

Product datasheet

Progesterone Receptor peptide ab4907

Overview

**Product name** Progesterone Receptor peptide

Description

**Nature** Synthetic

Specifications

Our [Abpromise guarantee](#) covers the use of **ab4907** in the following tested applications.

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

**Applications** Blocking

**Form** Liquid

Additional notes

This peptide may be used for neutralization and control experiments with the monoclonal antibody that reacts with this product and PR, catalog [ab2764](#). Using a solution with equal weights per unit volume of peptide and corresponding antibody will yield a solution with a large molar excess of peptide that is able to competitively bind the antibody.

Preparation and Storage

**Stability and Storage** 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.

General Info

**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.

<b>Domain</b>	Contains 1 nuclear receptor DNA-binding domain.
<b>Post-translational modifications</b>	<p>Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal ligand-binding domain.</p> <p>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.</p>
<b>Cellular localization</b>	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.

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

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