

## Certificate of Analysis

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**Product Name:**  $\alpha$ -Conotoxin AulB

**Catalog No.:** 3120

**Batch No.:** 6

CAS Number: 216299-21-7

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>65</sub>H<sub>89</sub>N<sub>17</sub>O<sub>21</sub>S<sub>4</sub>  
**Batch Molecular Weight:** 1572.76  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 86%  
**Counter Ion:** Acetate  
**Solubility:** Soluble to 5 mg/ml in water  
**Storage:** Desiccate at -20°C  
**Peptide Sequence:**

Gly-Cys-Cys-Ser-Tyr-Pro-Pro-Cys-Phe-Ala-  
 Thr-Asn-Pro-Asp-Cys-NH<sub>2</sub>

### 2. ANALYTICAL DATA

**HPLC:** Shows 97% purity  
**Mass Spectrum:** Consistent with structure

### 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	1.00	0.99	Lys		
Arg			Met		
Asx	2.00	2.01	Phe	1.00	0.96
Cys	4.00	Detected	Pro	3.00	3.05
Glx			Ser	1.00	1.04
Gly	1.00	0.99	Thr	1.00	1.03
His			Trp		
Ile			Tyr	1.00	0.96
Leu			Val		

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

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**Product Name:**  $\alpha$ -Conotoxin AulB

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**Description:**

Selective antagonist of  $\alpha 3\beta 4$  nicotinic acetylcholine receptors. Displays > 100-fold selectivity over other receptor subunit combinations including  $\alpha 2\beta 2$ ,  $\alpha 2\beta 4$ ,  $\alpha 3\beta 2$ ,  $\alpha 4\beta 2$ ,  $\alpha 4\beta 4$  and  $\alpha 1\beta 1\gamma\delta$ .

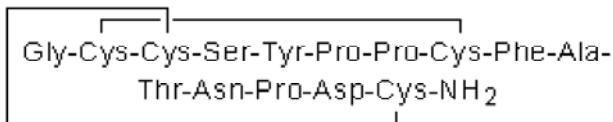
**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>65</sub>H<sub>89</sub>N<sub>17</sub>O<sub>21</sub>S<sub>4</sub>

Batch Molecular Weight: 1572.76

Physical Appearance: White lyophilised solid

**Peptide Sequence:**



**Storage:** Desiccate at -20°C

**Solubility & Usage Info:**

Soluble to 5 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:** 86% (Remaining weight made up of counterions and residual water).

**Counter Ion:** Acetate

**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  $\mu$ m filter to remove potential bacterial contamination whenever possible.

**Other Information:**

**This is a dual-use item with associated conditions of supply; the relevant licence/documentation from the appropriate governing body will be required.**

**Note on Biotubes:**

Toxins are supplied in protective biotubes. These biotubes have a screw top lid, which is manually tightened and can be easily unscrewed. If the lid is particularly tight, a coin placed in the top slot may be used to unscrew it.

**Licensing Information:**

Sold under license from University of Utah

**References:**

**Park et al** (2006) An  $\alpha 3\beta 4$  subunit combination acts as a major functional nicotinic acetylcholine receptor in male rat pelvic ganglion neurons. *Pflugers Arch.* **452** 775. PMID: 16715294.

**Nai et al** (2003) Relating neuronal nicotinic acetylcholine receptor subtypes defined by subunit composition and channel function. *Mol.Pharmacol.* **63** 311. PMID: 12527802.

**Luo et al** (1998)  $\alpha$ -Conotoxin AulB selectively blocks  $\alpha 3\beta 4$  nicotinic acetylcholine receptors and inhibits NE release. *J.Neurosci.* **18** 8571. PMID: 9786965.

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