

Certificate of Analysis

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Product Name: TLQP 21
CAS Number: 869988-94-3

Catalog No.: 3051 **Batch No.:** 6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₀₇H₁₇₀N₄₀O₂₆
Batch Molecular Weight: 2432.77
Physical Appearance: White lyophilised solid
Net Peptide Content: 64%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Desiccate 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 98.5% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

| Amino Acid Theoretical | | Actual | | Amino Acid Theoretical | | Actual | |
|------------------------|------|--------|-----|------------------------|------|--------|--|
| Ala | 3.00 | 2.92 | Lys | | | | |
| Arg | 4.00 | 3.78 | Met | | | | |
| Asx | | | Phe | 1.00 | 1.05 | | |
| Cys | | | Pro | 4.00 | 4.17 | | |
| Glx | 1.00 | 1.05 | Ser | 2.00 | 1.98 | | |
| Gly | | | Thr | 1.00 | 0.89 | | |
| His | 3.00 | 3.07 | Trp | | | | |
| Ile | | | Tyr | | | | |
| Leu | 2.00 | 1.98 | Val | | | | |

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

bio-techne.com
 info@bio-techne.com
 techsupport@bio-techne.com

North America
 Tel: (800) 343 7475

China
 info.cn@bio-techne.com
 Tel: +86 (21) 52380373

Europe Middle East Africa
 Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
 Tel:+1 612 379 2956

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Catalog No.: 3051

Batch No.: 6

CAS Number: 869988-94-3

Description:

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: C₁₀₇H₁₇₀N₄₀O₂₆

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: Desiccate 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: 64% (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.

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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