

# PGRMC1 (C-4): sc-393015

## 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; Pgrmc1 (mouse) mapping to X A3.3.

## SOURCE

PGRMC1 (C-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 61-92 within an internal region of PGRMC1 of human origin.

## PRODUCT

Each vial contains 200 µg IgM 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-393015 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-393015 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

PGRMC1 (C-4) is recommended for detection of PGRMC1 of mouse, rat and 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).

PGRMC1 (C-4) is also recommended for detection of PGRMC1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PGRMC1 siRNA (h): sc-76111, PGRMC1 siRNA (m): sc-76112, PGRMC1 shRNA Plasmid (h): sc-76111-SH, PGRMC1 shRNA Plasmid (m): sc-76112-SH, PGRMC1 shRNA (h) Lentiviral Particles: sc-76111-V and PGRMC1 shRNA (m) Lentiviral Particles: sc-76112-V.

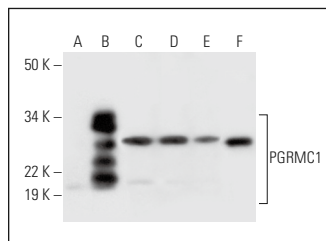
PGRMC1 (C-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of PGRMC1: 28 kDa.

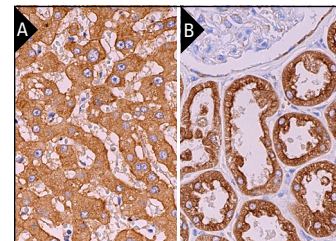
## STORAGE

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

## DATA



PGRMC1 (C-4): sc-393015. Western blot analysis of PGRMC1 expression in non-transfected 293T: sc-117752 (A), human PGRMC1 transfected 293T: sc-117752 (B), RT-4 (C), U-251-MG (D) and A-431 (E) whole cell lysates and human liver tissue extract (F).



PGRMC1 (C-4): sc-393015. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing membrane and cytoplasmic staining of hepatocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining of cells in tubules (B).

## SELECT PRODUCT CITATIONS

- Amelkina, O., et al. 2016. Progesterone, estrogen, and androgen receptors in the corpus luteum of the domestic cat, Iberian lynx (*Lynx pardinus*) and Eurasian lynx (*Lynx lynx*). *Theriogenology* 86: 2107-2118.
- Russo, V., et al. 2017. Sigma 2 receptor expression levels in blood and bladder from healthy and bladder cancer cattle. *Vet. Comp. Oncol.* 15: 1503-1512.
- Juhlen, R., et al. 2018. Triple A patient cells suffering from mitotic defects fail to localize PGRMC1 to mitotic kinetochore fibers. *Cell Div.* 13: 8.
- Xian, Y., et al. 2019. Exenatide mitigates inflammation and hypoxia along with improved angiogenesis in obese fat tissue. *J. Endocrinol.* 242: 79-89.
- Binder, C., et al. 2021. Expression of nuclear progesterone receptor, progesterone receptor membrane components 1 and 2 and prostaglandin-endoperoxide synthase 2 in the endometrium and oviduct of spontaneously ovulating cats. *Theriogenology* 172: 200-206.
- Lee, S.K., et al. 2022. Metastasis enhancer PGRMC1 boosts store-operated Ca<sup>2+</sup> entry by uncoiling Ca<sup>2+</sup> sensor STIM1 for focal adhesion turnover and actomyosin formation. *Cell Rep.* 38: 110281.
- Orzechowska, K., et al. 2022. Chemerin effect on the endometrial proteome of the domestic pig during implantation obtained by LC-MS/MS analysis. *Cells* 11: 1161.
- Mao, C., et al. 2024. *In situ* editing of tumour cell membranes induces aggregation and capture of PD-L1 membrane proteins for enhanced cancer immunotherapy. *Nat. Commun.* 15: 9723.

## RESEARCH USE

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