

Certificate of Analysis

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Product Name: [Pyr¹]-Apelin-13

Catalog No.: 2420

Batch No.: 8

CAS Number: 217082-60-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆₉H₁₀₈N₂₂O₁₆S
Batch Molecular Weight: 1533.81
Physical Appearance: White lyophilised solid
Net Peptide Content: 74.8%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Desiccate at -20°C
Peptide Sequence: Glp-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Phe

2. ANALYTICAL DATA

HPLC: Shows 99.2% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala			Lys	1.00	1.00
Arg	2.00	2.00	Met	1.00	1.00
Asx			Phe	1.00	1.00
Cys			Pro	3.00	2.99
Glx	1.00	1.02	Ser	1.00	0.75
Gly	1.00	1.00	Thr		
His	1.00	1.00	Trp		
Ile			Tyr		
Leu	1.00	0.99	Val		

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

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Product Name: [Pyr¹]-Apelin-13

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Batch No.: 8

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Description:

Highly potent pyroglutamyl form of apelin-13. Endogenous ligand for apelin APJ receptor (EC₅₀ = 0.37 nM) that displays potent vascular effects in vivo.

Physical and Chemical Properties:

Batch Molecular Formula: C₆₉H₁₀₈N₂₂O₁₆S

Batch Molecular Weight: 1533.81

Physical Appearance: White lyophilised solid

Peptide Sequence:

Glp-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-
Met-Pro-Phe

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: 74.8% (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:

Kagiyama et al (2005) Central and peripheral cardiovascular actions of apelin in conscious rats. *Regul. Pept.* **125** 55. PMID: 15582714.

Kleinz et al (2005) Emerging roles of apelin in biology and medicine. *Pharmacol. Ther.* **107** 198. PMID: 15907343.

Katugampola et al (2001) [¹²⁵I]-[Pyr¹]Apelin-13 is a novel radioligand for localizing the APJ orphan receptor in human and rat tissues with evidence for a vasoconstrictor role in man. *Br. J. Pharmacol.* **132** 1255. PMID: 11250876.

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