

Tertiapin Q

Product name : Tertiapin Q	Synonyms :
Catalog # : 08TER001	
Product description	
<p>Tertiapin has been isolated from the venom of the Honeybee Apis mellifera (African tarantula). Tertiapin-Q is an oxidation-resistant mutant of the wild-type tertiapin where Methione 13 has been replaced by a Glutamine. Tertiapin-Q blocks the inwardly rectifying K_{ir}1.1 (ROMK1) and K_{ir}3.1/3.4 (GIRK1/GIRK4 also known as IKACH) potassium channels with Kd values of around 2 nM and 8 nM respectively. Tertiapin-Q also inhibits calcium-activated large conductance BK potassium channels (K_{Ca}1.1) in a concentration and voltage-dependent manner (IC₅₀ ~ 5 nM), in addition to inhibiting K_{ir}3.1/3.2 (GIRK1/GIRK2) heteromultimer potassium channels with a Kd close to 270 nM. Tertiapin-Q can prevent dose-dependent acetylcholine(ACh)-induced atrioventricular blocks in mammalian hearts, as KCNJ3/KCNJ5 channels (also named I(KACH)), are activated by ACh found in mammalian myocytes.</p>	
Product specifications	
<p>AA sequence: Ala-Leu-Cys³-Asn-Cys⁵-Asn-Arg-Ile-Ile-Ile-Pro-His-Gln-Cys¹⁴-Trp-Lys-Lys-Cys¹⁸-Gly-Lys-Lys-NH₂ Disulfide bonds: C₁₀₆H₁₇₉N₃₃O₂₄S₅ Length (aa): 18 Formula: C₇₉H₁₃₁N₃₁O₂₄S₄ Appearance: White lyophilized solid Molecular Weight: 2456 Da CAS number: Source: Synthetic Counterion: TFA salts Solubility: Water or saline buffer, 5 mg/mL maximum (recommendation)</p>	
Formulation	
<p>Storage/Stability: Shipped at ambient temperature under lyophilized powder. Store at -20°C (-4°F). Do not freeze-thaw. Aliquot sample if required and store at -80°C (-112°F). Expiry date: One year Use restrictions: For laboratory use only. Not for drug, household or other uses. Not for use in diagnostic or therapeutic procedures.</p>	
References	
<ul style="list-style-type: none"> • Felix, J. P., <i>et al.</i> (2006) Characterization of Kir1.1 channels with the use of a radiolabeled derivative of tertiapin, <i>Biochemistry</i> • Kanjhan, R., C <i>et al.</i> (2005) Tertiapin-Q blocks recombinant and native large conductance K⁺ channels in a use-dependent manner, <i>J Pharmacol Exp Ther.</i> • Ramu, Y., <i>et al.</i> (2001) Titration of tertiapin-Q inhibition of ROMK1 channels by extracellular protons, <i>Biochemistry.</i> • Kitamura, H., <i>et al.</i> (2000) Tertiapin potently and selectively blocks muscarinic K(+) channels in rabbit cardiac myocytes, <i>J Pharmacol Exp Ther.</i> • Jin, W., <i>et al.</i> (1999) Mechanisms of inward-rectifier K⁺ channel inhibition by tertiapin-Q, <i>Biochemistry</i> 	

For laboratory research use only