

**Product Name:** Phrixotoxin 3

**Catalog No.:** 4914

**Batch No.:** 1

CAS Number: 880886-00-0

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>176</sub>H<sub>269</sub>N<sub>51</sub>O<sub>48</sub>S<sub>6</sub>  
**Batch Molecular Weight:** 4059.74  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 100%  
**Counter Ion:** TFA salt  
**Solubility:** Soluble to 1 mg/ml in water  
**Storage:** Store at -20°C  
**Peptide Sequence:**

```

Asp-Cys-Leu-Gly-Phe-Leu-Trp-Lys-Cys-Asn-
Pro-Ser-Asn-Asp-Lys-Cys-Cys-Arg-Pro-Asn-
Leu-Val-Cys-Ser-Arg-Lys-Asp-Lys-Trp-Cys-
Lys-Tyr-Gln-Ile
    
```

**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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**Description:**

Potent blocker of voltage-gated sodium channels (IC<sub>50</sub> values are 0.6, 42, and 72 nM for Na<sub>v</sub>1.2, Na<sub>v</sub>1.3 and Na<sub>v</sub>1.5 respectively). Blocks inward sodium currents in a voltage-dependent manner.

**Physical and Chemical Properties:**

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Asp-Cys-Leu-Gly-Phe-Leu-Trp-Lys-Cys-Asn-
Pro-Ser-Asn-Asp-Lys-Cys-Cys-Arg-Pro-Asn-
Leu-Val-Cys-Ser-Arg-Lys-Asp-Lys-Trp-Cys-
Lys-Tyr-Gln-Ile
    
```

**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 1 mg/ml in water

This product is supplied as a lyophilized solid and may be very hard to visualize. 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:** 100% (Remaining weight made up of counterions and residual water).

**Counter Ion:** TFA salt

**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:**

**Bosmans et al** (2006) Four novel tarantula toxins as selective modulators of voltage-gated sodium channel subtypes. *Mol.Pharmacol.* **69** 419. PMID: 16267209.

**Ono et al** (2011) Characterization of voltage-dependent calcium channel blocking peptides from the venom of the tarantula *Grammostola rosea*. *Toxicon.* **58** 265. PMID: 21740921.

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