

# Certificate of Analysis

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**Product Name:** Calcitonin (salmon)

**Catalog No.:** 1159

**Batch No.:** 9

CAS Number: 47931-85-1

EC Number: 256-342-8

## 1. PHYSICAL AND CHEMICAL PROPERTIES

<b>Batch Molecular Formula:</b>	C <sub>145</sub> H <sub>240</sub> N <sub>44</sub> O <sub>48</sub> S <sub>2</sub>
<b>Batch Molecular Weight:</b>	3431.9
<b>Physical Appearance:</b>	White lyophilised solid
<b>Net Peptide Content:</b>	84%
<b>Counter Ion:</b>	Acetate
<b>Solubility:</b>	Soluble to 1 mg/ml in water
<b>Storage:</b>	Desiccate at -20°C
<b>Peptide Sequence:</b>	<div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 5px;">Cys-Ser-Asn-Leu-Ser-Thr-Cys-Val-Leu-Gly-</div> Lys-Leu-Ser-Gln-Glu-Leu-His-Lys-Leu-Gln- Thr-Tyr-Pro-Arg-Thr-Asn-Thr-Gly-Ser-Gly- Thr-Pro-NH <sub>2</sub>

## 2. ANALYTICAL DATA

<b>HPLC:</b>	Shows 99% purity
<b>Mass Spectrum:</b>	Consistent with structure

## 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys	2.00	1.96
Arg	1.00	1.10	Met		
Asx	2.00	1.99	Phe		
Cys	2.00	Detected	Pro	2.00	2.04
Glx	3.00	3.01	Ser	4.00	4.01
Gly	3.00	2.97	Thr	5.00	4.79
His	1.00	0.74	Trp		
Ile			Tyr	1.00	1.03
Leu	5.00	4.88	Val	1.00	0.99

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

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**Description:**

Stimulates bone formation by osteoblasts and inhibits bone resorption.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>145</sub>H<sub>240</sub>N<sub>44</sub>O<sub>48</sub>S<sub>2</sub>

Batch Molecular Weight: 3431.9

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Cys-Ser-Asn-Leu-Ser-Thr-Cys-Val-Leu-Gly-  
Lys-Leu-Ser-Gln-Glu-Leu-His-Lys-Leu-Gln-  
Thr-Tyr-Pro-Arg-Thr-Asn-Thr-Gly-Ser-Gly-  
Thr-Pro-NH<sub>2</sub>

**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:** 84% (Remaining weight made up of counterions and residual water).

**Counter Ion:** Acetate

**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:**

**van Rossum et al** (1997) Neuroanatomical localization, pharmacological characterization and functions of CGRP, related peptides and their receptors. *Neurosci.Biobehav.Rev.* **21** 649. PMID: 9353797.

**Poyner** (1995) Pharmacology of receptors for calcitonin gene-related peptide and amylin. *TIPS* **16** 424. PMID: 8578616.

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**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