

## Product datasheet

# Anti-Progesterone Receptor antibody [Alpha PR6] - ChIP Grade ab2765

★★★★★ 2 Abreviews 14 References 5 Images

### Overview

<b>Product name</b>	Anti-Progesterone Receptor antibody [Alpha PR6] - ChIP Grade
<b>Description</b>	Mouse monoclonal [Alpha PR6] to Progesterone Receptor - ChIP Grade
<b>Host species</b>	Mouse
<b>Specificity</b>	Detects the B form of the progesterone receptor (PR). This antibody does not cross-react with estrogen receptor or glucocorticoid receptor.
<b>Tested applications</b>	<b>Suitable for:</b> ICC, IHC-Fr, IP, WB, ChIP, Flow Cyt, ICC/IF, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Sheep, Rabbit, Chicken, Guinea pig, Cow, Human
<b>Immunogen</b>	Other Immunogen Type corresponding to Chicken Progesterone Receptor. Progesterone receptor purified from chick oviduct cytosol.

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.05% Sodium azide Constituent: PBS
<b>Purity</b>	Protein G purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	Alpha PR6
<b>Isotype</b>	IgG2a

### Applications

Our [Abpromise guarantee](#) covers the use of **ab2765** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC		Use at an assay dependent concentration.
IHC-Fr		Use a concentration of 20 µg/ml.
IP		Use at an assay dependent concentration.
WB		Use a concentration of 1 µg/ml. Predicted molecular weight: 99 kDa.
ChIP		Use at an assay dependent concentration.
EMSA		Use at an assay dependent concentration.
Flow Cyt		Use 0.5µg for 10 <sup>6</sup> cells. <a href="#">ab170191</a> - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.
ICC/IF		Use at an assay dependent concentration.
IHC-P	★★★★★	1/50.

## Target

### Function

The steroid hormones and their receptors are involved in the regulation of eukaryotic gene expression and affect cellular proliferation and differentiation in target tissues. Progesterone receptor isoform B (PRB) is involved activation of c-SRC/MAPK signaling on hormone stimulation.

Isoform A: inactive in stimulating c-Src/MAPK signaling on hormone stimulation.

Isoform 4: Increases mitochondrial membrane potential and cellular respiration upon stimulation by progesterone.

### Sequence similarities

Belongs to the nuclear hormone receptor family. NR3 subfamily.

Contains 1 nuclear receptor DNA-binding domain.

### Domain

Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal ligand-binding domain.

### Post-translational modifications

Phosphorylated on multiple serine sites. Several of these sites are hormone-dependent.

Phosphorylation on Ser-294 occurs preferentially on isoform B, is highly hormone-dependent and modulates ubiquitination and sumoylation on Lys-388. Phosphorylation on Ser-102 and Ser-345 also requires induction by hormone. Basal phosphorylation on Ser-81, Ser-162, Ser-190 and Ser-400 is increased in response to progesterone and can be phosphorylated in vitro by the CDK2-A1 complex. Increased levels of phosphorylation on Ser-400 also in the presence of EGF, heregulin, IGF, PMA and FBS. Phosphorylation at this site by CDK2 is ligand-independent, and increases nuclear translocation and transcriptional activity. Phosphorylation at Ser-162 and Ser-294, but not at Ser-190, is impaired during the G(2)/M phase of the cell cycle. Phosphorylation on Ser-345 by ERK1/2 MAPK is required for interaction with SP1.

Sumoylation is hormone-dependent and represses transcriptional activity. Sumoylation on all three sites is enhanced by PIAS3. Desumoylated by SENP1. Sumoylation on Lys-388, the main site of sumoylation, is repressed by ubiquitination on the same site, and modulated by phosphorylation at Ser-294.

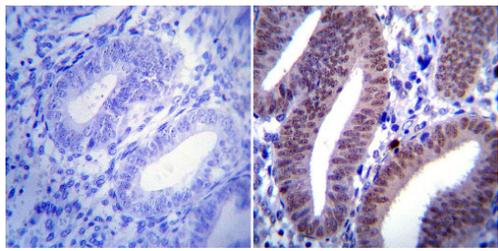
Ubiquitination is hormone-dependent and represses sumoylation on the same site. Promoted by MAPK-mediated phosphorylation on Ser-294.

Palmitoylated by ZDHHC7 and ZDHHC21. Palmitoylation is required for plasma membrane targeting and for rapid intracellular signaling via ERK and AKT kinases and cAMP generation.

## Cellular localization

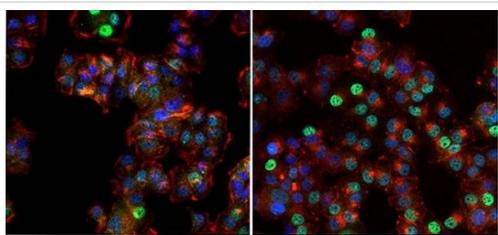
Nucleus. Cytoplasm. Nucleoplasmic shuttling is both hormone- and cell cycle-dependent. On hormone stimulation, retained in the cytoplasm in the G(1) and G(2)/M phases; Mitochondrion outer membrane and Nucleus. Cytoplasm. Mainly nuclear.

