# PRODUCT INFORMATION

## Progesterone Receptor (Phospho-Ser$^{190}$) Monoclonal Antibody (Clone 1154)

*Item No. 10009762*

### Overview and Properties

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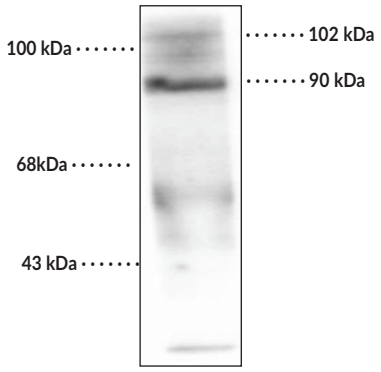
|---|---|
| **Contents:** | This vial contains 100 µl of protein G-affinity purified monoclonal antibody. |
| **Immunogen:** | Phosphopeptide from amino acid residues surrounding the phospho-Ser$^{294}$ of human progesterone receptor |
| **Molecular Weight:** | 90/120 kDa |
| **Species Reactivity:** | (+) Human |
| **Form:** | Liquid |
| **Storage:** | -20°C (as supplied) |
| **Stability:** | ≥1 year |
| **Storage Buffer:** | 10 mM HEPES, pH 7.5, with 150 mM sodium chloride, 100 µg/ml BSA, and 50% glycerol |
| **Clone:** | 1154 |
| **Host:** | Mouse |
| **Isotype:** | IgG1 |
| **Applications:** | Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:1,000 for IHC and WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically. |

### Image




WB of T47D cell lysate prepared from cells that were incubated in the presence of the synthetic progestin agonist R5020 (500 nM) showing specific immunolabeling of the ~90 kDa PR-A isoform and the ~120 kDa PR-B isoform of the progesterone receptor phosphorylated at Ser$^{190}$. The immunolabeling is specifically blocked by the phosphopeptide used as the antigen (not shown).



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## Description

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 $Ser^{190}$ and $Ser^{294}$ 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, G.R., Zeitoun, K., Edwards, D., *et al.* Progesterone receptor isoform A but not B is expressed in endometriosis. *J. Clin. Endocrinol. Metab.* **85(8)**, 2897-2902 (2000).
3. Lin, V.C.L., Woon, C.T., Aw, S.E., *et al.* Distinct molecular pathways mediate progesterone-induced growth inhibition and focal adhesion. *Endocrinology* **144(12)**, 5650-5657 (2003).
4. Clemm, D.L., Sherman, L., Boonyaratanakornkit, 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(1)**, 52-65 (2000).



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