

Certificate of Analysis

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

Catalog No.: 3520

Batch No.: 14

CAS Number: 127869-51-6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉₃H₁₅₇N₂₇O₂₈S₃
Batch Molecular Weight: 2197.61
Physical Appearance: White lyophilised solid
Counter Ion: Trifluoroacetate
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 99.0% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala			Lys	2.00	2.01
Arg	1.00	1.01	Met	1.00	0.97
Asx	1.00	1.01	Phe	1.00	1.01
Cys	2.00	0.89	Pro		
Glx			Ser	3.00	2.12
Gly	6.00	5.98	Thr		
His			Trp		
Ile	1.00	1.00	Tyr		
Leu	4.00	4.01	Val		

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

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
 Tel: (800) 343 7475

China
info.cn@bio-techne.com
 Tel: +86 (21) 52380373

Europe Middle East Africa
 Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
 Tel: +1 612 379 2956

Product Information

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

Catalog No.: 3520

Batch No.: 14

CAS Number: 127869-51-6

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.

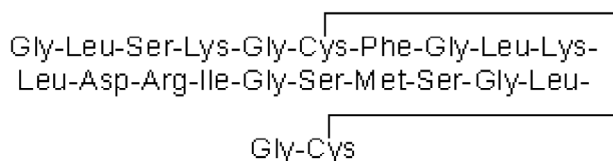
Physical and Chemical Properties:

Batch Molecular Formula: C₉₃H₁₅₇N₂₇O₂₈S₃

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.

Counter Ion: Trifluoroacetate

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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