

# Phospho-Progesterone Receptor (Ser294) Antibody



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	90 (PR-A), 118 (PR-B)	Rabbit	#P06401	5241
<b>Product Usage Information</b>	<b>Application</b>		<b>Dilution</b>			
	Western Blotting		1:1000			
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.					
<b>Specificity/Sensitivity</b>	Phospho-Progesterone Receptor (Ser294) Antibody recognizes endogenous levels of progesterone receptor B (PR-B) and progesterone receptor A (PR-A) proteins only when phosphorylated at Ser294 and Ser130, respectively. This antibody does not cross-react with other progesterone receptor family members.					
<b>Species predicted to react based on 100% sequence homology</b>	Mouse, Rat, Pig, Horse					
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser294 of human progesterone receptor B (PR-B) protein. Antibodies are purified by protein A and peptide affinity chromatography.					
<b>Background</b>	<p>Human progesterone receptor (PR) is expressed as two forms: the full length PR-B and the short form PR-A. PR-A lacks the first 164 amino acid residues of PR-B (1,2). Both PR-A and PR-B are ligand activated, but differ in their relative ability to activate target gene transcription (3,4). The activity of PR is regulated by phosphorylation; at least seven serine residues are phosphorylated in its amino-terminal domain. Three sites (Ser81, Ser102, and Ser162) are unique to full length PR-B, while other sites (Ser190, Ser294, Ser345, and Ser400) are shared by both isoforms (5). Phosphorylation of PR-B at Ser190 (equivalent to Ser26 of PR-A) is catalyzed by CDK2 (6). Mutation of Ser190 results in decreased activity of PR (7), suggesting that the phosphorylation at Ser190 may be critical to its biological function.</p> <p>Progesterone receptor Ser294 is as an important hormone-dependent phospho-acceptor site that serves as an extracellular signaling "sensor." Research studies indicate that p44/p42 MAP kinases are responsible for phosphorylation of progesterone receptor at Ser294 following hormone binding. This phosphorylation event promotes nuclear retention of the receptor, enhanced transcriptional activity, and ubiquitin-dependent proteasomal degradation (6,8,9).</p>					
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Evans, R.M. (1988) <i>Science</i> 240, 889-895.</li> <li>2. Kastner, P. et al. (1990) <i>EMBO J.</i> 112, 1603-1614.</li> <li>3. Giangrande, P.H. et al. (2000) <i>Mol. Cell. Biol.</i> 20, 3102-3115.</li> <li>4. Wen, D.X. et al. (1994) <i>Mol. Cell. Biol.</i> 14, 8356-8364.</li> <li>5. Clemm, D.L. et al. (2000) <i>Mol. Endocrinol.</i> 14, 52-65.</li> <li>6. Zhang, Y. et al. (1997) <i>Mol. Endocrinol.</i> 11, 823-832.</li> <li>7. Takimoto, G.S. et al. (1996) <i>J. Biol. Chem.</i> 271, 13308-13316.</li> <li>8. Lange, C.A. et al. (2000) <i>Proc Natl Acad Sci U S A</i> 97, 1032-7.</li> <li>9. Daniel, A.R. et al. (2007) <i>Steroids</i> 72, 188-201.</li> </ol>					

**Species Reactivity** Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer** IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key** **W:** Western Blotting

**Cross-Reactivity Key** **H:** Human

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