

Certificate of Analysis

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Product Name: Atrial natriuretic factor (1-28) (rat)

Catalog No.: 1912

Batch No.: 9

CAS Number: 88898-17-3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂₈H₂₀₅N₄₅O₃₉S₂
Batch Molecular Weight: 3062.43
Physical Appearance: White lyophilised solid
Net Peptide Content: 88%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Desiccate at -20°C
Peptide Sequence:

Ser-Leu-Arg-Arg-Ser-Ser-Cys-Phe-Gly-Gly-
 Arg-Ile-Asp-Arg-Ile-Gly-Ala-Gln-Ser-Gly-
 Leu-Gly-Cys-Asn-Ser-Phe-Arg-Tyr

2. ANALYTICAL DATA

HPLC: Shows 97.3% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala		1.00	1.00	Lys			
Arg		5.00	4.95	Met			
Asx		2.00	2.09	Phe	2.00	2.01	
Cys		2.00	0.86	Pro			
Glx		1.00	1.02	Ser	5.00	3.61	
Gly		5.00	4.95	Thr			
His				Trp			
Ile		2.00	1.98	Tyr	1.00	0.88	
Leu		2.00	1.99	Val			

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

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CAS Number: 88898-17-3

Description:

Endogenous peptide produced by the heart; involved in blood pressure regulation. Produces natriuresis, diuresis and vasorelaxation in vivo.

Physical and Chemical Properties:

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Leu-Gly-Cys-Asn-Ser-Phe-Arg-Tyr

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: 88% (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:

Rubattu and Volpe (2001) The atrial natriuretic peptide: a changing view. *J.Hypertens.* **19** 1923. PMID: 11677356.

Atlas et al (1985) Atrial natriuretic factor (auriculin): structure and biological effects. *J.Clin.Hypertens.* **1** 187. PMID: 2941526.

de Bold et al (1985) Atrial natriuretic factor: a hormone produced by the heart. *Science* **230** 767. PMID: 2932797.

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