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TOCRIS

Certificate of Analysis

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Product Name: **TLQP 21**   **Catalog No.: 3051**   **Batch No.: 8**
CAS Number: 869988-94-3

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1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{107}H_{170}N_{40}O_{26}$

Batch Molecular Weight: 2432.77

Physical Appearance: White lyophilised solid

Counter Ion: TFA

Solubility: Soluble to 1 mg/ml in water

Storage: Store at -20°C

Peptide Sequence: Thr-Leu-Gln-Pro-Pro-Ala-Ser-Ser-Arg-Arg-
                                     Arg-His-Phe-His-His-Ala-Leu-Pro-Pro-Ala-Arg

2. ANALYTICAL DATA

HPLC: Shows 98.2% purity

Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala	3.00	2.82	Lys		
Arg	4.00	4.06	Met		
Asx			Phe	1.00	1.12
Cys			Pro	4.00	3.91
Glx	1.00	0.99	Ser	2.00	1.94
Gly			Thr	1.00	0.92
His	3.00	3.13	Trp		
Ile			Tyr		
Leu	2.00	1.97	Val		

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

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Product Name: TLQP 21

Catalog No.: 3051   **Batch No.: 8**

CAS Number: 869988-94-3

Description:

TLQP 21 is a VGF-derived peptide; spans residues 556-576 of the precursor sequence. Protects cerebellar granule cells (CGCs) from serum and potassium deprivation-induced apoptosis. Increases energy expenditure and prevents early phase diet-induced diabetes.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{107}H_{170}N_{40}O_{26}$

Batch Molecular Weight: 2432.77

Physical Appearance: White lyophilised solid

Peptide Sequence:

Thr-Leu-Gln-Pro-Pro-Ala-Ser-Ser-Arg-Arg-
Arg-His-Phe-His-His-Ala-Leu-Pro-Pro-Ala-Arg

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:

Severini *et al* (2008) TLQP-21, a neuroendocrine VGF-derived peptide, prevents cerebellar granule cell death induced by serum and potassium deprivation. J.Neurochem. **104** 534. PMID: 18173805.

Jethwa *et al* (2007) VGF-derived peptide, TLQP-21, regulates food intake and body weight in Siberian hamsters. Endocrinol. **148** 4044.

Bartolomucci *et al* (2006) TLQP-21, a VGF-derived peptide, increases energy expenditure and prevents the early phase of diet-induced obesity. Proc.Natl.Acad.Sci. USA **103** 14584.

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