewis, J.H., *et al.* Mechanisms of inward-rectifier K^+ channel inhibition by tertiapin-Q. *Biochemistry* **38(43)**, 14294-14301 (1999).
2. Jin, W. and Lu, Z. Synthesis of a stable form of tertiapin: A high-affinity inhibitor for inward-rectifier K^+ channels. *Biochemistry* **38(43)**, 14286-14293 (1999).
3. Kanjhan, R., Coulson, E.J., Adams, D.J., *et al.* Tertiapin-Q blocks recombinant and native large conductance K^+ channels in a use-dependent manner. *J. Pharmacol. Exp. Ther.* **314(3)**, 1353-1361 (2005).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM