

# Certificate of Analysis

[www.tocris.com](http://www.tocris.com)

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

**Catalog No.:** 3520

**Batch No.:** 9

CAS Number: 127869-51-6

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>93</sub>H<sub>157</sub>N<sub>27</sub>O<sub>28</sub>S<sub>3</sub>  
**Batch Molecular Weight:** 2197.61  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 87.9%  
**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 96% 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	0.99	Met	1.00	1.02
Asx	1.00	0.98	Phe	1.00	1.02
Cys	2.00	1.18	Pro		
Glx			Ser	3.00	2.66
Gly	6.00	6.00	Thr		
His			Trp		
Ile	1.00	0.98	Tyr		
Leu	4.00	4.01	Val		

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

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

**Catalog No.:** 3520

**9**

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.

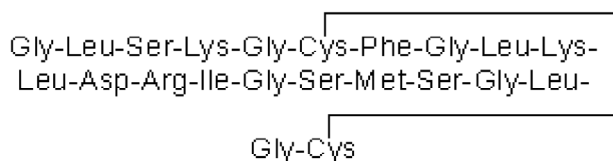
**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>93</sub>H<sub>157</sub>N<sub>27</sub>O<sub>28</sub>S<sub>3</sub>

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:** 87.9% (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.

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