Product datasheet

Anti-Progesterone Receptor antibody ab63605

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Overview

Product name  Anti-Progesterone Receptor antibody
Description  Rabbit polyclonal to Progesterone Receptor
Host species  Rabbit
Specificity  ab63605 detects endogenous levels of total Progesterone Receptor protein.
Tested applications  Suitable for: ICC/IF, IHC-P
Species reactivity  Reacts with: Human
Immunogen  Synthetic non-phosphopeptide derived from Human Progesterone Receptor around the phosphorylation site of serine 294 (G-R-SP^-P-L).

General notes

Reproducibility is key to advancing scientific discovery and accelerating scientists’ next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&As.

Properties

Form  Liquid
Storage instructions  Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer
pH: 7.40
Preservative: 0.02% Sodium azide
Constituents: PBS, 50% Glycerol, 0.87% Sodium chloride
Without Mg2+ and Ca2+

Purity
Immunogen affinity purified

Purification notes
ab63605 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Clonality
Polyclonal

Isotype
IgG

Applications
Our Abpromise guarantee covers the use of ab63605 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>ICC/IF</td>
<td></td>
<td>1/500 - 1/1000.</td>
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<tr>
<td>IHC-P</td>
<td>★★★★★</td>
<td>1/50 - 1/100.</td>
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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 homone- 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**

Paraffin-embedded human liver carcinoma tissue stained for Progesterone Receptor with ab63605 at 1/50 dilution in immunohistochemical analysis.

In the right-hand panel the sample is incubated with the immunizing peptide.

ab63605, at a 1/500 dilution, staining Human Progesterone Receptor in A549 cells, with (+) or without (-) immunising peptide, by Immunofluorescence.
ab63605 staining Progesterone Receptor in Mouse uterus tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde, permeabilized with 0.3% Triton X-100 and blocked with 2% BSA for 1 hour at room temperature; antigen retrieval was by heat mediation in Tris_EDTA. Samples were incubated with primary antibody (1/100) for 10 hours at 4°C. A HRP-conjugated goat anti-rabbit IgG polyclonal (1/100) was used as the secondary antibody.

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

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