

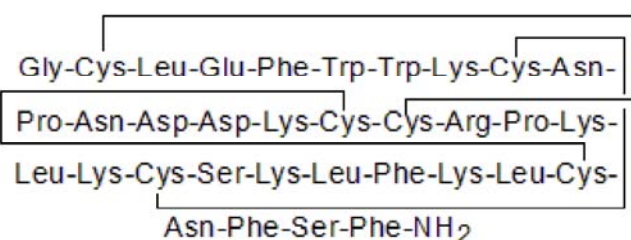
Product Name: GsMTx4

Catalog No.: 4912

Batch No.: 9

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈₅H₂₇₃N₄₉O₄₅S₆
Batch Molecular Weight: 4095.86
Physical Appearance: White lyophilised solid
Net Peptide Content: 90%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence:



2. ANALYTICAL DATA

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

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Product Name: GsMTx4

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Description:

TRPC1 and TRPC6 blocker. Also blocks stretch-activated cation channels in astrocytes, cardiac cells, and smooth and skeletal muscle cells. Also inhibits TACAN, a mechanosensitive ion channel involved in the pain response.

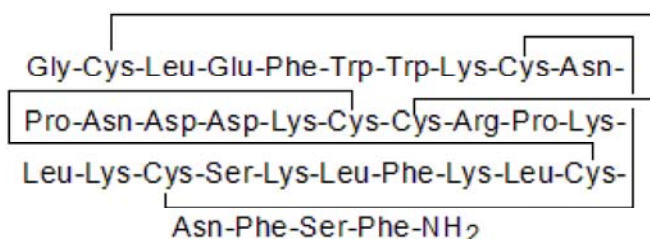
Physical and Chemical Properties:

Batch Molecular Formula: C₁₈₅H₂₇₃N₄₉O₄₅S₆

Batch Molecular Weight: 4095.86

Physical Appearance: White lyophilised solid

Peptide Sequence:



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: 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).

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.

Licensing Information:

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References:

Beaulieu-Laroche et al (2020) TACAN is an ion channel involved in sensing mechanical pain. *Cell* . PMID: 32084332.

Bae et al (2011) The mechanosensitive ion channel Piezo1 is inhibited by the peptide GsMTx4. *Biochemistry* **50** 6295. PMID: 21696149.

Bowman et al (2007) Mechanosensitive ion channels and the peptide inhibitor GsMTx-4: history, properties, mechanisms and pharmacology. *Toxicon*. **49** 249. PMID: 17157345.

Drew et al (2007) High-threshold mechanosensitive ion channels blocked by a novel conopeptide mediate pressure-evoked pain. *PLoS One* **2** e515. PMID: 17565368.

Suchyna et al (2000) Identification of a peptide toxin from *Grammostola spatulata* spider venom that blocks cation-selective stretch-activated channels. *J.Gen.Physiol.* **115** 583. PMID: 10779316.

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