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

**For Research Use Only. Not For Use In Diagnostic Procedures.**

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<th>Species Cross-Reactivity*</th>
<th>Molecular Wt.</th>
<th>Isotype</th>
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<td>W, IHC-P</td>
<td>H</td>
<td>66 kDa</td>
<td>Mouse IgG2b**</td>
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<tr>
<td>Endogenous</td>
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**Background:** Estrogen receptor α (ERα), 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), ERα regulates transcription by recruiting coactivator proteins and interacting with general transcriptional machinery (2). Phosphorylation at multiple sites provides an important mechanism to regulate ERα 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 ERα activity. Ser118 may be the substrate of the transcriptional 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).

**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 ERα.

**Background References:**

**Recommended Antibody Dilutions:**
- Western Blotting: 1:1000
- Immunohistochemistry (Paraffin): 1:800

**Unmasking buffer:** Citrate

**Antibody diluent:** PBST-5% NGS

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

**Species cross-reactivity is determined by western blot.**

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

**Recommended Antibody Dilutions:**
- Western Blotting: 1:1000
- Immunohistochemistry (Paraffin): 1:800
- Unmasking buffer: Citrate
- Antibody diluent: PBST-5% NGS

**For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com**

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**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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