

Human PTH / PTH1 / Parathyroid Hormone Protein (Fc Tag)

Catalog Number: 13192-H01H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

PTH; PTH1; Pthp

Protein Construction:

A DNA sequence encoding the human PTH (P01270) (Ser32-Gln115) was expressed, with the fused Fc region of human IgG1 at the N-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Glu

Molecular Mass:

The recombinant human PTH/Fc is a disulfide-linked homodimer. The reduced monomer comprises 344 amino acids and has a predicted molecular mass of 37.9 kDa. The apparent molecular mass of the protein is approximately 40 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

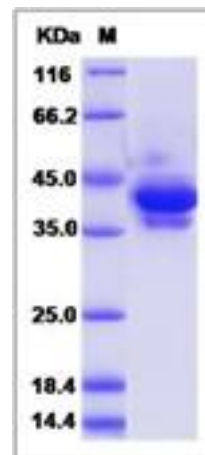
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Parathyroid hormone (PTH), parathormone or parathyrin, is secreted by the chief cells of the parathyroid glands as a polypeptide. PTH elevates calcium level by dissolving the salts in bone and preventing their renal excretion. Parathyroid hormone (PTH) has been proved to play a pivotal role in maintaining myocardial contractility as well as effective natriuresis, and possible pathogenic mechanisms contributing to heart failure secondary to hypocalcemia and hypoparathyroidism. With the increased population of preosteoblastic lineages and the osteoblastic activation, Parathyroid hormone (PTH) drives anabolism in bone. Experiments have recently reported that PTH affects bone cells in a dual pathway - mediating osteoblastic (preosteoblastic) activities or osteocytic synthesis of sclerostin. Defects in PTH are a cause of familial isolated hypoparathyroidism (FIH), also called autosomal dominant hypoparathyroidism or autosomal dominant hypocalcemia. FIH is characterized by hypocalcemia and hyperphosphatemia due to inadequate secretion of parathyroid hormone. Symptoms are seizures, tetany and cramps.

References

1. Bedi B, *et al.* (2012) Silencing of parathyroid hormone (PTH) receptor 1 in T cells blunts the bone anabolic activity of PTH. *Proc Natl Acad Sci U S A.* 109(12): 725-33.
2. Hasegawa T, *et al.* (2012) Parathyroid hormone as a Bone anabolic agent. Biological function of bone cells on the PTH-driven anabolic effect. *Clin Calcium.* 22(3): 373-9.
3. Ito M. Parathyroid hormone as a Bone anabolic agent. Effect of PTH on bone structural properties. *Clin Calcium.* 22(3): 335-41.

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>