

PTH (C-20): sc-9678

BACKGROUND

Parathyroid hormone (PTH), which is also designated parathyrin, is an 84 amino acid single chain peptide that functions to regulate calcium metabolism by raising blood levels of calcium through various mechanisms. PTH stimulates bone formation to increase bone mass and strength in rats and humans. Within the PTH molecule, the essential activity is associated with the first 34 amino acids at the amino terminus of the molecule. The gene encoding PTH maps to human chromosome 11p15.2. Parathyroid hormone-related protein (PTH-rP) is an autocrine factor that is structurally related to PTH yet, unlike PTH, which is synthesized only by the parathyroid cells, PTH-rP is synthesized by several cell types. PTH-rP regulates endochondral bone development and epithelial-mesenchymal interactions during the formation of the mammary glands and teeth. Isolated from the culture medium of a human lung cancer cell line, PTH-rP produces PTH-like effects that are characterized as humoral hypercalcemia of malignancy. The gene encoding PTH-rP maps to human chromosome 12p12.1-p11.2. PTH and PTH-rP are both regulated by vitamin D and steroid hormones and preferentially bind to specific PTH/PTH-rP receptors, then activating adenylate cyclase or PLC β via PKC activation.

REFERENCES

1. O'Riordan, J.L., et al. G.D. 1971. Isolation of human parathyroid hormone. *Endocrinology* 89: 234-239.
2. Brewer, H.B. Jr., et al. 1972. Human parathyroid hormone: amino-acid sequence of the amino-terminal residues 1-34. *Proc. Natl. Acad. Sci. USA* 69: 3585-3588.
3. Suva, L.J., et al. 1987. A parathyroid hormone-related protein implicated in malignant hypercalcemia: cloning and expression. *Science* 237: 893-896.
4. Mangin, M., et al. 1988. Identification of a cDNA encoding a parathyroid hormone-like peptide from a human tumor associated with humoral hypercalcemia of malignancy. *Proc. Natl. Acad. Sci. USA* 85: 597-601.

CHROMOSOMAL LOCATION

Genetic locus: PTH (human) mapping to 11p15.2; Pth (mouse) mapping to 7 F1.

SOURCE

PTH (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PTH of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9678 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

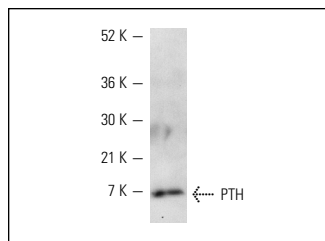
PTH (C-20) is recommended for detection of precursor and mature PTH of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PTH (C-20) is also recommended for detection of precursor and mature PTH in additional species, including canine and feline.

Suitable for use as control antibody for PTH siRNA (h): sc-39693, PTH siRNA (m): sc-39694, PTH shRNA Plasmid (h): sc-39693-SH, PTH shRNA Plasmid (m): sc-39694-SH, PTH shRNA (h) Lentiviral Particles: sc-39693-V and PTH shRNA (m) Lentiviral Particles: sc-39694-V.

Molecular Weight of PTH: 9 kDa.

DATA



PTH (C-20): sc-9678. Western blot analysis of purified human PTH.

SELECT PRODUCT CITATIONS

1. Björklund, P., et al. 2007. Activated β -catenin in the novel human parathyroid tumor cell line sHPT-1. *Biochem. Biophys. Res. Commun.* 352: 532-536.
2. Kanai, G., et al. 2009. Suppression of parathyroid hormone production *in vitro* and *in vivo* by RNA interference. *Kidney Int.* 75: 490-498.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


 MONOS
 Satisfaction
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Try **PTH (H-7): sc-398856** or **PTH (BGN/1F8): sc-80924**, our highly recommended monoclonal alternatives to PTH (C-20).