

Recombinant Human Parathyroid Hormone 1-84, 15N Stable Isotope Labeled

Information

Gene ID	5741
Accession #	P01270
Alternate Names	Parathormone, Parathyrin
Source	Escherichia coli.
M.Wt	Approximately 9551 Da, a single non-glycosylated polypeptide chain containing 84 amino acids. 15N stable isotope labeled.
AA Sequence	SVSEIQLMHN LGKHLNSMER VEWLRKKLQD VHNFVALGAP LAPRDAGSQR PRKKEDNVLV ESHEKSLGEA DKADVNVLTAK AKSQ
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	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
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
Reconstitution	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.
Biological Activity	Fully biologically active when compared to standard. 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.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10μg	100μg	500μg
Recombinant Human Parathyroid Hormone 1-84, 15N Stable Isotope Labeled	10μg	100μg	500μg

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- 12 months from date of receipt, -20 to -70 °C as supplied
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- 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/ μ g of rHuPTH1-84, 15N 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^{2+} 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.

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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