

Certificate of Analysis

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Product Name: α-Bungarotoxin

Catalog No.: 2133

Batch No.: 22

CAS Number: 11032-79-4

EC Number: 234-266-6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₃₈H₅₂₉N₉₇O₁₀₅S₁₁

Batch Molecular Weight: 7984.14

Physical Appearance: lyophilised solid

Solubility: Soluble in water

Storage: Store at -20°C

Peptide Sequence:

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Ile-Val-Cys-His-Thr-Thr-Ala-Thr-Ser-Pro-
Ile-Ser-Ala-Val-Thr-Cys-Pro-Pro-Gly-Glu-
Asn-Leu-Cys-Tyr-Arg-Lys-Met-Trp-Cys-Asp-
Ala-Phe-Cys-Ser-Ser-Arg-Gly-Lys-Val-Val-
Glu-Leu-Gly-Cys-Ala-Ala-Thr-Cys-Pro-Ser-
Lys-Lys-Pro-Tyr-Glu-Glu-Val-Thr-Cys-Cys-
Ser-Thr-Asp-Lys-Cys-Asn-Pro-His-Pro-Lys-
Gln-Arg-Pro-Gly
  
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2. ANALYTICAL DATA

HPLC: Shows 99.9% purity

Mass Spectrum: Consistent with structure

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

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Tel: +1 612 379 2956

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Description:

α-Bungarotoxin is a neurotoxin that blocks neuromuscular transmission via irreversible inhibition of nicotinic ACh receptors (nAChRs). Prevents opening of nicotinic receptor-associated ion channels and is selective for α7 receptors over α3β4 receptors (IC₅₀ values are 1.6 nM and > 3 μM respectively).

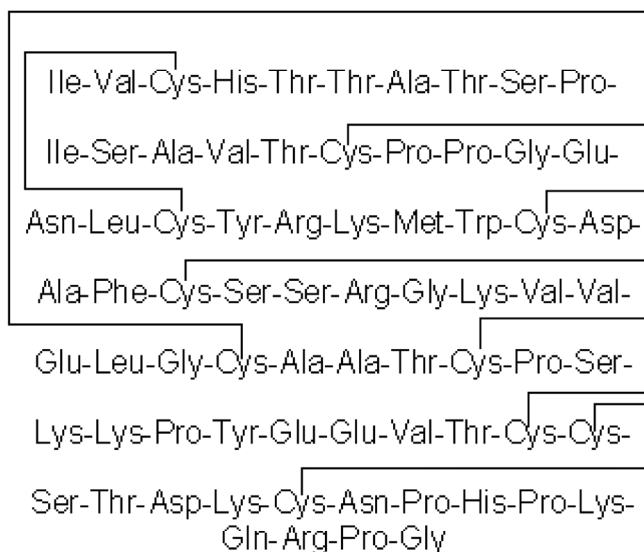
Physical and Chemical Properties:

Batch Molecular Formula: C₃₃₈H₅₂₉N₉₇O₁₀₅S₁₁

Batch Molecular Weight: 7984.14

Physical Appearance: lyophilised solid

Peptide Sequence:



Storage: Store at -20°C

Solubility & Usage Info:

Soluble in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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.

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:

Lopez et al (1998) Unmasking the functions of the chromaffin cell α₇ nicotinic receptor by using short pulses of acetylcholine and selective blockers. *Proc.Natl.Acad.Sci.USA* **95** 14184.

Zhang et al (1994) Neuronal acetylcholine receptors that bind α-bungarotoxin with high affinity function as ligand-gated ion channels. *Neuron* **12** 167. PMID: 7507338.

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