

Certificate of Analysis

Product Name: ProTx III

Catalog No.: 5792

Batch No.: 1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₆₂H₂₄₆N₅₂O₄₃S₆
Batch Molecular Weight: 3802.41
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence:

Asp-Cys-Leu-Lys-Phe-Gly-Trp-Lys-Cys-Asn-
Pro-Arg-Asn-Asp-Lys-Cys-Cys-Ser-Gly-Leu-
Lys-Cys-Gly-Ser-Asn-His-Asn-Trp-Cys-Lys-
Leu-His-Ile-NH₂

2. ANALYTICAL DATA

HPLC: Shows >98% purity
Mass Spectrum: Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Potent Na_v1.7 blocker (IC₅₀ = 2.5 nM). Also inhibits Na_v1.1, Na_v1.2, Na_v1.3 and Na_v1.6 in the nanomolar range. Exhibits no effects on Ca_v channels or nAChR at 5 μM. Demonstrates analgesic activity in vivo; antagonizes effects of scorpion-venom toxin OD1 at Na_v1.7.

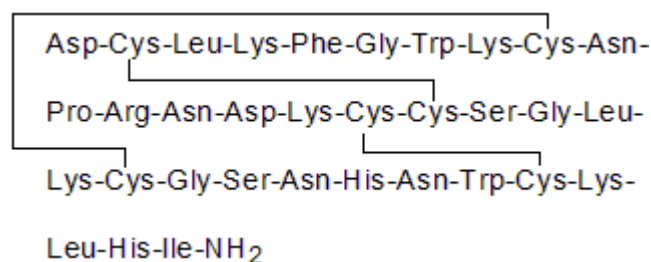
Physical and Chemical Properties:

Batch Molecular Formula: C₁₆₂H₂₄₆N₅₂O₄₃S₆

Batch Molecular Weight: 3802.41

Physical Appearance: White lyophilised solid

Peptide Sequence:



Storage: Store 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.

Counter Ion: TFA

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 as 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 μm filter to remove potential bacterial contamination whenever possible.

References:

Cardoso et al (2015) Identification and characterization of ProTx-III [μ-TRTX-Tp1a], a new voltage-gated sodium channel inhibitor from venom of the tarantula thrixopelma pruriens. *Mol.Pharmacol.* **88** 291. PMID: 25979003.

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