

Certificate of Analysis

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Product Name: Neuropeptide FF

Catalog No.: 3137

Batch No.: 11

CAS Number: 99566-27-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₅₄H₇₆N₁₄O₁₀
Batch Molecular Weight: 1081.28
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 0.50 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Phe-Leu-Phe-Gln-Pro-Gln-Arg-Phe-NH₂

2. ANALYTICAL DATA

HPLC: Shows 99.0% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys		
Arg	1.00	1.00	Met		
Asx			Phe	3.00	2.96
Cys			Pro	1.00	1.00
Glx	2.00	2.01	Ser		
Gly			Thr		
His			Trp		
Ile			Tyr		
Leu	1.00	1.03	Val		

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

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CAS Number: 99566-27-5

Description:

Neuropeptide FF is an endogenous antiopioid peptide and agonist at NPFF₁ and NPFF₂ receptors (K_i values are 2.82 and 0.21 nM respectively). Exhibits anorexigenic effects following i.c.v. administration. Also MRGPRA agonist.

Physical and Chemical Properties:

Batch Molecular Formula: C₅₄H₇₆N₁₄O₁₀

Batch Molecular Weight: 1081.28

Physical Appearance: White lyophilised solid

Peptide Sequence:

Phe-Leu-Phe-Gln-Pro-Gln-Arg-Phe-NH₂

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 0.50 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 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:

Solinski *et al* (2014) Pharmacology and signaling of MAS-related G protein-coupled receptors. *Pharmacol.Rev.* **66** 570. PMID: 24867890.

Cline *et al* (2007) Central neuropeptide FF reduces feed consumption and affects hypothalamic chemistry in chicks. *Neuropeptides* **41** 433. PMID: 17936900.

Gouarderes *et al* (2007) Functional differences between NPFF₁ and NPFF₂ receptor coupling: high intrinsic activities of RFamide-related peptides on stimulation of [³⁵S]GTPγS binding. *Neuropharmacology* **52** 376. PMID: 17011599.

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