

PTH2 Receptor (E-20): sc-16384

BACKGROUND

Parathyroid hormone (PTH) and parathyroid hormone-related peptide (PTHrP) regulate calcium, phosphate and hydrogen ions in the kidney. In addition, PTHrP is also expressed in a variety of tissues, where it acts as an autocrine/paracrine factor to influence skeletal and cartilage development. Both ligands preferentially bind to the type 1 PTH/PTHrP receptor (PTH1R), whereas the type 2 PTH receptor (PTH2 receptor or PTH2R) binds only PTH, but not PTHrP. The PTH2 receptor also binds to tuberoinfundibular peptide of 39 residues (TIP39), which shares limited homology with PTH and may, subsequently, activate the PTH2 receptor through alternative methods. Both PTH receptors are members of the glucagon/secretin/calcitonin subfamily of G protein-coupled receptors (GPCRs), and are characterized as seven transmembrane receptors that recruit G proteins and signal through intracellular adenylyl cyclase/cAMP pathways. The PTH2 receptor is highly expressed in brain and pancreas, with lower expression in testis, and is thought to play a role in the regulation of several physiological systems, including pituitary hormone secretion and pain perception.

REFERENCES

1. Bruns, M.E., et al. 1995. Expression of parathyroid hormone-related peptide and its receptor messenger ribonucleic acid in human amnion and chorion-decidua: implications for secretion and function. *Am. J. Obstet. Gynecol.* 173: 739-746.
2. Usdin, T.B., et al. 1996. Distribution of parathyroid hormone-2 receptor messenger ribonucleic acid in rat. *Endocrinology* 137: 4285-4297.
3. Iezzoni, J.C., et al. 1998. Coexpression of parathyroid hormone-related protein and its receptor in breast carcinoma: a potential autocrine effector system. *Mod. Pathol.* 11: 265-270.
4. Takasu, H., et al. 1999. Dual signaling and ligand selectivity of the human PTH/PTHrP receptor. *J. Bone Miner. Res.* 14: 11-20.

CHROMOSOMAL LOCATION

Genetic locus: PTH2R (human) mapping to 2q34; Pth2r (mouse) mapping to 1 C2.

SOURCE

PTH2 Receptor (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PTH2 Receptor 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.

Blocking peptide available for competition studies, sc-16384 P, (100 µg 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

PTH2 Receptor (E-20) is recommended for detection of PTH2 Receptor 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).

PTH2 Receptor (E-20) is also recommended for detection of PTH2 Receptor in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PTH2 Receptor siRNA (h): sc-40156, PTH2 Receptor siRNA (m): sc-40157, PTH2 Receptor shRNA Plasmid (h): sc-40156-SH, PTH2 Receptor shRNA Plasmid (m): sc-40157-SH, PTH2 Receptor shRNA (h) Lentiviral Particles: sc-40156-V and PTH2 Receptor shRNA (m) Lentiviral Particles: sc-40157-V.

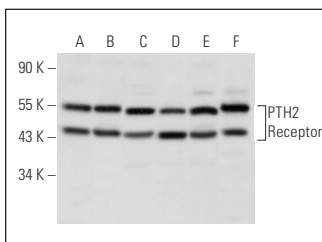
Molecular Weight of PTH2 Receptor: 62 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NTERA-2 cl.D1 whole cell lysate: sc-364181 or rat brain extract: sc-2392.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PTH2 Receptor (E-20): sc-16384. Western blot analysis of PTH2 Receptor expression in C6 (A), NTERA-2 cl.D1 (B), OVCA8-3 (C), BxPC-3 (D) and HeLa (E) whole cell lysates and rat brain tissue extract (F).

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.