

Product datasheet

Anti-Progesterone Receptor antibody [PR501] ab187296

2 Images

Overview

<b>Product name</b>	Anti-Progesterone Receptor antibody [PR501]
<b>Description</b>	Mouse monoclonal [PR501] to Progesterone Receptor
<b>Host species</b>	Mouse
<b>Specificity</b>	ab187296 is specific to Progesterone Receptor and shows minimal cross-reaction with other members of the family.
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Recombinant fragment corresponding to Human Progesterone Receptor. Database link: <a href="#">P06401</a>
<b>Positive control</b>	IHC-P: Human breast and Human invasive ductal carcinoma tissues.
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

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 long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: 0.05% BSA, 99% PBS
<b>Purity</b>	Protein G purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	PR501
<b>Isotype</b>	IgG1

Light chain type

kappa

## Applications

### The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab187296 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
IHC-P		Use a concentration of 1 - 2 µg/ml. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

## 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.

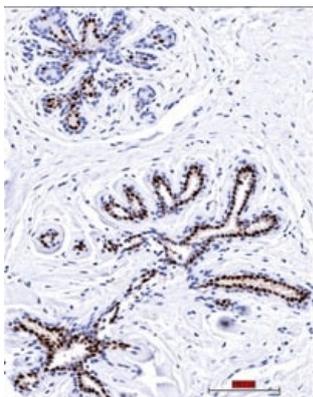
Palmitoylated by ZDHHC7 and ZDHHC21. Palmitoylation is required for plasma membrane targeting and for rapid intracellular signaling via ERK and AKT kinases and cAMP generation.

### 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.

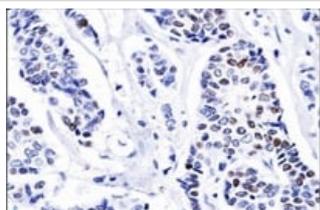
## Images

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Immunohistochemical analysis of paraffin-embedded Human breast tissue labeling Progesterone Receptor with ab187296 at 1  $\mu\text{g/ml}$ .

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Progesterone Receptor antibody [PR501] (ab187296)



Immunohistochemical analysis of paraffin-embedded Human invasive ductal carcinoma tissue labeling Progesterone Receptor with ab187296 at 1  $\mu\text{g/ml}$ .

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Progesterone Receptor antibody [PR501] (ab187296)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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