

Product Information



Progesterone Receptor (Phospho-Ser²⁹⁴) Monoclonal Antibody

Item No. 10009763

Supplied as:	100 µl affinity-purified antibody in 10 mM HEPES, pH 7.5, containing 150 mM NaCl, 100 µg/ml BSA, and 50% glycerol
Host:	Mouse
Antigen:	Phosphopeptide corresponding to amino acid residues surrounding Phospho-Ser ²⁹⁴ of the human progesterone receptor
Cross Reactivity:	(+) Human progesterone receptor; expected to react with mouse, rat, and non-human primates progesterone receptor based on the fact that these species have 100% homology with the amino acid sequence used as an antigen
Stability:	≥1 year at -20°C
Applications:	The recommended starting dilution for western blot and immunohistochemistry (frozen sections) is 1:1,000.

There is accumulating evidence to suggest that progesterone plays an essential role in the regulation of growth and differentiation of mammary glands and thus may play a key role in breast cancer.¹ The biological response to progesterone is mediated by two distinct forms of the human progesterone receptor (PR-A and PR-B forms). In most cell contexts, the B form functions as a transcriptional activator, whereas the A form functions as a transcriptional inhibitor of steroid hormones.^{2,3} Recently it has been demonstrated that there is differential hormone-dependent regulation of the phosphorylation of the A and B forms of the receptor.⁴ Treatment of T47D breast cancer cells with progestin agonist increases the phosphorylation of Ser¹⁹⁰ and Ser²⁹⁴ with different kinetics. These phosphorylation events may differentially affect the transcriptional activity of the receptor.

References

1. Edwards, D.P. Regulation of signal transduction pathways by estrogen and progesterone. *Annu. Rev. Physiol.* **67**, 335-376 (2005).
2. Attia, GR, Zeitoun, K., Edwards, D., *et al.* Progesterone receptor isoform A but not B is expressed in endometriosis. *J. Clin. Endocrinol. Metab.* **85**, 2897-2902 (2000).
3. Lin, V.C., Woon, C.T., Aw, S.E., *et al.* Distinct molecular pathways mediate progesterone-induced growth inhibition and focal adhesion. *Endocrinology.* **144**, 5650-5657 (2003).
4. Clemm, D.L., Sherman, L., Boonyaratankornkit, V., *et al.* Differential hormone-dependent phosphorylation of progesterone receptor A and B forms revealed by a phosphoserine site-specific monoclonal antibody. *Mol. Endocrinol.* **14**, 52-65 (2000).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10009763

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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