SANTA CRUZ BIOTECHNOLOGY, INC.

mPR (xP-14): sc-28022

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 alpha, beta, and gamma, comprise this gene family, and while all contain 7 transmembrane domains, they show distinct distributions in reproductive, neural, kidney and intestinal tissues, respectively. These characteristics separate them from nuclear progestin receptors, and instead imply similarity to G-protein coupled receptors.

REFERENCES

1. Sheng, Y., et al. 2001. Regulation of *Xenopus* oocyte meiosis arrest by G protein betagamma subunits. Curr. Biol. 11: 405-416.
2. Curran-Rauhut, M.A., et al. 2002. The distribution of progestin receptor mRNA in rat brainstem. Brain. Res. Gene. Expr. Patterns. 1: 151-157.
3. Zhu, Y., et al. 2003. Cloning, expression, and characterization of a membrane progestin receptor and evidence it is an intermediary in meiotic maturation of fish oocytes. Proc. Natl. Acad. Sci. USA. 100: 2231-2236.
4. Zhu, Y., et al. 2003. Identification, classification, and partial characterization of genes in humans and other vertebrates homologous to a fish membrane progestin receptor. Proc. Natl. Acad. Sci. USA. 100: 2237-2242.
5. Kudwa, A.E., et al. 2003. Double oestrogen receptor alpha and beta knockout mice reveal differences in neural oestrogen-mediated progestin receptor induction and female sexual behaviour. J. Neuroendocrinol. 15: 978-983.
6. Kudwa, A.E., et al. 2004. Estrogen receptor beta modulates estradiol induction of progestin receptor immunoreactivity in male, but not in female, mouse medial preoptic area. Endocrinology. 145: 4500-4506.
7. Lonstein, J.S., et al. 2004. Immunocytochemical investigation of nuclear progestin receptor expression within dopaminergic neurones of the female rat brain. J. Neuroendocrinol. 16: 534-543.

SOURCE

mPR (xP-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of membrane progesterone receptor of *Xenopus laevis* 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-28022 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

mPR (xP-14) is recommended for detection of mPR of *Xenopus laevis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

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) 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.

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.