Anti-Parathyroid Hormone Antibody [JE66-58]

HA722059

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 13 kDa
Clone number:	JE66-58

Description: Parathyroid hormone (PTH), also called parathormone or parathyrin, is a peptide hormone secreted by the parathyroid glands that regulates the serum calcium concentration through its effects on bone, kidney, and intestine. PTH influences bone remodeling, which is an ongoing process in which bone tissue is alternately resorbed and rebuilt over time. PTH is secreted in response to low blood serum calcium (Ca2+) levels. PTH indirectly stimulates osteoclast activity within the bone matrix (osteon), in an effort to release more ionic calcium (Ca2+) into the blood to elevate a low serum calcium level. The bones act as a (metaphorical) "bank of calcium" from which the body can make "withdrawals" as needed to keep the amount of calcium in the blood at appropriate levels despite the ever-present challenges of metabolism, stress, and nutritional variations. PTH is "a key that unlocks the bank vault" to remove the calcium. PTH is secreted primarily by the chief cells of the parathyroid glands. The gene for PTH is located on chromosome 11. It is a polypeptide containing 84 amino acids, which is a prohormone. It has a molecular mass around 9500 Da. Its action is opposed by the hormone calcitonin. Disorders that yield too little or too much PTH, such as hypoparathyroidism, hyperparathyroidism, and paraneoplastic syndromes can cause bone disease, hypocalcemia, and hypercalcemia.

Immunogen:	Synthetic peptide within Human Parathyroid Hormone aa 26-75 / 115.
Positive control:	HEK-293 cell lysate, CAL-62 cell lysate, A549 cell lysate, Jurkat cell lysate, mouse thymus tissue lysate, rat thymus tissue lysate, human parathyroid tissue.
Subcellular location:	Secreted.
Database links:	SwissProt: P01270 Human | P04089 Rat Entrez Gene: 19226 Mouse
Recommended Dilutions:	
WB	1;1,000
IHC-P	1:100
Storage Buffer:	1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.
Purity:	Protein A affinity purified.

Images

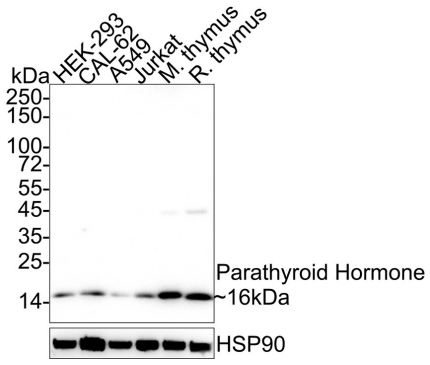

Fig1: Western blot analysis of Parathyroid Hormone on different lysates with Rabbit anti-Parathyroid Hormone antibody (HA722059) at 1/1,000 dilution.

Lane 1: HEK-293 cell lysate (20 µg/Lane)
Lane 2: CAL-62 cell lysate (20 µg/Lane)
Lane 3: A549 cell lysate (20 µg/Lane)
Lane 4: Jurkat cell lysate (20 µg/Lane)
Lane 5: Mouse thymus tissue lysate (40 µg/Lane)
Lane 6: Rat thymus tissue lysate (40 µg/Lane)

Predicted band size: 13 kDa
Observed band size: 16 kDa

Exposure time: 3 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA722059) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

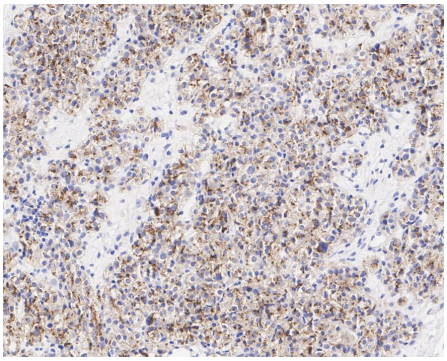

Fig2: Immunohistochemical analysis of paraffin-embedded human parathyroid tissue with Rabbit anti-Parathyroid Hormone antibody (HA722059) at 1/100 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA722059) at 1/100 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Chen T et al. Parathyroid hormone and its related peptides in bone metabolism. Biochem Pharmacol. 2021 Oct
2. Kužma M et al. Parathyroid Hormone-Related Changes of Bone Structure. Physiol Res. 2021 Nov