

Recombinant Human Parathyroid Hormone (rHuPTH)

ORDERING INFORMATION

Catalog No.	Size
58004P-100	100ug
58004P-500	500ug
58004P-1000	1000ug

FORMULATION

The protein (1 mg/ml) was lyophilized after extensive dialysis against 1.15mg sodium citrate, 7.31mg sodium chloride, 0.21 mg citric acid, 0.1117mg EDTA-Na₂, 0.2mg Tween 80 and 50mg mannitol. Purity >98% as determined by RP-HPLC and SDS-PAGE.

ACCESSION NO.

P01270

BACKGROUND

Parathyroid hormone (PTH) is a 84-amino acid polypeptide secreted by parathyroid glands that increases the concentration of calcium in the blood through its interaction with parathyroid hormone receptors in bones, kidney, and intestines. In bones PTH enhances the release of calcium from the large reservoir contained in bones, in kidney it enhances active reabsorption of calcium from distal tubules and the thick ascending limb, and in intestines it enhances the absorption of calcium by increasing the production of vitamin D and upregulating the enzyme responsible for 1-alpha hydroxylation of 25-hydroxy vitamin D, converting vitamin D to its active form (1,25-dihydroxy vitamin D) which effects the absorption of calcium (as Ca²⁺ ions) by the intestine via calbindin.

DESCRIPTION

Recombinant Human Parathyroid Hormone (C₁₈₁H₂₉₀N₅₅O₅₁S₂) is produced in *E. coli* as a single, non-glycosylated, polypeptide chain containing 34 amino acids and having a molecular mass of 4117.8 Dalton and is purified by proprietary chromatographic techniques.

AMINO ACID SEQUENCE

Ser-Val-Ser-Glu-Ile-Gln-Leu-Met-His-Asn-Leu-Gly-Lys-His-Leu-Asn-Ser-Met-Glu-Arg-Val-Glu-Trp-Leu-Arg-Lys-Lys-Leu-Gln-Asp-Val-His-Asn-Phe.

BIOLOGICAL ACTIVITY

Specific activity of 10,000 Units/mg as determined by the UMR106 cell/cAMP method.

SOLUBILITY

Reconstitute lyophilized rHuPTH in sterile distilled H₂O to not less than 100µg/ml which can then be further diluted in other aqueous solutions.

STORAGE AND STABILITY

Lyophilized rHuPTH should be stored desiccated below -20°C. Upon reconstitution, rHuPTH may be stored at 4°C for 2-7 days and, for future use, below -20°C. For long term storage it is recommended that a carrier protein (0.1% HSA or BSA) is added. Prepare appropriate aliquots to avoid multiple freeze-thaw cycles.

For in vitro investigational use only. Not for use in therapeutic or diagnostic procedures.