

Parathyroid Hormone

Human, Recombinant (rHuPTH)

Expressed in *E. coli*

Cat. No. CRP0817

Lot. No. (See product label)

PRODUCT INFORMATION

Description: Parathyroid hormone is the most important endocrine regulator of calcium and phosphorus concentration in extracellular fluid. This hormone is secreted from cells of the parathyroid glands and finds its major target cells in bone and kidney. Another hormone, parathyroid hormone-related protein, binds to the same receptor as parathyroid hormone and has major effects on development.

Like most other protein hormones, parathyroid hormone is synthesized as a prohormone. After intracellular processing, the mature hormone is packaged within the Golgi into secretory vesicles, then secreted into blood by exocytosis. Parathyroid hormone is secreted as a linear protein of 84 amino acids.

Amino-Acid Sequence: 84 aa, non-glycosylated

M. W. : 9,000 Da

Recombinant: Expressed in *E. coli*

Purity: >98% as determined by SDS-PAGE, RP-HPLC and FPLC.

Formulation: The protein (1mg/ml) was lyophilized after extensive dialyses against 1.15mg sodium citrate, 7.31mg sodium chloride, 0.21mg citric acid, 0.1117 EDTA-Na₂, 0.2mg Tween 80 and 50mg Mannitol.

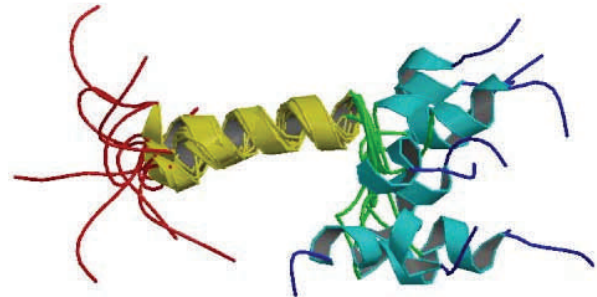
Specific Activity: rHuPTH is fully biologically active when compared to standards. The activity calculated by UMR106 cell/cAMP method corresponding to a specific activity of 1.0 x 10⁴ IU/mg.

Endotoxin: Less than 0.1 ng/μg (IEU/μg) of rHuPTH.

Reconstitution: It is recommended to reconstitute the lyophilized rHuPTH in sterile 18MΩ-cm H₂O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

Storage: Lyophilized rHuPTH although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuPTH should be stored at 4°C between 2-7 days and for future use below -18°C. For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Aliquot to avoid repeated freeze-thaw cycles.

FOR RESEARCH USE ONLY



[PDB](#) rendering based on 1bwx.

GENE INFORMATION

Gene Name: [PTH](#)

Gene Alias: parathormone; parathyrin

Gene Type: protein coding

mRNA Refseq: [NM_000315](#)

Protein Refseq: [NP_000306](#)

MIM: [168450](#)

GeneID: [5741](#)

Chromosome Location: 11p15.3-p15.1

Pathway: Neuroactive ligand-receptor interaction

Function: hormone activity; parathyroid hormone receptor binding activity

REFERENCES

1. Poole K, Reeve J. Parathyroid hormone - a bone anabolic and catabolic agent. *Curr Opin Pharmacol.* 2005; 5 (6): 612-617
2. Pawlotsky Y, et al. Elevated parathyroid hormone 44-68 in idiopathic calcium pyrophosphate dihydrate crystal deposition disease. Role of menopause and iron metabolism? *J Rheumatol.* 2008 Feb;35(2):315-318
3. Zadrozna-Sliwka B, et al. The role of cyclase activating (CAP) and cyclase inhibiting (CIP) parathormone fractions in the assessment of bone metabolism disturbances in women with hyperprolactinemia of various origin. *Neuro Endocrinol Lett.* 2008 Feb; 29(1):178-184

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