

Product Data Sheet

Product Name: Cardiotoxin Analog (CTX) IV 6-12

Cat. No.: GC35609

Chemical Properties

Cas. No. 115722-23-1

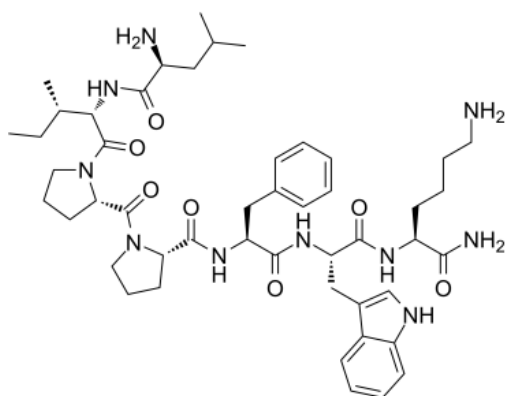
Formula $C_{48}H_{70}N_{10}O_7$ M.Wt 899.13

Solubility 100 mg/ml in water Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Cardiotoxin Analog (CTX) IV 6-12 is a peptide fragment of cyclophosphamide analog (CTX) IV, derived from the venom of *Naja atra*, and is a unique cardiotoxin analog^[1]. Cardiotoxin Analog (CTX) IV 6-12 has a three-finger ring structure similar to neurotoxins and muscarinic toxins and has cytolytic effects on many cells^[2]. Cardiotoxin Analog (CTX) IV 6-12 can cause depolarization and contraction of smooth and skeletal muscles, as well as depolarization of nerve cells^[3]. Cardiotoxin Analog (CTX) IV 6-12 is able to induce membrane fusion of vesicles formed by phospholipids such as cardiolipin or sphingomyelin^[4]. Cardiotoxin Analog (CTX) IV 6-12 is the only cardiotoxin isoform

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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known to date that has a positively charged residue at the N-terminal amino acid^[5]. CTX IV differs from CTX II only by the presence of arginine in place of a leucine residue at position 1^[6].

References:

- [1] Kaneda N, Sasaki T, Hayashi K. Primary structures of cardiotoxin analogues II and IV from the venom of *Naja naja atra*[J]. *Biochimica et Biophysica Acta (BBA)-Protein Structure*, 1977, 491(1): 53-66.
- [2] Wu W G. Diversity of cobra cardiotoxin[J]. *Journal of Toxicology: Toxin Reviews*, 1997, 16(3): 115-134.
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- [4] Forouhar F, Huang W N, Liu J H, et al. Structural basis of membrane-induced cardiotoxin A3 oligomerization[J]. *Journal of Biological Chemistry*, 2003, 278(24): 21980-21988.
- [5] Jang J Y, Kumar T K S, Jayaraman G, et al. Comparison of the hemolytic activity and solution structures of two snake venom cardiotoxin analogues which only differ in their N-terminal amino acid[J]. *Biochemistry*, 1997, 36(48): 14635-14641.
- [6] Kumar T K S, Pandian S T K, Jayaraman G, et al. Understanding the structure, function and folding of cobra toxins[J]. *PROCEEDINGS-NATIONAL SCIENCE COUNCIL REPUBLIC OF CHINA PART A PHYSICAL SCIENCE AND ENGINEERING*, 1999, 23: 1-19.

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