

Product Name: Psalmotoxin 1

Catalog No.: 5042

Batch No.: 1

1. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------|--|
| Batch Molecular Formula: | C ₂₀₀ H ₃₁₂ N ₆₂ O ₅₇ S ₆ |
| Batch Molecular Weight: | 4689.41 |
| Physical Appearance: | White lyophilised solid |
| Net Peptide Content: | 90% |
| Counter Ion: | TFA |
| Solubility: | Soluble to 2 mg/ml in water |
| Storage: | Store at -20°C |
| Peptide Sequence: | |

Glu-Asp-Cys-Ile-Pro-Lys-Trp-Lys-Gly-Cys-
Val-Asn-Arg-His-Gly-Asp-Cys-Cys-Glu-Gly-
Leu-Glu-Cys-Trp-Lys-Arg-Arg-Arg-Ser-Phe-
Glu-Val-Cys-Val-Pro-Lys-Thr-Pro-Lys-Thr

2. ANALYTICAL DATA

| | |
|-----------------------|---------------------------|
| HPLC: | Shows 100% purity |
| Mass Spectrum: | Consistent with structure |

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

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SYSTEMS®

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Description:

Potent and selective acid-sensing ion channel 1a (ASIC1a) blocker (IC₅₀ = 0.9 nM). Displays no effect at ASIC1b, ASIC2a, ASIC3, heteromeric ASIC channels, ENaC and K_v2.1/2.2/4.2/4.3 channels expressed in oocytes, at concentrations up to 100 nM. Displays potent analgesic properties against thermal, mechanical, chemical, inflammatory and neuropathic pain in rodents.

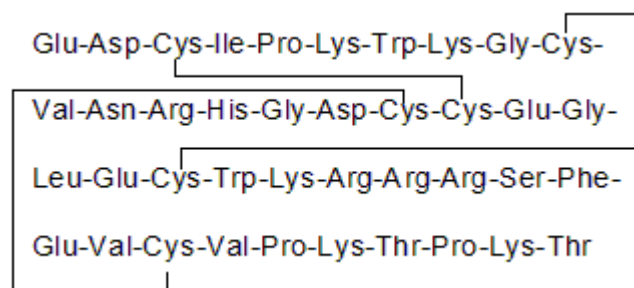
Physical and Chemical Properties:

Batch Molecular Formula: C₂₀₀H₃₁₂N₆₂O₅₇S₆

Batch Molecular Weight: 4689.41

Physical Appearance: White lyophilised solid

Peptide Sequence:



Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 mg/ml in water

This product is supplied as a lyophilised solid and may be very hard to visualise. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Net Peptide Content: 90% (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).

References:

Escoubas et al (2000) Isolation of a tarantula toxin specific for a class of proton-gated Na⁺ channels. *J.Biol.Chem.* **275** 25116. PMID: 10829030.

Escoubas et al (2003) Recombinant production and solution structure of PcTx1, the specific peptide inhibitor of ASIC1a proton-gated cation channels. *Protein Sci.* **12** 1332. PMID: 12824480.

Salinas et al (2006) The receptor site of the spider toxin PcTx1 on the proton-gated cation channel ASIC1a. *J.Physiol.* **570** 339. PMID: 16284080.

Mazzuca et al (2007) A tarantula peptide against pain via ASIC1a channels and opioid mechanisms. *Nat.Neurosci.* **10** 943. PMID: 17632507.

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