SANTA CRUZ BIOTECHNOLOGY, INC.

PR (C-19): sc-538

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (C-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of PR of human 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-538 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-538 X, 200 µg/0.1 ml.

APPLICATIONS

PR (C-19) is recommended for detection of progesterone receptor (PR-A and PR-B) of mouse, rat and human 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), 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).

PR (C-19) is also recommended for detection of progesterone receptor (PR-A and PR-B) in additional species, including equine, canine, bovine, porcine and avian.

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

PR (C-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

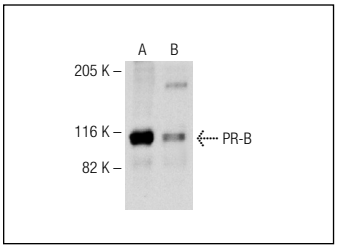
Molecular Weight of PR-A: 81 kDa.

Molecular Weight of PR-B: 116 kDa.

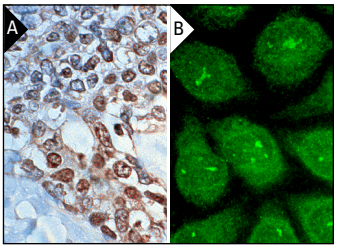
STORAGE

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

DATA



PR (C-19): sc-538. Western blot analysis of progesterone receptor expression in T-47D (**A**) and AT-3 (**B**) whole cell lysates.



PR (C-19): sc-538. Immunoperoxidase staining of formalin-fixed, paraffin-embedded normal human breast tissue showing nuclear staining of ductal epithelial cells and stromal cells (**A**). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization (**B**).

SELECT PRODUCT CITATIONS

1. Liao, D.Z., et al. 1998. Promotion of estrogen-induced mammary gland carcinogenesis by androgen in the male noble rat: probable mediation by steroid receptors. Carcinogenesis 19: 2173-2180.
2. Amazit, L., et al. 2011. Ligand-dependent degradation of SRC-1 is pivotal for progesterone receptor transcriptional activity. Mol. Endocrinol. 25: 394-408.
3. Suresh, P.S., et al. 2011. The effect of progesterone replacement on gene expression in the corpus luteum during induced regression and late luteal phase in the bonnet monkey *(Macaca radiata)*. Reprod. Biol. Endocrinol. 9: 20.
4. Cerliani, J.P, et al. 2011. Interaction between FGFR-2, STAT5, and progesterone receptors in breast cancer. Cancer Res. 71: 3720-3731.
5. Cerliani, J.P., et al. 2011. Associated expressions of FGFR-2 and FGFR-3: from mouse mammary gland physiology to human breast cancer. Breast Cancer Res. Treat. E-published.
6. Riggio, M., et al. 2012. PI3K/AKT pathway regulates phosphorylation of steroid receptors, hormone independence and tumor differentiation in breast cancer. Carcinogenesis 33: 509-518.
7. Yuan, H., et al. 2012. The chemopreventive effect of mifepristone on mammary tumorigenesis is associated with an anti-invasive and anti-inflammatory gene signature. Cancer Prev. Res. 5: 754-764.

RESEARCH USE

For research use only, not for use in diagnostic procedures