

Recombinant Human PTH protein

Cat. No. PTH-02H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human PTH protein (1-34 a.a.) was expressed in Escherichia coli.
Species	Human
Source	E.coli
ProteinLength	34
Description	Parathyroid hormone (PTH) is a single polypeptide of 84 amino acids. PTH is a critical hormone in the regulation of Ca²⁺ homeostasis. PTH is secreted by the parathyroid glands, which promote release of calcium from bone to extracellular fluid by activating osteoblasts and inhibiting osteoclasts, indirectly promote increased intestinal absorption of calcium, and promote renal tubular reabsorption of calcium and increased renal excretion of phosphates. It is a major regulator of bone metabolism. Secretion of parathyroid hormone increases when the level of calcium in the extracellular fluid is low. The amino terminal (1-34) fragment of parathyroid hormone, called PTH (1-34) reproduces all the activity of the full length mature hormone and has been used therapeutically for treatment of osteoporosis.
Form	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.0.
Bio-activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by its ability to induce cAMP accumulation in murine MC3T3E1 cells is less than 50 ng/ml, corresponding to a specific activity of > 2.0 × 10 ⁴ IU/mg.

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Molecular Mass	Approximately 4.1 kDa, a single non-glycosylated polypeptide chain containing 34 amino acids.
AA Sequence	SVSEIQLMHNLGKHLNSMERVEWLRKKLQDVHNF
Endotoxin	Less than 1 EU/g of rHuPTH1-34 as determined by LAL method.
Purity	>97% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	PTH
Official Symbol	PTH
Synonyms	PTH; parathyroid hormone; parathormone; parathyrin; parathyroid hormone 1; PTH1;
Gene ID	5741
mRNA Refseq	NM_000315

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Protein Refseq	NP_000306
MIM	168450
UniProt ID	P01270

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