10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Parathyroid hormone Recombinant Rabbit mAb

Catalog # AP100017

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P01270
Other Accession	P01270
Reactivity	Human
Host	Rabbit
Clonality	Recombinant
Calculated MW	12861
Physical State	Liquid
Immunogen	A synthesized peptide derived from human Parathyroid hormone
Epitope Specificity	30-74
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	10mM phosphate buffered saline(pH 7.4) with 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
SIMILARITY	Belongs to the parathyroid hormone family.
SUBUNIT	Interacts with PTH1R (via N-terminal extracellular domain).
DISEASE	Defects in PTH are a cause of familial isolated hypoparathyroidism (FIH) [MIM:146200]; also called autosomal dominant hypoparathyroidism or autosomal dominant hypocalcemia. FIH is characterized by hypocalcemia and hyperphosphatemia due to inadequate secretion of parathyroid hormone. Symptoms are seizures, tetany and cramps. FIH exist both as autosomal dominant and recessive forms of hypoparathyroidism.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	PTH elevates calcium level by dissolving the salts in bone and preventing their renal excretion. Stimulates [1-14C]-2-deoxy-D-glucose (2DG) transport and glycogen synthesis in osteoblastic cells.

Additional Information

Gene ID	5741
Other Names	FIH1; PTH1; Pthp; PTH-(1-84); Pthr1; PTHY_BOVIN; PTH; Parathyrin; PTHY_CANLF; PTHY_HUMAN; Parathormone; PTHY_PIG; PTHY_RAT; parathyroid hormone; parathyroid hormone 1; preproparathyroid hormone; prepro-PTH
Dilution	WB=1:1000-2000,IHC-P=1:100-200,IHC-F=1:100-200,IF=1:100-200
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	PTH {ECO:0000303|PubMed:35932760, ECO:0000312|HGNC:HGNC:9606}
Function	Peptide hormone secreted by parathyroid chief cells that acts as a primary endocrine regulator of extracellular calcium and phosphate homeostasis, acting primarily on bone and kidney to maintain serum calcium levels within a narrow range (PubMed:11604398, PubMed:35932760). Acts by binding and activating the G protein-coupled receptor PTH1R, engaging the receptor to activate G(s)-mediated cAMP/PKA signaling and G(q)-mediated PLC/PKC signaling (PubMed:18375760, PubMed:35932760). In bone, acts indirectly on osteoclasts by binding PTH1R on cells of the osteoblast/osteocyte lineage, where it increases expression of TNFSF11/RANKL and decreases expression of TNFRSF11B/OPG, thereby raising the RANKL/OPG ratio and stimulating osteoclast differentiation and bone resorption (PubMed:9797718, PubMed:11454517). Stimulates also [1-14C]-2-deoxy-D- glucose (2DG) transport and glycogen synthesis in osteoblastic cells (PubMed:21076856). In distal renal tubule cells, stimulates active Ca(2+) reabsorption via the adenylyl cyclase-cAMP-protein kinase A (PKA) pathway leading to the phosphorylation and activation of the calcium selective cation channel TRPV5 (PubMed:19423690). Acting on PTH1R in proximal renal tubule cells, decreases reabsorption of filtered phosphate by reducing apical abundance of SLC34A1, through a mechanism involving PTH1R-activated PKC-mediated phosphorylation of the scaffold NHERF1, causing dissociation of the NHERF1-SLC34A1 complex and subsequent clathrin-mediated endocytosis and lysosomal degradation of the cotransporter (By similarity). Activates also transcription of CYP27B1 (25-hydroxyvitamin D3 1-alpha-hydroxylase) through a cAMP/PKA/SIK2-SIK3/CRTC2 axis, thereby increasing renal synthesis of the active vitamin D metabolite 1,25-dihydroxyvitamin D(3) (By similarity).
Cellular Location	Secreted

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.