

PTH Protein, Human, Recombinant (His)

General Information

Synonyms:	Parathyroid hormone;Parathyrin;PTH;Parathormone
Protein Construction:	Ser32-Gln115
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P01270
Molecular Weight:	13 KDa (reducing condition)
AA Sequence:	Ser32-Gln115

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Parathyroid hormone (PTH) is a critical hormone in the regulation of Ca⁺⁺ homeostasis. 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

preprohormone. After intracellular processing, the mature hormone is packaged with in the Golgi into secretory vesicles, the secreted into blood by exocytosis. In renal epithelium, PTH promotes conversion of Vitamin D to its active form, lowers Ca^{++} excretion and increases phosphate excretion. PTH also increases hematopoietic stem cell proliferation and mobilization and induces arterial vasodilation by regulating Ca^{++} influx in PTH1R-expressing arterial smooth muscle.

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