

**Phospho-Estrogen Receptor α (Ser118)
(16J4) Mouse mAb**

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-P	H	Endogenous	66	Mouse IgG2b	#P03372	2099

Product Usage Information**Application**

Western Blotting
Immunohistochemistry (Paraffin)

Dilution

1:1000
1:800

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C . Do not aliquot the antibody.

Specificity/Sensitivity

Phospho-Estrogen Receptor α (Ser118) (16J4) Mouse mAb detects endogenous levels of estrogen receptor α only when phosphorylated at serine 118. It does not cross-react with phosphorylated estrogen receptor β .

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser118 of human ER α .

Background

Estrogen receptor α (ER α), a member of the steroid receptor superfamily, contains highly conserved DNA binding and ligand binding domains (1). Through its estrogen-independent and estrogen-dependent activation domains (AF-1 and AF-2, respectively), ER α regulates transcription by recruiting coactivator proteins and interacting with general transcriptional machinery (2). Phosphorylation at multiple sites provides an important mechanism to regulate ER α activity (3-5). Ser104, 106, 118, and 167 are located in the amino-terminal transcription activation function domain AF-1, and phosphorylation of these serine residues plays an important role in regulating ER α activity. Ser118 may be the substrate of the transcription regulatory kinase CDK7 (5). Ser167 may be phosphorylated by p90RSK and Akt (4,6). According to the research literature, phosphorylation at Ser167 may confer tamoxifen resistance in breast cancer patients (4).

Background References

1. Mangelsdorf, D.J. et al. (1995) *Cell* 83, 835-9.
2. Glass, C.K. and Rosenfeld, M.G. (2000) *Genes Dev* 14, 121-41.
3. Chen, D. et al. (1999) *Mol Cell Biol* 19, 1002-15.
4. Campbell, R.A. et al. (2001) *J Biol Chem* 276, 9817-24.
5. Chen, D. et al. (2000) *Mol Cell* 6, 127-37.
6. Joel, P.B. et al. (1998) *Mol Cell Biol* 18, 1978-84.

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 $\text{\textcircled{R}}$ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human

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