SANTA CRUZ BIOTECHNOLOGY, INC.

mPR (xL-20): sc-28023

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 (xL-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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-28023 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.

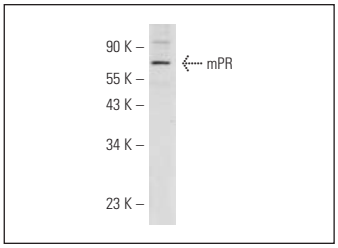
APPLICATIONS

mPR (xL-20) is recommended for detection of mPR of *Xenopus laevis* 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).

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



mPR (xL-20): sc-28023. Western blot analysis of mPR expression A6 whole cell lysate.

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.