

Certificate of Analysis

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Product Name: Calcitonin (human)

Catalog No.: 6031

Batch No.: 3

CAS Number: 21215-62-3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₅₁ H ₂₂₆ N ₄₀ O ₄₅ S ₃
Batch Molecular Weight:	3417.87
Physical Appearance:	White lyophilised solid
Net Peptide Content:	84%
Counter Ion:	TFA
Solubility:	Soluble to 2 mg/ml in water
Storage:	Store at -20°C
Peptide Sequence:	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> Cys-Gly-Asn-Leu-Ser-Thr-Cys-Met-Leu-Gly- Thr-Tyr-Thr-Gln-Asp-Phe-Asn-Lys-Phe-His- Thr-Phe-Pro-Gln-Thr-Ala-Ile-Gly-Val-Gly-Ala- Pro-NH₂ </div>

2. ANALYTICAL DATA

HPLC:	Shows 99% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	2.00	1.93	Lys	1.00	1.00
Arg			Met	1.00	0.97
Asx	3.00	3.00	Phe	3.00	2.93
Cys	2.00	Detected	Pro	2.00	2.01
Glx	2.00	2.02	Ser	1.00	0.99
Gly	4.00	4.12	Thr	5.00	5.22
His	1.00	1.02	Trp		
Ile	1.00	0.93	Tyr	1.00	0.98
Leu	2.00	2.04	Val	1.00	0.99

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

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Product Name: Calcitonin (human)

Catalog No.: 6031

Batch No.: 3

CAS Number: 21215-62-3

Description:

Endogenous calcitonin receptor agonist. Lowers systemic blood calcium levels and inhibits bone resorption.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₅₁H₂₂₆N₄₀O₄₅S₃

Batch Molecular Weight: 3417.87

Physical Appearance: White lyophilised solid

Peptide Sequence:

Cys-Gly-Asn-Leu-Ser-Thr-Cys-Met-Leu-Gly-
Thr-Tyr-Thr-Gln-Asp-Phe-Asn-Lys-Phe-His-
Thr-Phe-Pro-Gln-Thr-Ala-Ile-Gly-Val-Gly-Ala-
Pro-NH₂

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 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: 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:

Bower and Hay (2016) Amylin structure-function relationships and receptor pharmacology: implications for amylin mimetic drug development. *Br.J.Pharmacol.* **173** 1883. PMID: 27061187.

Lee et al (2016) Calcitonin and amylin receptor peptide interaction mechanisms. *J.Biol.Chem.* **291** 16416. PMID: 27474777.

Foster (1968) Calcitonin. A review of experimental and clinical investigations. *Postgrad.Med.J.* **44** 411. PMID: 4871775.

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