

ShK

Product name : ShK	Synonyms :
Catalog # : 08SHK001	
Product description	
<p>ShK (Stichodactyla helianthus Neurotoxin) has been isolated from the venom of the Caribbean sea anemone <i>Stichodactyla helianthus</i>. ShK inhibits voltage-dependent potassium channels. It blocks K_v1.3 (KCNA3) potently and also K_v1.1 (KCNA1), K_v1.4 (KCNA4), and K_v1.6 (KCNA6) respectively with 11 pM, 16 pM and 165 pM. Interestingly, it was also demonstrated that ShK potently inhibits the hK_v3.2b channel with an IC₅₀ value of approximately 0.6 nM.</p>	
Product specifications	
<p>AA sequence: Arg-Ser-Cys³-Ile-Asp-Thr-Ile-Pro-Lys-Ser-Arg-Cys¹²-Thr-Ala-Phe-Gln-Cys¹⁷-Lys-His-Ser-Met-Lys-Tyr-Arg-Leu-Ser-Phe-Cys²⁸-Arg-Lys-Thr-Cys³²-Gly-Thr-Cys³⁵-OH Disulfide bonds: Cys³-Cys¹⁵, Cys¹²-Cys³⁸, Cys¹⁷-Cys³² Length (aa): 35 Formula: C₁₆₉H₂₇₄N₅₄O₄₈S₇ Appearance: White lyophilized solid Molecular Weight: 4051.87 Da CAS number: 165168-50-3 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>	
Related products	
<ul style="list-style-type: none"> • Kaliotoxin 1 - #08KTX002: potent inhibitor of K_v1.1, K_v1.2, K_v1.3 channels • Margatoxin - #08MAG001: selective inhibitor of K_v1.3 • HsTx1 - # 08NEU001: inhibits K_v1.3 with a K_d close to 10pM • Maurotoxin - #08MAR001: inhibits voltage-gated potassium channels and small conductance calcium-activated channels • ADWX-1 - #13ADW001: selective K_v1.3 blocker • (Dap²²)-ShK - #13SHD001: selective blocker of the voltage-gated potassium channel K_v1.3 (IC₅₀ ~ 23 pM) 	
References	
<ul style="list-style-type: none"> • Panyi G, et al. (2006) K⁺ channel blockers: novel tools to inhibit T cell activation leading to specific immunosuppression. <i>Curr Pharm Des.</i> • Yan L., et al. (2005) <i>Stichodactyla helianthus</i> peptide, a pharmacological tool for studying Kv3.2 channels. <i>Mol Pharmacol.</i> • Beeton C., et al. (2005) Targeting effector memory T cells with a selective peptide inhibitor of Kv1.3 channels for therapy of autoimmune diseases. <i>Mol Pharmacol.</i> • Norton RS., et al. (2004) Potassium channel blockade by the sea anemone toxin ShK for the treatment of multiple sclerosis and other autoimmune diseases. <i>Curr Med Chem</i> • Castaneda, O., et al. (1995) Characterization of a potassium channel toxin from the Caribbean Sea anemone <i>Stichodactyla helianthus</i>, <i>Toxicon.</i> 	

For laboratory research use only