



# SZABO SCANDIC

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Laborgeräte & Service

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- Expressversand

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# PRODUCT INFORMATION

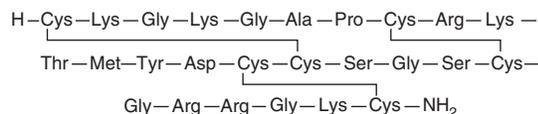


## $\omega$ -Conotoxin MVIIC

Item No. 24411

CAS Registry No.: 147794-23-8

Formal Name: L-cysteinyl-L-lysylglycyl-L-lysylglycyl-L-alanyl-L-prolyl-L-cysteinyl-L-arginyl-L-lysyl-L-threonyl-L-methionyl-L-tyrosyl-L- $\alpha$ -aspartyl-L-cysteinyl-L-cysteinyl-L-serylglycyl-L-seryl-L-cysteinylglycyl-L-arginyl-L-arginylglycyl-L-lysyl-L-cysteinamide, cyclic (1 $\rightarrow$ 16),(8 $\rightarrow$ 20),(15 $\rightarrow$ 26)-tris(disulfide)



Synonym: SNX-230

MF: C<sub>106</sub>H<sub>178</sub>N<sub>40</sub>O<sub>32</sub>S<sub>7</sub>

FW: 2,749.3

Purity:  $\geq$ 95%

Supplied as: A lyophilized powder

Storage: -20°C

Stability:  $\geq$ 2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

$\omega$ -Conotoxin MVIIC is supplied as a lyophilized powder. A stock solution may be made by dissolving the  $\omega$ -conotoxin MVIIC in water. The solubility of  $\omega$ -conotoxin MVIIC in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

$\omega$ -Conotoxin MVIIC is a peptide originally isolated from the marine mollusk *C. magus*.<sup>1</sup> It blocks N-type calcium channels on rat superior cervical ganglions (SCGs) and P-type calcium channels on rat Purkinje neurons ( $K_{dS}$  = 30 and ~50 nM, respectively, in the presence of 5 mM barium).<sup>2</sup> It also blocks Q-type channels in rat CA3 neurons.  $\omega$ -Conotoxin MVIIC binds to rat brain membranes ( $IC_{50}$  = 0.3 nM) and completely blocks calcium uptake by rat brain synaptosomes when used at a concentration of 2.5  $\mu$ M in the presence of 5 mM potassium.<sup>1</sup> It blocks potassium-evoked dopamine (Item No. 21992) release from rat striatal slices ( $IC_{50}$  = ~128 nM) and potassium-evoked calcium-dependent glutamate release from rat brain synaptosomes.<sup>3,4</sup>

### References

1. Hillyard, D.R., Monje, V.D., Mintz, I.M., *et al.* A new Conus peptide ligand for mammalian presynaptic Ca<sup>2+</sup> channels. *Neuron* **9**(1), 69-77 (1992).
2. McDonough, S.I., Swartz, K.J., Mintz, I.M., *et al.* Inhibition of calcium channels in rat central and peripheral neurons by  $\omega$ -conotoxin MVIIC. *J. Neurosci.* **16**(8), 2612-2623 (1996).
3. Dobrev, D. and Andreas, K. Modulation of potassium-evoked [<sup>3</sup>H]dopamine release from rat striatal slices by voltage-activated calcium channel ligands: Effects of  $\omega$ -conotoxin-MVIIC. *Neurochem. Res.* **22**(9), 1085-1093 (1997).
4. Turner, T.J., Lampe, R.A., and Dunlap, K. Characterization of presynaptic calcium channels with  $\omega$ -conotoxin MVIIC and  $\omega$ -grammotoxin SIA: Role for a resistant calcium channel type in neurosecretion. *Mol. Pharmacol.* **47**(2), 348-353 (1995).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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