SANTA CRUZ BIOTECHNOLOGY, INC.

mPRα (M-75): sc-134816

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The steroid progesterone induces the resumption of maturation in oocytes via a nongenomic pathway through binding to a novel membrane progestin receptor (mPR). This pathway inhibits adenylyl cyclase and reduces intracellular cAMP, and also activates mitogen-activated protein kinase to effect signal transduction pathways. Three distinct groups, designated α, β and γ, comprise the mPR gene family. mPRα, also designated progestin and AdipoQ receptor family member VII (PAQR7), consists of an extracellular N-terminus, an intracellular C-terminus and seven transmembrane domains. mPRα is expressed in ovary, testis, placenta, uterus and bladder. mPRβ, or progestin and AdipoQ receptor family member VIII (PAQR8), consists of eight putative transmembrane regions and an intracellular N-terminus that contains a leucine-rich motif. mPRβ is a 354 amino acid protein expressed in brain and spinal cord. Both mPRα and mPRβ may be G protein-coupled receptors and may be involved in oocyte maturation.

REFERENCES

1. Suzuki, T., Ganesh, S., Agarwala, K.L., Morita, R., Sugimoto, Y., Inazawa, J., Delgado-Escueta, A.V. and Yamakawa, K. 2001. A novel gene in the chromosomal region for juvenile myoclonic epilepsy on 6p12 encodes a brain-specific lysosomal membrane protein. Biochem. Biophys. Res. Commun. 288: 626-636.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607779. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Hammes, S.R. 2003. The further redefining of steroid-mediated signaling. Proc. Natl. Acad. Sci. USA 100: 2168-2170.
4. Kazeto, Y., Goto-Kazeto, R., Thomas, P. and Trant, J.M. 2005. Molecular characterization of three forms of putative membrane-bound progestin receptors and their tissue-distribution in channel catfish, *Ictalurus punctatus*. J. Mol. Endocrinol. 34: 781-791.
5. Tang, Y.T., Hu, T., Arterburn, M., Boyle, B., Bright, J.M., Emtage, P.C. and Funk, W.D. 2005. PAQR proteins: a novel membrane receptor family defined by an ancient seven-transmembrane pass motif. J. Mol. Evol. 61: 372-380.
6. Thomas, P., Dressing, G., Pang, Y., Berg, H., Tubbs, C., Benninghoff, A. and Doughty, K. 2006. Progestin, estrogen and androgen G protein-coupled receptors in fish gonads. Steroids 71: 310-316.

CHROMOSOMAL LOCATION

Genetic locus: PAQR7 (human) mapping to 1p36.11; Paqr7 (mouse) mapping to 4 D3.

SOURCE

mPRα (M-75) is a rabbit polyclonal antibody raised against amino acids 1-75 mapping at the N-terminus of mPRα of mouse origin.

PRODUCT

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

APPLICATIONS

mPRα (M-75) is recommended for detection of mPRα (membrane progestin receptor α) of mouse, rat and, to a lesser extent, 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).

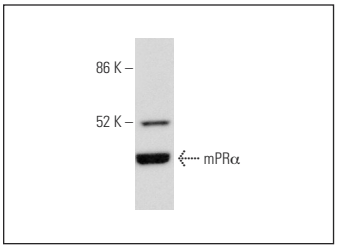
Suitable for use as control antibody for mPRα siRNA (h): sc-61071, mPRα siRNA (m): sc-61072, mPRα shRNA Plasmid (h): sc-61071-SH, mPRα shRNA Plasmid (m): sc-61072-SH, mPRα shRNA (h) Lentiviral Particles: sc-61071-V and mPRα shRNA (m) Lentiviral Particles: sc-61072-V.

Molecular Weight of mPRα: 40 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



mPRα (M-75): sc-134816. Western blot analysis of mPRα expression in ES-2 whole cell lysate.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.