Product Data Sheet

Product Name: β-Pompilidotoxin
Cat. No.: GP10111

Chemical Properties

Cas. No.	216064-36-7		
Chemical Name	β-Pompilidotoxin		
SMILES	CCC(C)C(C(=O)NC(CCCCN)C(=O)NC(C(C)CC)C(=O)NCC(=O)NC(CC(C)C)C(=O)NC(CC1=CC=CC=C1)C(=O)NC(CC(=O)O)C(=O)NC(CC		
Formula	$C_{71}H_{124}N_{22}O_{17}$	M.Wt	
Solubility	≥ 155.8mg/mL in DMSO	Storage	
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	β-Pompilidotoxin		

Background

β-Pompilidotoxin, (C71H124N22O17), a peptide with the sequence H2N-Arg

-Ile-Lys-Ile-Gly-Leu-Phe-Asp-Gln-Leu-Ser-Arg-Leu-amide, MW= 1557.88. Pompilidotoxin is a toxin from the venom of spider wasps that slows the inactivation of Na^+channels. α-Pompilidotoxin (α-PMTX) can be extracted from the venom of a solitary wasp, Anopolis samariensis. β-Pompilidotoxin (β-PMTX) originates from the venom of another wasp, Batozonellus maculifrons(1). Homology α-PMTX has no structural homology with other toxins. It lacks disulfide bonds which are known to be present in other toxins acting on sodium channels, such as sea anemone toxins or scorpion toxins(2). Both α- and β-PMTX slow the inactivation of neuronal sodium channels (but not heart sodium channels), possibly by binding to the neurotoxin receptor site 3 on the extracellular surface of the sodium channel(3). β-PMTX has higher potency than α-PMTX. By slowing down the inactivation of sodium channels, PMTXs can potentiate synaptic transmission in the lobster neuromuscular endplate.

References:
1. Konno K, Hisada M, Itagaki Y, Naoki H, Kawai N, Miwa A, Yasuhara T, Takayama H (1998). "Isolation and structure of pompilidotoxins, novel peptide neurotoxins in solitary wasp venoms". Biochem Biophys Res Commun. 250 (3): 612–6.
2. Sahara Y, Gotoh M, Konno K, Miwa A, Tsubokawa H, Robinson HP, Kawai N (2000). "A new class of neurotoxin from wasp venom slows inactivation of sodium current". Eur J Neurosci. 12 (6): 1961–70.
3. Kawai N, Konno K (2004). "Molecular determinants of two neurotoxins that regulate sodium current inactivation in rat hippocampal neurons". Neurosci Lett. 361 (1-3): 44–6.

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA