

Product Name: β-Pompidotoxin

Catalog No.: 1539

Batch No.: 4

CAS Number: 216064-36-7

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₇₁H₁₂₄N₂₂O₁₇
Batch Molecular Weight: 1557.9
Physical Appearance: White lyophilised solid
Net Peptide Content: 85%
Solubility: Soluble to 1 mg/ml in water
Storage: Desiccate at -20°C
Peptide Sequence: Arg-Ile-Lys-Ile-Gly-Leu-Phe-Asp-Gln-Leu-Ser-Arg-Leu-NH₂

2. ANALYTICAL DATA

HPLC: Shows >95% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala			Lys	1.00	0.93
Arg	2.00	1.95	Met		
Asx	1.00	1.04	Phe	1.00	0.97
Cys			Pro		
Glx	1.00	1.05	Ser	1.00	1.09
Gly	1.00	1.05	Thr		
His			Trp		
Ile	2.00	1.81	Tyr		
Leu	3.00	3.11	Val		

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Description:

Novel wasp neurotoxin that slows Na⁺ channel inactivation. Facilitates neuromuscular synaptic transmission and discriminates between rat neuronal and cardiac Na⁺ channel α -subunits.

Physical and Chemical Properties:

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Batch Molecular Weight: 1557.9

Physical Appearance: White lyophilised solid

Peptide Sequence:

Arg-Ile-Lys-Ile-Gly-Leu-Phe-Asp-Gln-Leu-
Ser-Arg-Leu-NH₂

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in water

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Net Peptide Content: 85% (Remaining weight made up of counterions and residual water).

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 μ m filter to remove potential bacterial contamination whenever possible.

References:

Konno *et al* (1998) Isolation and structure of pompilidotoxins, novel peptide neurotoxins in solitary wasp venoms. *Biochem.Biophys.Res.Commun.* **250** 612. PMID: 9784394.

Kinoshita *et al* (2001) Novel wasp toxin discriminates between neuronal and cardiac sodium channels. *Mol.Pharmacol.* **59** 1457. PMID: 11353806.

Miyawaki *et al* (2002) Differential effects of novel wasp toxin on rat hippocampal interneurons. *Neurosci.Lett.* **328** 25. PMID: 12123851.

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