

Certificate of Analysis

Product Name: α -Conotoxin Iml

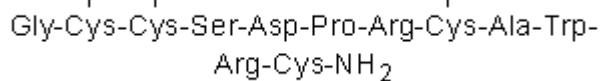
Catalog No.: 3119

Batch No.: 2

CAS Number: 156467-85-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₅₂H₇₈N₂₀O₁₅S₄
Batch Molecular Weight: 1351.6
Physical Appearance: White lyophilised solid
Net Peptide Content: 67%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in 20% acetonitrile / water
Storage: Store at -20°C
Peptide Sequence:



2. ANALYTICAL DATA

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

3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala	1.00	1.00	Lys				
Arg	2.00	1.99	Met				
Asx	1.00	1.00	Phe				
Cys			Pro	1.00		1.01	
Glx			Ser	1.00		0.98	
Gly	1.00	0.99	Thr				
His			Trp				
Ile			Tyr				
Leu			Val				

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

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Description:

Nicotinic receptor antagonist that displays selectivity for homomeric $\alpha 7$ and $\alpha 9$ receptors (IC₅₀ values are 220 and 1800 nM respectively). Displays no effect on $\alpha 2\beta 2$, $\alpha 3\beta 2$, $\alpha 4\beta 2$, $\alpha 2\beta 4$, $\alpha 3\beta 3$ and $\alpha 4\beta 4$ subunit combinations.

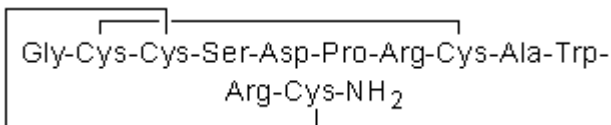
Physical and Chemical Properties:

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Batch Molecular Weight: 1351.6

Physical Appearance: White lyophilised solid

Peptide Sequence:



Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in 20% acetonitrile / water

Net Peptide Content: 67% (Remaining weight made up of counterions and residual water).

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.

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.

References:

McIntosh et al (1994) A nicotinic acetylcholine receptor ligand of unique specificity, α -conotoxin Iml. *J.Biol.Chem.* **269** 16733. PMID: 8206995.

Johnson et al (1995) α -Conotoxin Iml exhibits subtype-specific nicotinic acetylcholine receptor blockade: preferential inhibition of homomeric $\alpha 7$ and $\alpha 9$ receptors. *Mol.Pharmacol.* **48** 194. PMID: 7651351.

Pereira et al (1996) α -Conotoxin-Iml: a competitive antagonist at α -Bungarotoxin-sensitive neuronal nicotinic receptors in hippocampal neurons. *J.Pharmacol.Exp.Ther.* **278** 1472. PMID: 8819535.

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956