bio-techne
TOCRIS

Print Date: Feb 28th 2024

Certificate of Analysis

www.tocris.com

Product Name: ω-Agatoxin TK **Catalog No.: 2802** **Batch No.: 3**

CAS Number: 158484-42-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{215}H_{337}N_{65}O_{70}S_{10}$

Batch Molecular Weight: 5273.02

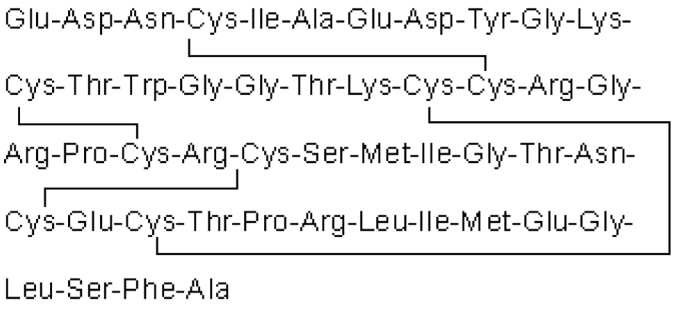
Physical Appearance: White lyophilised solid

Net Peptide Content: 100%

Solubility: Soluble in water

Storage: Store at -20°C

Peptide Sequence:



2. ANALYTICAL DATA

HPLC: Shows >99% purity

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala	2.00	2.19	Lys	2.00	2.00
Arg	4.00	3.99	Met	2.00	1.98
Asx	4.00	4.10	Phe	1.00	1.00
Cys	8.00	7.75	Pro	2.00	1.97
Glx	4.00	3.90	Ser	2.00	1.79
Gly	6.00	6.03	Thr	4.00	3.83
His			Trp	1.00	0.82
Ile	3.00	2.85	Tyr	1.00	0.98
Leu	2.00	2.00	Val		

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Product Name: ω-Agatoxin TK **Catalog No.: 2802** 3

CAS Number: 158484-42-5

Description:

ω-Agatoxin TK is a selective blocker of $Ca_V2.1$ P/Q-type calcium channels.

Physical and Chemical Properties:

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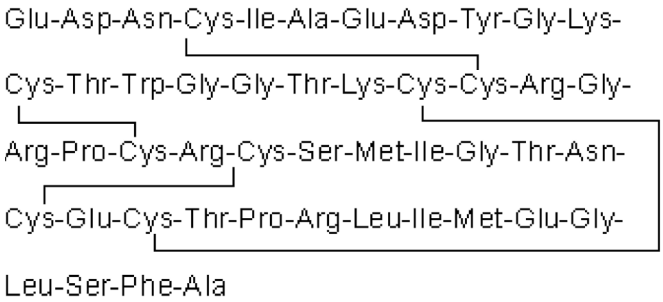

Storage: Store at -20°C

Solubility & Usage Info:

Soluble 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.

Net Peptide Content: 100% (Remaining weight made up of counterions and residual water).

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:

Barral *et al* (2001) High-affinity inhibition of glutamate release from corticostriatal synapses by ω-agatoxin TK. Eur.J.Pharmacol. ***430*** 167. PMID: 11711028.

Teramoto *et al* (1997) A novel type of calcium channel sensitive to ω-agatoxin-TK in cultured rat cerebral cortical neurons. Brain Res. ***756*** 225. PMID: 9187336.

Teramoto *et al* (1993) A novel peptide from funnel web spider venom, ω-Aga-TK, selectively blocks P-type calcium channels. Biochem.Biophys.Res.Comms. ***196*** 134.