SANTA CRUZ BIOTECHNOLOGY, INC.

mPRε (Y-13): sc-99579

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The Power to Question

BACKGROUND

The PAQR superfamily of receptors includes AdipoR1, AdipoR2, mPRα, mPRβ, mPRγ, mPRδ, mPRε, PAQR3 and PAQR4, all of which encode functional receptors with a broad range of ligand specificities. The best characterized family members are AdipoR1 and AdipoR2, which regulate fatty acid oxidation and the uptake of glucose by adiponectin. Certain PAQR family members have been shown to specifically bind progesterone and mediate non-genomic effects. In yeast, since PAQR progeseterone-dependent signaling does not require heterotrimeric G-proteins, it is suspected that PAQRs may function as a novel class of G protein-coupled receptors. mPRε, also known as PAQR9 (progestin and adipoQ receptor family member 9), is a 377 amino acid multi-pass membrane protein that responds to progesterone binding.

REFERENCES

1. Fernandes, M.S., et al. 2005. Regulated expression of putative membrane progestin receptor homologues in human endometrium and gestational tissues. J. Endocrinol. 187: 89-101.
2. Tang, Y.T., et al. 2005. PAQR proteins: a novel membrane receptor family defined by an ancient 7-transmembrane pass motif. J. Mol. Evol. 61: 372-380.
3. Thomas, P. 2008. Characteristics of membrane progestin receptor α (mPRα) and progesterone membrane receptor component 1 (PGMRC1) and their roles in mediating rapid progestin actions. Front Neuroendocrinol. 29: 292-312.
4. Romero-Sánchez, M., et al. 2008. Expression profile of heptahelical putative membrane progesterone receptors in epithelial ovarian tumors. Hum. Pathol. 39: 1026-1033.
5. Góñez, L.J., et al. 2008. Pancreatic expression and mitochondrial localization of the progestin-adipoQ receptor PAQR10. Mol. Med. 14: 697-704.
6. Villa, N.Y., et al. 2008. Sphingolipids function as downstream effectors of a fungal paqr receptor. Mol. Pharmacol. 75: 866-875.
7. Smith, J.L., et al. 2008. Heterologous expression of human mPRα, mPRβ and mPRγ in yeast confirms their ability to function as membrane progesterone receptors. Steroids 73: 1160-1173.

CHROMOSOMAL LOCATION

Genetic locus: PAQR9 (human) mapping to 3q23; Paqr9 (mouse) mapping to 9 E3.3.

SOURCE

mPRε (Y-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of mPRε of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-99579 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

mPRε (Y-13) is recommended for detection of mPRε 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); non cross-reactive with PAQR3 or PAQR4.

mPRε (Y-13) is also recommended for detection of mPRε in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for mPRε siRNA (h): sc-78180, mPRε siRNA (m): sc-152022, mPRε shRNA Plasmid (h): sc-78180-SH, mPRε shRNA Plasmid (m): sc-152022-SH, mPRε shRNA (h) Lentiviral Particles: sc-78180-V and mPRε shRNA (m) Lentiviral Particles: sc-152022-V.

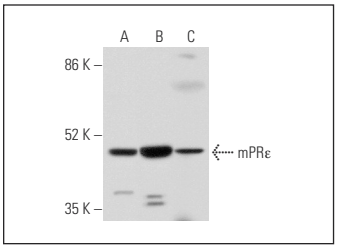
Molecular Weight of mPRε: 43 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, RAW 264.7 whole cell lysate: sc-2211 or mouse uterus extract: sc-364254.

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



mPRε (Y-13): sc-99579. Western blot analysis of mPRε expression in NIH/3T3 (**A**) and RAW 264.7 (**B**) whole cell lysates and mouse uterus tissue extract (**C**).

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.