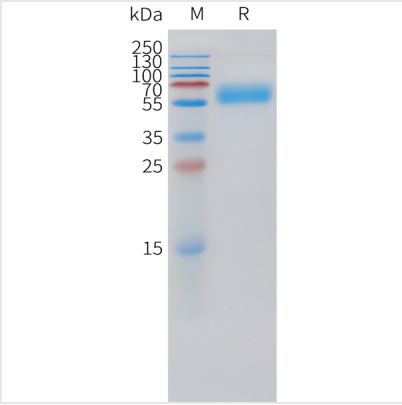
PTH1R Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	PTH1R, Recombinant Protein
Full Product Name	Human PTH1R Protein, hFc Tag
Product Gene Name	PTH1R recombinant protein
Product Synonym Names	PFE; EKNS; PTHR; PTHR1; Recombinant human PTH1R Protein with C-terminal human Fc tag
Sequence	PTH1R (Asp27-Gly 188) hFc (Glu99-Ala 330)
Host	HEK293
Form/Format	Lyophilized from sterile PBS, pH 7.4. Normally 5% – 8% trehalose is added as protectants before lyophilization. Please see Certificate of Analysis for specific instructions of reconstitution.
Purity/Purification	The purity of the protein is greater than 95% as determined by SDS-PAGE and Coomassie blue staining.
Preparation and Storage	Store at -20 degree C to -80 degree C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80 degree C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.
Molecular Weight	66,361 Da
Chromosome Location	Chromosome: 3; NC_000003.11 (46919236..46945289). Location: 3p22-p21.1
OMIM	125350
3D Structure	ModBase 3D Structure for Q03431
Tag	C-Human Fc
Product Categories/Family for PTH1R recombinant protein	ECD Proteins
Related Product Information for PTH1R recombinant protein	The protein encoded by this gene is a member of the G-protein coupled receptor family 2. This protein is a receptor for parathyroid hormone (PTH) and for parathyroid hormone-like hormone (PTHLH). The activity of this receptor is mediated by G proteins which activate adenylyl cyclase and also a phosphatidylinositol-calcium second messenger system. Defects in this receptor are known to be the cause of Jansen's metaphyseal chondrodysplasia (JMC), chondrodysplasia Blomstrand type (BOCD), as well as enchodromatosis. Two transcript variants encoding the same protein have been found for this gene. [provided by RefSeq, May 2010]
Other Notes	Small volumes of PTH1R recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PTH1R purchase	MBS1884010 is a recombinant protein targeting PTH1R. Also known as Human PTH1R Protein, hFc Tag. Host: HEK293.



SDS-PAGE of PTH1R recombinant protein

Figure 1. Human PTH1R Protein, hFc Tag on SDS-PAGE under reducing condition.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PTH1R. It may not necessarily be applicable to this product.

NCBI GI #	4506271
NCBI GeneID	5745
NCBI Accession #	NP_000307.1
UniProt Primary Accession #	Q03431
UniProt Secondary Accession #	Q2M1U3
UniProt Related Accession #	Q03431
GenBank Nucleotide #	NM_000316.2
NCBI Official Full Name	parathyroid hormone/parathyroid hormone-related peptide receptor
NCBI Official Synonym Full Names	parathyroid hormone 1 receptor
NCBI Official Symbol	PTH1R
NCBI Official Synonym Symbols	PFE; PTHR; PTHR1
UniProt Protein Name	Parathyroid hormone/parathyroid hormone-related peptide receptor
UniProt Synonym Protein Names	PTH/PTHrP type I receptor; PTH/PTHr receptor; Parathyroid hormone 1 receptor
Protein Family	Parathyroid hormone/parathyroid hormone-related peptide receptor
UniProt Gene Name	PTH1R
UniProt Synonym Gene Names	PTHR; PTHR1; PTH/PTHr receptor
UniProt Entry Name	PTH1R_HUMAN
NCBI Protein Information	parathyroid hormone/parathyroid hormone-related peptide receptor; PTH1 receptor; PTH/PTHr receptor; PTH/PTHrP type I receptor; parathyroid hormone receptor 1; seven transmembrane helix receptor; parathyroid hormone/parathyroid hormone-related protein rece

UniProt Comments for PTH1R	PTHR: This is a receptor for parathyroid hormone and for parathyroid hormone-related peptide. The activity of this receptor 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). JMC is a rare autosomal dominant disorder characterized by a short-limbed dwarfism associated with hypercalcemia and normal or low serum concentrations of the two parathyroid hormones. Defects in PTH1R are the cause of chondrodysplasia Blomstrand type (BOCD). BOCD is a severe skeletal dysplasia. Defects in PTH1R may be a cause of enchondromatosis multiple (ENCHOM). Enchondromas are common benign cartilage tumors of bone. They can occur as solitary lesions or as multiple lesions in enchondromatosis (Ollier and Maffucci diseases). Clinical problems caused by enchondromas include skeletal deformity and the potential for malignant change to osteosarcoma. Defects in PTH1R are the cause of Eiken skeletal dysplasia (EISD); also known as bone modeling defect of hands and feet. It is a rare familial autosomal recessive skeletal dysplasia. It is characterized by multiple epiphyseal dysplasia, with extremely retarded ossification, principally of the epiphyses, pelvis, hands and feet, as well as by abnormal modeling of the bones in hands and feet, abnormal persistence of cartilage in the pelvis and mild growth retardation. Defects in PTH1R are a cause of primary failure of tooth eruption (PFE). PFE is a rare condition that has high penetrance and variable expressivity and in which tooth retention occurs without evidence of any obvious mechanical interference. Instead, malfunction of the eruptive mechanism itself appears to cause nonankylosed permanent teeth to fail to erupt, although the eruption pathway has been cleared by bone resorption. Belongs to the G-protein coupled receptor 2 family. Protein type: GPCR, family 2; Receptor, GPCR; Membrane protein, integral; Membrane protein, multi-pass Chromosomal Location of Human Ortholog: 3p22-p21.1 Cellular Component: integral to plasma membrane; brush border membrane; basolateral plasma membrane; apical plasma membrane; cytoplasm; plasma membrane; nucleus; receptor complex Molecular Function: protein binding; protein self-association; peptide hormone binding; parathyroid hormone receptor activity Biological Process: cell maturation; G-protein signaling, adenylate cyclase activating pathway; bone mineralization; osteoblast development; G-protein signaling, coupled to cAMP nucleotide second messenger; negative regulation of cell proliferation; G-protein coupled receptor protein signaling pathway; G-protein signaling, coupled to cyclic nucleotide second messenger; elevation of cytosolic calcium ion concentration; positive regulation of cell proliferation; chondrocyte differentiation; G-protein signaling, coupled to IP3 second messenger (phospholipase C activating); skeletal development; aging; bone resorption Disease: Eiken Syndrome; Chondrodysplasia, Blomstrand Type; Failure Of Tooth Eruption, Primary; Metaphyseal Chondrodysplasia, Jansen Type
Research Articles on PTH1R	**1.** beta-catenin binds to the PTHR-1 C-tail and switches the downstream signaling pathway from G(alphas)/cAMP to G(alphaq)/Ca(2+), which is a mechanism by which chondrocyte hypertrophy may be regulated through the PTH/PTHrP signal independent of canonical Wnt pathway
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