

#12783 Store at -20°C

Phospho-Progesterone Receptor (Ser345) Antibody

✓ 100 µl
(10 western blots)



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New 05/13

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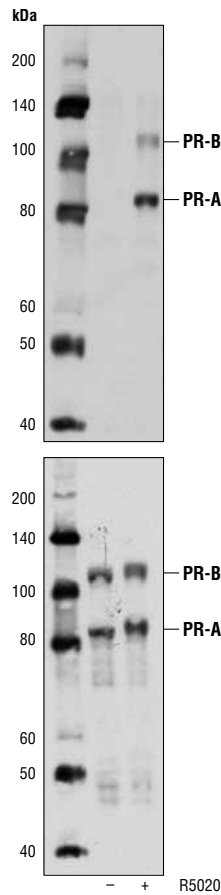
Applications W Endogenous	Species Cross-Reactivity* H	Molecular Wt. 90 (PR-A) kDa 118 (PR-B) kDa	Source Rabbit**
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Background: Human progesterone receptor (PR) is expressed as two forms: the full length PR-B and the short form PR-A. PR-A lacks the first 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.

Research studies have demonstrated ligand-dependent phosphorylation of PR-B at Ser345 is catalyzed by MAPK and plays an important role in mediating the proliferation of breast cancer cells. Investigators have shown that Ser345-phosphorylated PR-B associates with Sp1 to regulate *EGFR* and *p21* transcription (8).

Specificity/Sensitivity: Phospho-Progesterone Receptor (Ser345) Antibody recognizes endogenous levels of progesterone receptor B (PR-B) and progesterone receptor A (PR-A) proteins only when phosphorylated at Ser345 and Ser181, respectively. This antibody does not cross-react with other progesterone receptor family members.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser345 of human progesterone receptor B (PR-B) protein. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from T-47D cells grown for 48 hr in phenol red-free medium supplemented with 5% charcoal-stripped FBS, untreated (-) or promegestone (R5020)-treated (100 nM, 1 hr; +), using Phospho-Progesterone Receptor (Ser345) Antibody (upper) or Progesterone Receptor A/B (D8Q2J) XP[®] Rabbit mAb #8757 (lower).

Entrez-Gene ID #5241
Swiss-Prot Acc. #P06401

Storage: 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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western Blotting 1:1000

For product specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended complementary products.

Background References:

- (1) Evans, R.M. (1988) *Science* 240, 889-895.
- (2) Kastner, P. et al. (1990) *EMBO J.* 112, 1603-1614.
- (3) Giangrande, P.H. et al. (2000) *Mol. Cell. Biol.* 20, 3102-3115.
- (4) Wen, D.X. et al. (1994) *Mol. Cell. Biol.* 14, 8356-8364.
- (5) Clemm, D.L. et al. (2000) *Mol. Endocrinol.* 14, 52-65.
- (6) Zhang, Y. et al. (1997) *Mol. Endocrinol.* 11, 823-832.
- (7) Takimoto, G.S. et al. (1996) *J. Biol. Chem.* 271, 13308-13316.
- (8) Faivre, E.J. et al. (2008) *Mol. Endocrinol.* 22, 823-837.

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

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Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.