

# PR (F-2): sc-166170

## BACKGROUND

The effects of progesterone are mediated by two functionally different isoforms of the progesterone receptor, PR-A and PR-B, which are transcribed from distinct, estrogen-inducible promoters within a single copy of the PR gene. The first 164 amino acids of PR-B are absent in PR-A. Progesterone-bound PR-A and PR-B have different transcription activation properties. Specifically, PR-B functions as a transcriptional activator in most cell and promoter contexts, while PR-A is transcriptionally inactive and functions as a strong ligand-dependent transdominant repressor of steroid hormone receptor transcriptional activity. An inhibitory domain (ID), which maps to the amino terminus of the receptor, exists within both PR isoforms. Interestingly, the ID is functionally active only in PR-A and is necessary for steroid hormone transrepression by PR-A, suggesting that PR-A and PR-B may have different conformations in the cell.

## CHROMOSOMAL LOCATION

Genetic locus: PGR (human) mapping to 11q22.1; Pgr (mouse) mapping to 9 A1.

## SOURCE

PR (F-2) is a mouse monoclonal antibody raised against amino acids 375-564 of PR of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> 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-166170 X, 200 µg/0.1 ml.

## APPLICATIONS

PR (F-2) is recommended for detection of PR-A and PR-B 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).

Suitable for use as control antibody for PR siRNA (h2): sc-270221, PR siRNA (m): sc-36309, PR siRNA (r): sc-270024, PR shRNA Plasmid (h2): sc-270221-SH, PR shRNA Plasmid (m): sc-36309-SH, PR shRNA Plasmid (r): sc-270024-SH, PR shRNA (h2) Lentiviral Particles: sc-270221-V, PR shRNA (m) Lentiviral Particles: sc-36309-V and PR shRNA (r) Lentiviral Particles: sc-270024-V.

PR (F-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of PR-A: 81 kDa.

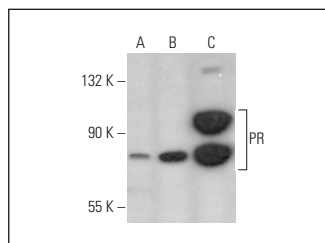
Molecular Weight of PR-B: 116 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, AT3B-1 whole cell lysate: sc-364372 or PC-3 cell lysate: sc-2220.

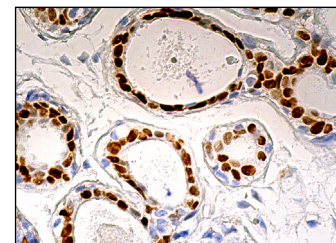
## RECOMMENDED SUPPORT REAGENTS

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



PR (F-2): sc-166170. Western blot analysis of PR expression in PC-3 (A), AT3B-1 (B) and A-431 (C) whole cell lysates.



PR (F-2): sc-166170. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing nuclear staining of glandular cells.

## SELECT PRODUCT CITATIONS

- Shishido, S.N., et al. 2013. The effect of antineoplastic drugs in a male spontaneous mammary tumor model. *PLoS ONE* 8: e64866.
- Le, M.H., et al. 2017. Fluoride alters KLK4 expression in maturation ameloblasts through androgen and progesterone receptor signaling. *Front. Physiol.* 8: 925.

## 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](http://www.scbt.com) for detailed protocols and support products.



See **PR (F-4): sc-166169** for PR antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.