

Certificate of Analysis

Product Name: C-type natriuretic peptide (1-22) (human, rat, swine)

Catalog No.: 3520

Batch No.: 6

CAS Number: 127869-51-6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉₃H₁₅₇N₂₇O₂₈S₃
Batch Molecular Weight: 2197.61
Physical Appearance: White lyophilised solid
Net Peptide Content: 68%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence:

Gly-Leu-Ser-Lys-Gly-Cys-Phe-Gly-Leu-Lys-
 Leu-Asp-Arg-Ile-Gly-Ser-Met-Ser-Gly-Leu-
 Gly-Cys

2. ANALYTICAL DATA

HPLC: Shows 95.7% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala				Lys	2.00		1.97
Arg	1.00	0.97	Met	1.00		0.96	
Asx	1.00	1.02	Phe	1.00		1.02	
Cys	2.00	0.74	Pro				
Glx			Ser	3.00		2.08	
Gly	6.00	6.02	Thr				
His			Trp				
Ile	1.00	0.98	Tyr				
Leu	4.00	4.06	Val				

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

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Description:

C-type natriuretic peptide (1-22) (human, rat, swine) is an endogenous peptide found in plasma and cerebrospinal fluid. Behaves as an agonist at natriuretic peptide receptor NPR2 (NPRB) and exhibits affinity for NPR3 (NPRC). Inhibits L-type calcium currents in myocytes and exhibits antiproliferative effects in cardiac fibroblasts in vitro. Regulates cartilage homeostasis, body fluid volume and exhibits vasodilatory activity in vivo.

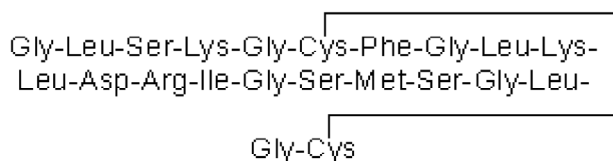
Physical and Chemical Properties:

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Batch Molecular Weight: 2197.61

Physical Appearance: White lyophilised solid

Peptide Sequence:



Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 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.

Net Peptide Content: 68% (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:

Rose and Giles (2008) Natriuretic peptide C receptor signalling in the heart and vasculature. *J.Physiol.* **586** 353. PMID: 18006579.

Pejchalova et al (2007) C-natriuretic peptide: An important regulator of cartilage. *Mol.Genet.Metab.* **92** 210. PMID: 17681481.

Suga et al (1992) Receptor selectivity of natriuretic peptide family, atrial natriuretic peptide, brain natriuretic peptide, and C-type natriuretic peptide. *Endocrinology* **130** 229. PMID: 1309330.

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