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TOCRIS

Print Date: Mar 12th 2024

Certificate of Analysis

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Product Name: **Phrixotoxin 3** **Catalog No.: 4914** **Batch No.: 6**

CAS Number: 880886-00-0

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{176}H_{269}N_{51}O_{48}S_6$

Batch Molecular Weight: 4059.74

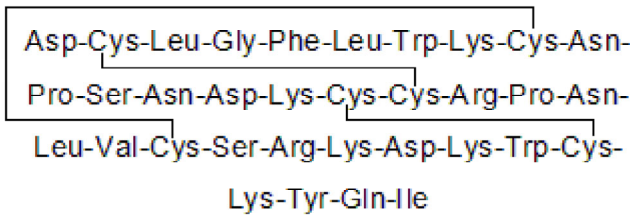
Physical Appearance: White solid

Counter Ion: TFA

Solubility: Soluble to 1 mg/ml in water

Storage: Store at -20°C

Peptide Sequence:



2. ANALYTICAL DATA

HPLC: Shows 95.5% purity

Mass Spectrum: Consistent with structure

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Product Name: **Phrixotoxin 3** **Catalog No.: 4914** **6**

CAS Number: 880886-00-0

Description:

Phrixotoxin 3 is a potent blocker of voltage-gated sodium channels (IC_{50} values are 0.6, 42, and 72 nM for $Na_V1.2$, $Na_V1.3$ and $Na_V1.5$ respectively). Blocks inward sodium currents in a voltage-dependent manner.

Physical and Chemical Properties:

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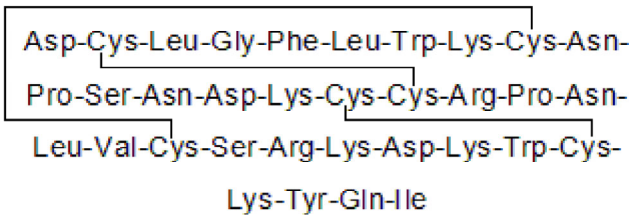
Peptide Sequence:



Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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.

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 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:

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.

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