Product Data Sheet

Product Name: ShK toxin TFA
Cat. No.: GC79543

Chemical Properties

Cas. No.			
Formula	$C_{169}H_{274}N_{54}O_{48}S_7 \cdot xC_2HF_3O_2$	M.Wt	4054.8
Solubility	H_2O: ≥ 50 mg/mL	Storage	Sealed storage, away from moisture
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Arg-Ser-Cys-Ile-Asp-Thr-Ile-Pro-Lys-Ser-Arg-Cys-Thr-Ala-Phe-Gln-Cys-Lys-His-Ser-Met-Lys-Tyr-Arg-Leu-Ser-Phe-Cys-Arg-Lys-Thr-Cys-Gly-Thr-Cys (Disulfide bridge: Cys3-Cys35; Cys12-Cys28; Cys17-Cys32) (TFA salt)

Background

ShK toxin TFA (Stichodactyla helianthus neurotoxin TFA) is a neurotoxin. ShK toxin TFA blocks voltage-dependent potassium channel (K v 1.3 channel). ShK toxin TFA can be isolated from the whole body extract of the Caribbean sea anemone (Stichodactylu helianthus). ShK toxin TFA competes with dendrotoxin I and α-dendrotoxin for binding to synaptosomal membranes of rat brain, facilitates acetylcholine release. ShK toxin TFA suppresses K + currents in cultured rat dorsal root ganglion neurons. ShK toxin TFA also inhibits T lymphocyte proliferation [1] [2].

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

[1]. Castañeda O, et al. Characterization of a potassium channel toxin from the Caribbean Sea anemone Stichodactyla helianthus. Toxicon. 1995 May;33(5):603-13.
[2]. Beeton C, et al. The D-diastereomer of ShK toxin selectively blocks voltage-gated K+ channels and inhibits T lymphocyte proliferation. J Biol Chem. 2008 Jan 11;283(2):988-97.

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