

PTH-rP (N-19): sc-9680

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. 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. Both PTH and PTH-rP are regulated by vitamin D and steroid hormones, and both preferentially bind to specific PTH/PTH-rP receptors, then activate adenylate cyclase or PLC β via PKC activation.

CHROMOSOMAL LOCATION

Genetic locus: PTHLH (human) mapping to 12p11.22; Pthlh (mouse) mapping to 6 G3.

SOURCE

PTH-rP (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PTH-rP 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-9680 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PTH-rP (N-19) is recommended for detection of precursor and mature PTH-rP 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-rP (N-19) is also recommended for detection of precursor and mature PTH-rP in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PTH-rP siRNA (h): sc-39695, PTH-rP siRNA (m): sc-39696, PTH-rP shRNA Plasmid (h): sc-39695-SH, PTH-rP shRNA Plasmid (m): sc-39696-SH, PTH-rP shRNA (h) Lentiviral Particles: sc-39695-V and PTH-rP shRNA (m) Lentiviral Particles: sc-39696-V.

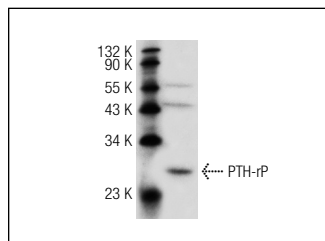
Molecular Weight of PTH-rP: 26 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, NIH/3T3 whole cell lysate: sc-2210 or MCF7 whole cell lysate: sc-2206.

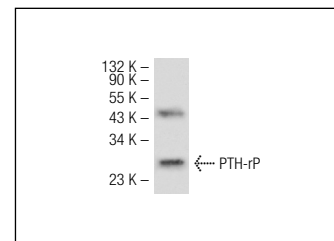
STORAGE

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

DATA



PTH-rP (N-19): sc-9680. Western blot analysis of PTH-rP expression in 3T3-L1 whole cell lysate.



PTH-rP (N-19): sc-9680. Western blot analysis of PTH-rP expression in NIH/3T3 whole cell lysate.

SELECT PRODUCT CITATIONS

- Hagforsen, E., et al. 2005. Women with palmoplantar pustulosis have disturbed calcium homeostasis and a high prevalence of diabetes mellitus and psychiatric disorders: a case-control study. *Acta Derm. Venereol.* 85: 225-232.
- Rukkulchon, B.K., et al. 2008. Effect of tensile force on expression of PTHrP and thickness of hypertrophic zone in organ-cultured mouse sphenoid-occipital synchondroses. *Arch. Oral Biol.* 53: 690-699.
- Dahia, C.L., et al. 2009. Intercellular signaling pathways active during intervertebral disc growth, differentiation, and aging. *Spine* 34: 456-462.
- Romero, M., et al. 2010. Parathyroid hormone-related protein induces hypertrophy in podocytes via TGF β 1 and p27Kip1: implications for diabetic nephropathy. *Nephrol. Dial. Transplant.* 25: 2447-2457.
- Toribio, R.E., et al. 2010. The midregion, nuclear localization sequence, and C terminus of PTHrP regulate skeletal development, hematopoiesis, and survival in mice. *FASEB J.* 24: 1947-1957.
- Chinen, Y., et al. 2011. Intravascular B-cell lymphoma with hypercalcemia as the initial presentation. *Int. J. Hematol.* 94: 567-570.
- Lorch, G., et al. 2011. The calcium-sensing receptor is necessary for the rapid development of hypercalcemia in human lung squamous cell carcinoma. *Neoplasia* 13: 428-438.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **PTH-rP (1D1): sc-53936**, our highly recommended monoclonal alternative to PTH-rP (N-19).