

## Recombinant Human Parathyroid Hormone 1-34

### Information

<b>Gene ID</b>	5741
<b>Accession #</b>	P01270
<b>Alternate Names</b>	Parathormone, Parathyrin
<b>Source</b>	Escherichia coli.
<b>M.Wt</b>	Approximately 4.1 kDa, a single non-glycosylated polypeptide chain containing 34 amino acids.
<b>AA Sequence</b>	SVSEIQLMHN LGKHLNSMER VEWLRRKKLQD VHNF
<b>Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.0.
<b>Reconstitution</b>	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 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> 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 <sup>4</sup> IU/mg.
<b>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	100µg	500µg
Recombinant Human Parathyroid Hormone 1-34	100µg	500µg

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- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

## Quality Control

Purity	> 97% by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuPTH1-34 as determined by LAL method.

## Description

Parathyroid hormone (PTH) is a single polypeptide of 84 amino acids. PTH is a critical hormone in the regulation of Ca<sup>2+</sup> 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.

## Reference

1. Potts, J.T. 2005. J Endocrinol, 187: 311-25
2. Misiorowski, W. 2011. Endokrynol Pol, 62: 73-8
3. Scillitani, A., V. Guarnieri, C. Battista, et al. 2011. J Endocrinol Invest, 34: 23-6.

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