

PGRMC1 (C-3): sc-271275



The Power to Question

BACKGROUND

PGRMC1 (progesterone receptor membrane component 1), also known as MPR, is a 195 amino acid single-pass membrane protein that localizes to both the endoplasmic reticulum and to the microsome and contains one cytochrome b5 heme-binding domain. Expressed in a variety of tissues with highest expression in kidney and liver, PGRMC1 functions as a receptor for progesterone, a steroid hormone that is involved in embryonic development and is crucial for proper female maturation. The gene encoding PGRMC1 maps to human chromosome X, which contains nearly 153 million base pairs and houses over 1,000 genes. In conjunction with chromosome Y, chromosome X is responsible for sex determination, as an X and a Y chromosome lead to normal male development, while two copies of an X chromosome lead to normal female development. There are a number of conditions related to an abnormal number and combination of sex chromosomes, some of which include Turner's syndrome, color blindness, hemophilia and Duchenne muscular dystrophy.

CHROMOSOMAL LOCATION

Genetic locus: PGRMC1 (human) mapping to Xq24.

SOURCE

PGRMC1 (C-3) is a mouse monoclonal antibody raised against amino acids 1-46 mapping at the N-terminus of PGRMC1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-271275 X, 200 µg/0.1 ml.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

PGRMC1 (C-3) is recommended for detection of PGRMC1 of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 PGRMC1 siRNA (h): sc-76111, PGRMC1 shRNA Plasmid (h): sc-76111-SH and PGRMC1 shRNA (h) Lentiviral Particles: sc-76111-V.

PGRMC1 (C-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

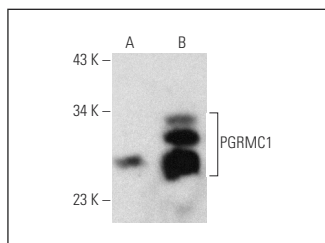
Molecular Weight of PGRMC1: 28 kDa.

Positive Controls: PGRMC1 (h2): 293T Lysate: sc-171544, Hep G2 cell lysate: sc-2227 or SK-BR-3 cell lysate: sc-2218.

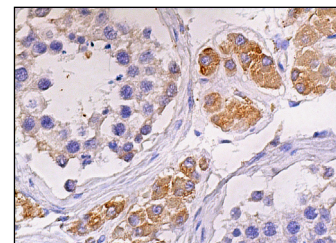
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PGRMC1 (C-3): sc-271275. Western blot analysis of PGRMC1 expression in non-transfected: sc-117752 (A) and human PGRMC1 transfected: sc-171544 (B) 293T whole cell lysates.



PGRMC1 (C-3): sc-271275. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of Leydig cells.

SELECT PRODUCT CITATIONS

- Peluso, J.J., et al. 2012. Evidence for a genomic mechanism of action for progesterone receptor membrane component-1. *Steroids* 77: 1007-1012.
- Moreno-Moya, J.M., et al. 2014. The transcriptomic and proteomic effects of ectopic overexpression of miR-30d in human endometrial epithelial cells. *Mol. Hum. Reprod.* 20: 550-566.
- Lan, R.X., et al. 2014. Immunolocalization of GnRHRI, gonadotropin receptors, PGR, and PGRMC1 during follicular development in the rabbit ovary. *Theriogenology* 81: 1139-1147.
- Palmerini, C.A., et al. 2016. Antagonistic effect of a salivary proline-rich peptide on the cytosolic Ca²⁺ mobilization induced by progesterone in oral squamous cancer cells. *PLoS ONE* 11: e0147925.
- Kim, J.Y., et al. 2019. Epitope mapping of anti-PGRMC1 antibodies reveals the non-conventional membrane topology of PGRMC1 on the cell surface. *Sci. Rep.* 9: 653.
- Choi, S.R., et al. 2020. Decreased expression of progesterone receptor membrane component 1 in fetal membranes with chorioamnionitis among women with preterm birth. *Arch. Gynecol. Obstet.* 301: 949-954.

RESEARCH USE

For research use only, not for use in diagnostic procedures.