## Images



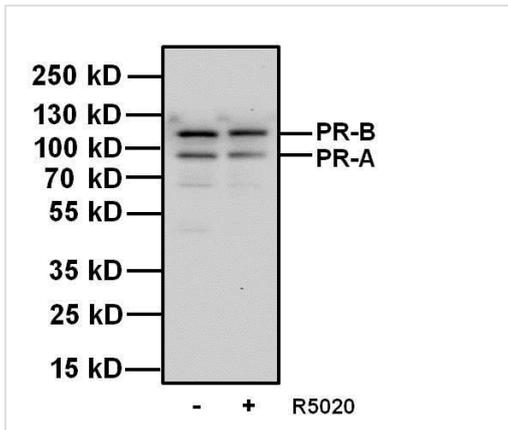
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Progesterone Receptor antibody [Alpha PR6] - ChIP Grade (ab2765)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) was performed on human uterus tissue. Antigen retrieval was performed using 10mM sodium citrate followed by microwave treatment for 8-15 minutes. Endogenous peroxidases were blocked in 3% H2O2-methanol for 15 minutes and tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with ab2765 (1:20) overnight in a humidified chamber. Tissues were washed in PBST and detection was performed using a secondary antibody conjugated to HRP. DAB staining buffer was applied and tissues were counterstained with hematoxylin and prepped for mounting. Images were taken at 40X magnification.



Immunocytochemistry/ Immunofluorescence - Anti-Progesterone Receptor antibody [Alpha PR6] - ChIP Grade (ab2765)

Immunocytochemistry/ Immunofluorescence analysis of T47D cells untreated (left) or stimulated with 100nm promegestone for 1 hour (right), labeling Progesterone Receptor with ab2765 (green). The cells were fixed with formalin for 15 minutes, permeabilized with 0.1% Triton X-100 in TBS for 10 minutes, and blocked with 3% Blocker BSA for 15 minutes at room temperature. Cells were stained with Anti-Progesterone Receptor antibody [Alpha PR6] - ChIP Grade (ab2765) at a dilution of 1/100 for 1 hour at 37C, and then incubated with a Alexa Fluor 488 goat anti-mouse IgG secondary antibody at a dilution of 1/1000 for 30 minutes at room temperature (both panels, green). Nuclei (both panels, blue) were stained with Hoechst 33342 dye.



Western blot - Anti-Progesterone Receptor antibody [Alpha PR6] - ChIP Grade (ab2765)

**All lanes :** Anti-Progesterone Receptor antibody [Alpha PR6] - ChIP Grade (ab2765) at 1 µg/ml

**Lane 1 :** T47D cell lysate untreated (-)

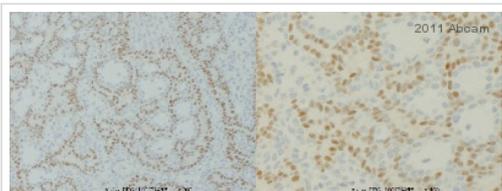
**Lane 2 :** T47D cell lysate stimulated (+) with 100 nm promegestone for 1 hour

Lysates/proteins at 20 µg per lane.

#### Secondary

**All lanes :** Goat anti-Mouse IgG-HRP at 1/2000 dilution

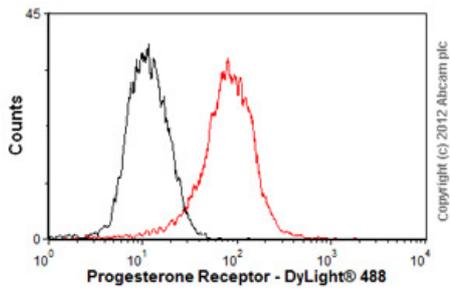
**Predicted band size:** 99 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Progesterone Receptor antibody [Alpha PR6] - ChIP Grade (ab2765)

This image is courtesy of Takako Akamatsu, Kansai Medical University.

ab2765 staining Progesterone Receptor in Rat mammary tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded tissue sections). The sections were fixed in formaldehyde and subjected to heat-mediated antigen retrieval by pressure cooker prior to blocking with 5% BSA for 5 minutes at room temperature. The primary antibody was diluted 1/100 in TBST and incubated with the sample for 16 hours at 4°C. A biotin-conjugated goat anti-mouse polyclonal was used as the secondary antibody.



Flow Cytometry - Anti-Progesterone Receptor antibody [Alpha PR6] - ChIP Grade (ab2765)

Overlay histogram showing T47D cells stained with ab2765 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab2765, 0.5µg/1x10<sup>6</sup> cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2a [C1GG2A] (ab91361, 2µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >5,000 events was performed.

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

### Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

### Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors