

## Certificate of Analysis

**Product Name:** Margatoxin

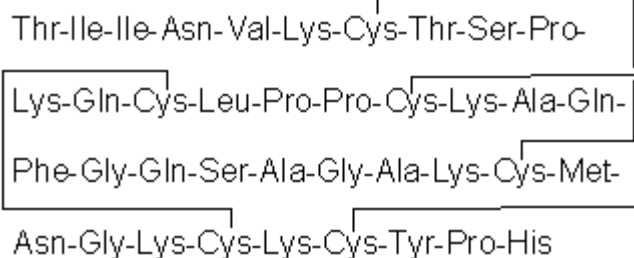
**Catalog No.:** 3563

**Batch No.:** 4

CAS Number: 145808-47-5

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>178</sub>H<sub>286</sub>N<sub>52</sub>O<sub>50</sub>S<sub>7</sub>  
**Batch Molecular Weight:** 4178.96  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 95%  
**Counter Ion:** TFA  
**Solubility:** Soluble to 0.50 mg/ml in water  
**Storage:** Store at -20°C  
**Peptide Sequence:**



### 2. ANALYTICAL DATA

**HPLC:** Shows >95.6% purity  
**Mass Spectrum:** Consistent with structure

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

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**Description:**

Potent K<sub>v</sub>1.3 channel blocker (IC<sub>50</sub> = 36 pM). Displays no effect at calcium-activated channels. Reduces VEGF-induced transmembrane calcium influxes and nitric oxide production in human endothelial cells.

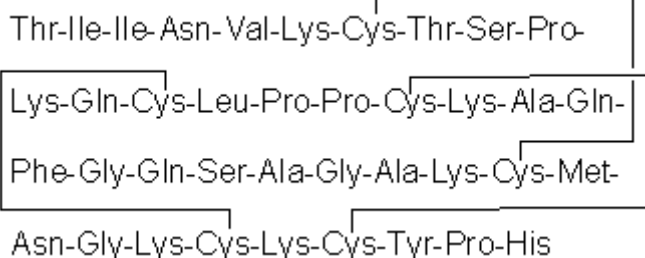
**Physical and Chemical Properties:**

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Batch Molecular Weight: 4178.96

Physical Appearance: White lyophilised solid

**Peptide Sequence:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 0.50 mg/ml in water

**Net Peptide Content:** 95% (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.

**References:**

**Erdogan et al** (2005) Margatoxin inhibits VEGF-induced hyperpolarization, proliferation and nitric oxide production of human endothelial cells. *J.Vasc.Res.* **42** 368. PMID: 16043967.

**Garcia-Calvo et al** (1993) Purification, characterization, and biosynthesis of Margatoxin, a component of *Centruroides margaritatus* venom that selectively inhibits voltage-dependent potassium channels. *J.Biol.Chem.* **268** 18866. PMID: 8360176.

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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