

PR (C262): sc-53943

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 (C262) is a mouse monoclonal antibody raised against a syntehtic peptide corresponding to amino acids 919-933 of progesterone receptor protein 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.

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.

APPLICATIONS

PR (C262) is recommended for detection of PR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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.

Molecular Weight of PR-A: 81 kDa.

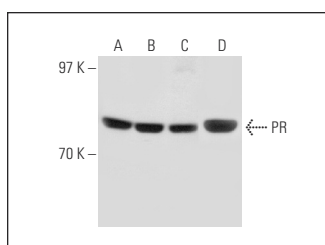
Molecular Weight of PR-B: 116 kDa.

Positive Controls: T-47D cell lysate: sc-2293, MCF7 whole cell lysate: sc-2206 or A-431 whole cell lysate: sc-2201.

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).

DATA



PR (C262): sc-53943. Western blot analysis of PR expression in EGF induced A-431 (A), T-47D (B), MCF7 (C) and MES-SA/Dx5 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

- Samalecos, A. and Gellersen, B. 2008. Systematic expression analysis and antibody screening do not support the existence of naturally occurring progesterone receptor (PR)-C, PR-M, or other truncated PR isoforms. *Endocrinology* 149: 5872-5887.
- Espino, J., et al. 2009. Reduced levels of intracellular calcium releasing in spermatozoa from asthenozoospermic patients. *Reprod. Biol. Endocrinol.* 7: 11.
- Lee, K.L., et al. 2010. Modulation of ATP-induced calcium signaling by progesterone in T47D-Y breast cancer cells. *Mol. Cell. Endocrinol.* 319: 109-115.
- Wang, B., et al. 2014. Negative effects of progesterone receptor isoform-A on human placental activity of the noncanonical NFκB signaling. *J. Clin. Endocrinol. Metab.* 99: E320-E328.
- Berardi, D.E., et al. 2015. Myoepithelial and luminal breast cancer cells exhibit different responses to all-*trans* retinoic acid. *Cell. Oncol.* 38: 289-305.
- Zhang, L., et al. 2019. Progesterone receptor antagonist provides palliative effects for uterine leiomyoma through a Bcl-2/Beclin1-dependent mechanism. *Biosci. Rep.* 39 pii: BSR20190094.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

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.