Human PTH1R / PTHR1 / PTH1 Receptor Protein (His Tag)

Catalog Number: 12232-H08H

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Biological Solution Specialist

General Information

Gene Name Synonym:

MGC138426; MGC138452; PFE; PTHR; PTHR1; PPR; Pthr; Pthr1

Protein Construction:

A DNA sequence encoding the human PTH1R (Q03431) extracellular domain (Met 1-Gly 188) was fused with a polyhistidine tag at the C-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 ℃

Predicted N terminal: Asp 27

Molecular Mass:

The recombinant human PTH1R consists of 173 amino acids and has a predicted molecular mass of 20 kDa. As a result of glycosylation, the apparent molecular mass of rh PTH1R is approximately 30-40 kDa in SDS-PAGE under reducing conditions.

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:

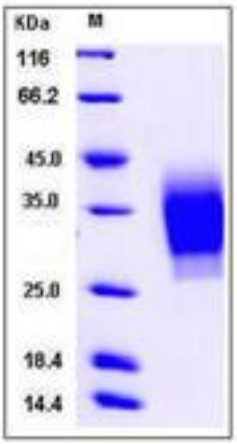
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Parathyroid hormone / parathyroid hormone-related peptide receptor, also known as PTH / PTHrP type I receptor, PTH/PTHr receptor, Parathyroid hormone 1 receptor, PTH1 receptor, PTH1R and PTHR, is a multi-pass membrane protein which belongs to the G-protein coupled receptor 2 family. PTH1R is expressed in most tissues. It is most abundant in kidney, bone and liver. PTH1R is expressed in high levels in bone and kidney and regulates calcium ion homeostasis through activation of adenylate cyclase and phospholipase C. In bone, PTH1R is expressed on the surface of osteoblasts. When the receptor is activated, these cells in turn stimulate osteoclasts to ultimately increase the resorption rate. PTH1R is a receptor for parathyroid hormone and for parathyroid hormone-related peptide. The activity of PTH1R is mediated by G proteins which activate adenylyl cyclase and also a phosphatidylinositol-calcium second messenger system. Defects in PTH1R are the cause of Jansen metaphyseal chondrodysplasia (JMC), chondrodysplasia Blomstrand type (BOCD), enchondromatosis multiple (ENCHOM), Eiken skeletal dysplasia (EISD) and primary failure of tooth eruption (PFE).

References

1.Schipani E., et al., 1993, Endocrinology 132:2157-2165.
2.Hopyan S., et al., 2002, Nat. Genet. 30:306-310.
3.Bastepe M., et al., 2004, J. Clin. Endocrinol. Metab. 89:3595-3600.