PTH/PTHrP-R (3D1.1): sc-12722

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

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: PTH1R (human) mapping to 3p21.31; Pth1r (mouse) mapping to human chromosome 11p15.3-p15.1.

SOURCE

PTH/PTHrP-R (3D1.1) is a mouse monoclonal antibody raised against amino acids 155-169 of PTH/PTHrP-R of human origin.

PRODUCT

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PTH/PTHrP-R (3D1.1) is available conjugated to agarose (sc-12722 AC), 500 µg/0.25 ml agarose in 1 ml, for IF; to HRP (sc-12722 HRP), 200 µg/ml, for WB, IHC(PO) and ELISA; to either phycoerythrin (sc-12722 PE), fluorescein (sc-12722 FITC), Alexa Fluor® 488 (sc-12722 AF488), Alexa Fluor® 546 (sc-12722 AF546), Alexa Fluor® 594 (sc-12722 AF594) or Alexa Fluor® 647 (sc-12722 AF647), 200 µg/ml, for WB (RGB), IF, IHC(PO) and FCM; and to either Alexa Fluor® 680 (sc-12722 AF680) or Alexa Fluor® 790 (sc-12722 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, PTH/PTHrP-R (3D1.1) is available conjugated to TRITC (sc-12722 TRITC, 200 µg/ml), for IF, IHC(PO) and FCM.

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APPLICATIONS

PTH/PTHrP-R (3D1.1) is recommended for detection of PTH/PTHrP receptor type I 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for PTH/PTHrP-R siRNA (h): sc-36327, PTH/PTHrP-R siRNA (m): sc-40158, PTH/PTHrP-R siRNA Plasmid (h): sc-36327-SH, PTH/PTHrP-R siRNA Plasmid (m): sc-40158-SH, PTH/PTHrP-R shRNA (h) Lentiviral Particles: sc-36327-V and PTH/PTHrP-R shRNA (m) Lentiviral Particles: sc-40158-V.

Molecular Weight of PTH/PTHrP-R: 80 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, F9 cell lysate: sc-2245 or HeLa whole cell lysate: sc-2200.

DATA

PTH/PTHrP-R (3D1.1): sc-12722. Western blot analysis of PTH/PTHrP-R expression in MCF7 (A), HeLa (B) and F9 (C) whole cell lysates.

PHTH/rP-R (3D1.1): sc-12722. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse kidney (A) and human kidney (B) tissue showing cytoplasmic staining of cells in glomeruli and cells in tubules.

SELECT PRODUCT CITATIONS


STORAGE

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

RESEARCH USE

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