

Recombinant Human Parathyroid Hormone 1-84 (Human PTH1-84)

Product Information

Product Name	Cat#	Size
Recombinant Human Parathyroid Hormone 1-84 (Human PTH1-84)	92802ES60	100 µg
	92802ES76	500 µg

Product Description

PTH (parathyroid hormone) is a critical hormone in the regulation of Ca⁺⁺ homeostasis. PTH is secreted by the chief cells of the parathyroid glands as a polypeptide. PTH secretion is enhanced by low Ca⁺⁺ concentrations and inhibited by FGF-23. In normal human plasma, PTH correlates negatively with active Vitamin D and positively with ionized calcium. Human and other mammalian PTH will bind and stimulate human or rat PTH1R, activating adenylate cyclase and increasing cAMP production. PTH promotes secretion of TRANCE/RANKL and periostin through PTH1R binding on osteoblasts and/or bone marrow stromal cells. TRANCE/RANKL induces differentiation of osteoclasts, which in turn promote release of Ca⁺⁺ from bone. PTH1R on osteocytes, however, allows PTH to promote bone formation and IGF-1 production. In addition, PTH increases hematopoietic stem cell proliferation and mobilization and induces arterial vasodilation by regulating Ca⁺⁺ influx in PTH1R-expressing arterial smooth muscle. In renal epithelium, PTH promotes conversion of Vitamin D to its active form, lowers Ca⁺⁺ excretion and increases phosphate excretion.

Product Properties

Synonyms	Parathormone, Parathyrin
Accession	P01270
GeneID	5741
Source	E.coli-derived Human PTH1-84, Ser32-Gln115.
Molecular Weight	Approximately 9.4 kDa.
AA Sequence	SVSEIQLMHN LGKHLNSMER VEWLRKKLQD VHNFVALGAP LAPRDAGSQR PRKKEDNVLV ESHEKSLGEA DKADVNVLTAKSQ
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 97% by SDS-PAGE and HPLC analyses.
Biological Activity	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. Fully biologically active when compared to standard.
Endotoxin	< 1.0 EU per 1µg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
Reconstitution	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.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only.