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## Product Information

### $\omega$ -Conotoxin MVIIC synthetic

Catalog Number **C4188**  
Storage Temperature  $-20\text{ }^{\circ}\text{C}$

CAS RN 147794-23-8  
Synonym: Omega Conotoxin MVIIC

Cys-Lys-Gly-Lys-Gly-Ala-Pro-Cys-Arg-Lys-Thr-Met-Tyr-  
Asp-Cys-Cys-Ser-Gly-Ser-Cys-Gly-Arg-Arg-Gly-Lys-  
Cys-NH<sub>2</sub> [Disulfide Bridges: 1–16, 8–20, 15–26]

#### Product Description

Molecular Formula: C<sub>106</sub>H<sub>178</sub>N<sub>40</sub>O<sub>32</sub>S<sub>7</sub>  
Molecular Weight: 2749.25 (free base)

$\omega$ -Conotoxin MVIIC inhibits Ca<sup>2+</sup> channels resistant to  $\omega$ -Conotoxin GVIA. It blocks hippocampal excitatory postsynaptic potential (EPSPs), suggesting an interaction with Q-type voltage-sensitive calcium channels (VSCC).<sup>1,2</sup>

The toxin was originally isolated from the marine snail *Conus geographus*. This product is prepared by synthetic methods.

Purity:  $\geq 95\%$  (HPLC)

Peptide Content:  $\sim 65\%$   
(remainder is primarily trifluoroacetate salt and residual water, package size reflects total mass)

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. POTENT NEUROTOXIN. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Preparation Instructions

To dissolve  $\omega$ -Conotoxin MVIIC, allow the peptide to warm to room temperature in a desiccator prior to opening the container. Dissolve the peptide in water (1 mg/ml). Oxygen free water should be used as peptides containing Trp, Met, Cys, Asn, or Gln require special care to avoid oxidation. These peptides have a limited lifetime in solution and long-term storage of the solution is not recommended. Buffer or saline should be added only after the peptide is fully dissolved. Solutions should be stored in the pH range of 5–7 at  $-20\text{ }^{\circ}\text{C}$  in working aliquots.

If the peptide does not completely dissolve, check the pH of the solution and adjust the pH closer to 7 by adding 30% acetic acid or 100% ammonium hydroxide in microliter amounts. The solution may also be sonicated for 5–15 minutes to aid in solubilization.

#### Storage/Stability

Store the product tightly sealed at  $-20\text{ }^{\circ}\text{C}$ .

#### References

1. Ellinor, P.T. *et al.*, Functional expression of a rapidly inactivating neuronal calcium channel. *Nature*, **363**, 455-458 (1993).
2. Hillyard, D.R. *et al.*, A new *Conus* peptide ligand for mammalian presynaptic Ca<sup>2+</sup> channels. *Neuron*, **9**, 69-77 (1992).

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