

# Progesterone Receptor(PR) (Phospho Ser345) Rabbit pAb

CatalogNo: YP1452 **Orthogonal Validated** 

## Key Features

### Host Species

- Rabbit

### Reactivity

- Human, Mouse, Rat

### Applications

- WB, ELISA, IHC

### MW

- 105kD (Observed)

### Isotype

- IgG

## Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

## Recommended Dilution Ratios

**WB 1:500-2000**

**IHC 1:50-300**

**ELISA 1:2000-20000**

## Basic Information

**Clonality** Polyclonal

## Immunogen Information

**Immunogen** Synthesized phospho peptide around human Progesterone Receptor (Ser345)

**Specificity**

This antibody detects endogenous levels of Human Progesterone Receptor (phospho-Ser345). The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites): PRSSP

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## | Target Information

**Gene name** PGR;NR3C3

**Protein Name** Progesterone Receptor (Ser345)

Organism	Gene ID	UniProt ID
Human	<a href="#">5241</a> ;	<a href="#">P06401</a> ;
Mouse		<a href="#">Q00175</a> ;
Rat	<a href="#">25154</a> ;	<a href="#">Q63449</a> ;

**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.; [Isoform A]: Nucleus. Cytoplasm. Mainly nuclear.; [Isoform 4]: Mitochondrion outer membrane .

**Tissue specificity**

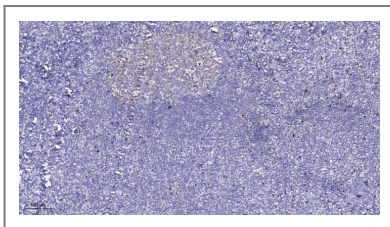
In reproductive tissues the expression of isoform A and isoform B varies as a consequence of developmental and hormonal status. Isoform A and isoform B are expressed in comparable levels in uterine glandular epithelium during the proliferative phase of the menstrual cycle. Expression of isoform B but not of isoform A persists in the glands during mid-secretory phase. In the stroma, isoform A is the predominant form throughout the cycle. Heterogeneous isoform expression between the glands of the endometrium basalis and functionalis is implying region-specific responses to hormonal stimuli.

## Function

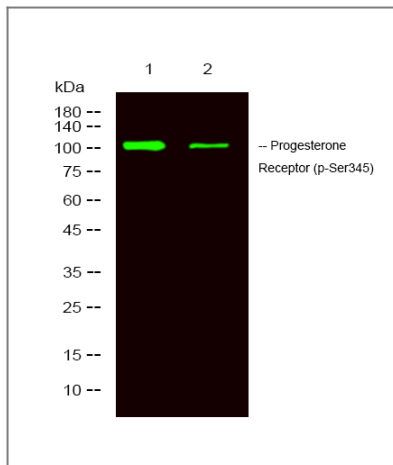
Domain: Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal steroid-binding domain. ,Function: Isoform A is inactive in stimulating c-Src/MAPK signaling on hormone stimulation. ,Function: The steroid hormones and their receptors are involved in the regulation of eukaryotic gene expression and affect cellular proliferation and differentiation in target tissues. Progesterone receptor isoform B (PRB) is involved in activation of c-SRC/MAPK signaling on hormone stimulation. ,online information: Progesterone receptor entry ,PTM: 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. ,PTM: 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. ,PTM: Ubiquitination is hormone-dependent and represses sumoylation on the same site. Promoted by MAPK-mediated phosphorylation on Ser-294. ,similarity: Belongs to the nuclear hormone receptor family. ,similarity: Belongs to the nuclear hormone receptor family. NR3 subfamily. ,similarity: Contains 1 nuclear receptor DNA-binding domain. ,subcellular location: Mainly nuclear. ,subcellular location: 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. ,subunit: Interacts with SMARD1 and UNC45A. Interacts with CUEDC2; the interaction promotes ubiquitination, decreases sumoylation, and represses transcriptional activity. Interacts with PIAS3; the interaction promotes sumoylation of PR in a hormone-dependent manner, inhibits DNA-binding, and alters nuclear export. Interacts with SP1; the interaction requires ligand-induced phosphorylation on Ser-345 by ERK1/2 MAPK. ,

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## Validation Data



Immunohistochemical analysis of paraffin-embedded human tonsil. 1, Antibody was diluted at 1:200 (4°C overnight). 2, Tris-EDTA, pH 9.0 was used for antigen retrieval. 3, Secondary antibody was diluted at 1:200 (room temperature, 45min).



Western blot analysis of 1 HeLa, 2 treated with LPS 100ng/mL 20min, using primary antibody at 1:1000 dilution. Secondary antibody (catalog#:RS23920) was diluted at 1:10000

## Contact information

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