

Certificate of Analysis

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Product Name: Parathyroid hormone (1-34) (human)

Catalog No.: 3011

Batch No.: 7

CAS Number: 52232-67-4

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₈₁ H ₂₉₁ N ₅₅ O ₅₁ S ₂
Batch Molecular Weight:	4117.75
Physical Appearance:	White lyophilised solid
Net Peptide Content:	81.3%
Counter Ion:	TFA
Solubility:	Soluble to 0.40 mg/ml in water
Storage:	Desiccate at -20°C
Peptide Sequence:	Ser-Val-Ser-Glu-Ile-Gln-Leu-Met-His-Asn-Leu-Gly-Lys-His-Leu-Asn-Ser-Met-Glu-Arg-Val-Glu-Trp-Leu-Arg-Lys-Lys-Leu-Gln-Asp-Val-His-Asn-Phe

2. ANALYTICAL DATA

HPLC:	Shows 97% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala			Lys	3.00	3.01
Arg	2.00	2.08	Met	2.00	2.05
Asx	4.00	3.92	Phe	1.00	1.04
Cys			Pro		
Glx	5.00	5.03	Ser	3.00	2.23
Gly	1.00	1.04	Thr		
His	3.00	3.07	Trp	1.00	0.36
Ile	1.00	1.00	Tyr		
Leu	5.00	4.89	Val	3.00	2.92

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

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Product Name: Parathyroid hormone (1-34) (human)

Catalog No.: 3011

Batch No.: 7

CAS Number: 52232-67-4

Description:

Human parathyroid hormone (hPTH) peptide fragment; contains the 34 N-terminal residues of hPTH. Agonist at parathyroid 1 (PTH1) and parathyroid 2 (PTH2) receptors.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₈₁H₂₉₁N₅₅O₅₁S₂

Batch Molecular Weight: 4117.75

Physical Appearance: White lyophilised solid

Peptide Sequence:

Ser-Val-Ser-Glu-Ile-Gln-Leu-Met-His-Asn-
Leu-Gly-Lys-His-Leu-Asn-Ser-Met-Glu-Arg-
Val-Glu-Trp-Leu-Arg-Lys-Lys-Leu-Gln-Asp-
Val-His-Asn-Phe

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 0.40 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: 81.3% (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:

Manabe *et al* (2007) Human parathyroid hormone (1-34) accelerates natural fracture healing process in the femoral osteotomy model of cynomolgus monkeys. *Bone* **40** 1475. PMID: 17369013.

Dobnig and Turner (1997) The effects of programmed administration of human parathyroid hormone fragment (1-34) on bone histomorphometry and serum chemistry in rats. *Endocrinology* **138** 4607. PMID: 9348185.

Niall *et al* (1974) The amino acid sequence of the amino-terminal 37 residues of human parathyroid hormone. *Proc.Natl.Acad.Sci.* **71** 384.

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