SANTA CRUZ BIOTECHNOLOGY, INC.

PTH (FL-115): sc-28922

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 11p15.3-p15.1. 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 (FL-115) is a rabbit polyclonal antibody raised against amino acids 1-115 representing full length PTH of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

PTH (FL-115) 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 µg per 100-500 µg 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 (FL-115) is also recommended for detection of precursor and mature PTH in additional species, including canine and bovine.

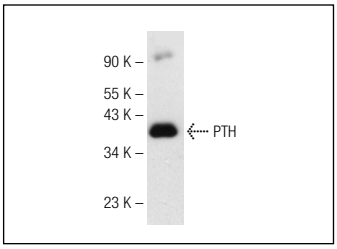
Suitable for use as control antibody for PTH siRNA (h): sc-39693, PTH siRNA (m): sc-39694, PTH shRNA Plasmid (h): sc-39693-SH, PTH shRNA Plasmid (m): sc-39694-SH, PTH shRNA (h) Lentiviral Particles: sc-39693-V and PTH shRNA (m) Lentiviral Particles: sc-39694-V.

Molecular Weight of PTH: 9 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PTH (FL-115): sc-28922. Western blot analysis of full length human recombinant PTH.

RESEARCH USE

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