Product Name: **ω-Agatoxin IVA** **Catalog No.: 2799** **Batch No.: 13**

CAS Number: 145017-83-0

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{217}H_{360}N_{68}O_{60}S_{10}$

Batch Molecular Weight: 5202.25

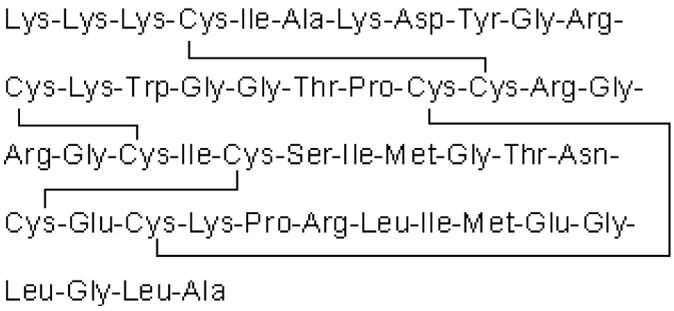
Physical Appearance: White solid

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: ω-Agatoxin IVA **Catalog No.:** 2799 **Batch No.:** 13

CAS Number: 145017-83-0

Description:

ω-Agatoxin IVA is a selective blocker of P-type calcium channels (IC_{50} < 1 - 3 nM). Also inhibits N-type channels at micromolar concentrations.

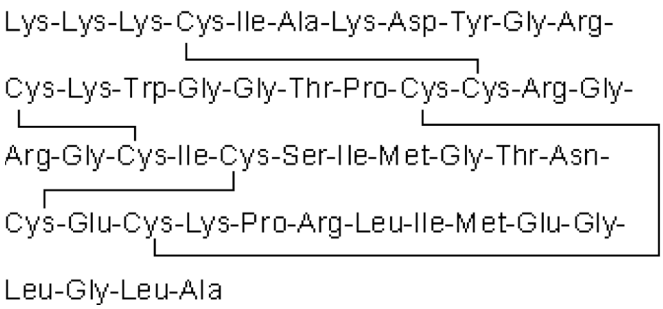
Physical and Chemical Properties:

Batch Molecular Formula: $C_{217}H_{360}N_{68}O_{60}S_{10}$

Batch Molecular Weight: 5202.25

Physical Appearance: White solid

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:

Tringham *et al* (2008) Protease treatment of cerebellar purkinje cells renders ω-agatoxin IVA-sensitive Ca^{2+} channels insensitive to inhibition by ω-conotoxin GVIA. J.Pharmacol.Exp.Ther. ***324*** 806. PMID: 17975010.

Bourinet *et al* (1999) Splicing of α_{1A} subunit gene generates phenotypic variants of P- and Q-type calcium channels. Nat.Neurosci. ***2*** 407. PMID: 10321243.

Mintz *et al* (1992) P-type calcium channels blocked by the spider toxin ω-Aga-IVA. Nature ***355*** 827. PMID: 1311418.