

Certificate of Analysis

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Product Name Apelin-36 (rat, mouse)

Catalog No. 2427

Batch No. 5

CAS Number: 230299-95-3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula	C ₁₈₅ H ₃₀₄ N ₆₈ O ₄₃ S
Batch Molecular Weight	4200.93
Physical Appearance	White lyophilised solid
Net Peptide Content	72%
Counter Ion	TFA
Solubility	Soluble to 1.60 mg/ml in water
Storage	Desiccate at -20°C
Peptide Sequence	Leu-Val-Lys-Pro-Arg-Thr-Ser-Arg-Thr-Gly- Pro-Gly-Ala-Trp-Gln-Gly-Gly-Arg-Arg-Lys- Phe-Arg-Arg-Gln-Arg-Pro-Arg-Leu-Ser-His- Lys-Gly-Pro-Met-Pro-Phe

2. ANALYTICAL DATA

HPLC	Shows 96.2% purity
Mass Spectrum	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala	1.00	0.94	Lys	3.00	2.94		
Arg	8.00	8.02	Met	1.00	0.98		
Asx			Phe	2.00	2.05		
Cys			Pro	5.00	5.00		
Glx	2.00	1.99	Ser	2.00	1.95		
Gly	5.00	5.02	Thr	2.00	1.86		
His	1.00	0.90	Trp	1.00	Detected		
Ile			Tyr				
Leu	2.00	2.10	Val	1.00	1.02		

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

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Description

Endogenous AP receptor agonist that is secreted by adipocytes. Binds with high affinity to AP receptors (IC₅₀ 5.4 nM) and potently inhibits cAMP production in vitro (EC₅₀ 0.52 nM). Involved in regulation of cardiovascular function, fluid homeostasis and feeding. Blocks entry of some HIV-1 and HIV-2 strains into NP-2/CD4 cells expressing AP .

Physical and Chemical Properties

Batch Molecular Formula: C₁₈₅H₃₀₄N₆₈O₄₃S

Batch Molecular Weight: 4200.93

Physical Appearance: White lyophilised solid

Peptide Sequence

Leu-Val-Lys-Pro-Arg-Thr-Ser-Arg-Thr-Gly-
Pro-Gly-Ala-Trp-Gln-Gly-Gly-Arg-Arg-Lys-
Phe-Arg-Arg-Gln-Arg-Pro-Arg-Leu-Ser-His-
Lys-Gly-Pro-Met-Pro-Phe

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 1.60 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: 72% (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 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:

Kawamata et al (2001) Molecular properties of apelin: tissue distribution and receptor binding. *Biochim.Biophys.Acta* 162. PMID: 11336787.

Zou et al (2000) Apelin peptides block the entry of human immunodeficiency virus (HIV). *FEBS Lett.* 15. PMID: 10802050.

Tatemoto et al (1998) Isolation and characterization of a novel endogenous peptide ligand for the human APJ receptor. *Biochem.Biophys.Res.Comm.* 471.

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