

#2515 Store at -20°C

Phospho-Estrogen Receptor α (Ser118) Antibody

✓ 100 μ l
(10 western blots)



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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H	66 kDa	Rabbit**

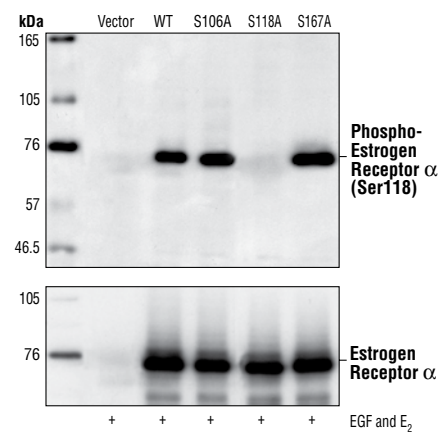
Background: Estrogen receptor α (ER α), a member of the steroid receptor superfamily, contains highly conserved DNA binding (DBD) and ligand binding domains (LBD) (1). Through its estrogen-independent and estrogen-dependent activation domains (AF-1 and AF-2, respectively), ER α regulates transcription by recruiting coactivator proteins and interacting with general transcriptional machinery (2). Phosphorylation provides an important mechanism to regulate ER α activity (3,4). ER α is phosphorylated on multiple sites (5). Serines 104, 106, 118 and 167 are located in the amino-terminal transcription activation function domain AF-1, and phosphorylation of these serines 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). Phosphorylation of Ser167 may confer tamoxifen resistance in breast cancer patients (4).

Specificity/Sensitivity: Phospho-Estrogen Receptor α (Ser118) Antibody detects endogenous levels of estrogen receptor α only when phosphorylated at Ser118. The antibody does not cross-react with the phosphorylated ER isoform β .

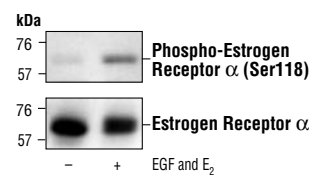
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser118 of human ER α . Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Mangelsdorf, D.J. et al. (1995) *Cell* 83, 835–839.
- (2) Glass, C.K. and Rosenfeld, M.G. (2000) *Genes Dev.* 14, 121–141.
- (3) Chen, D. et al. (1999) *Mol. Cell. Biol.* 19, 1002–1015.
- (4) Campbell, R.A. et al. (2001) *J. Biol. Chem.* 276, 9817–9824.
- (5) Chen, D. et al. (2000) *Mol. Cell* 6, 127–137.
- (6) Joel, P.B. et al. (1998) *Mol. Cell. Biol.* 18, 1978–1984.



Western blot analysis of extracts from COS-1 cells expressing wild-type or mutant ER α (S106A, S118A and S167A), treated with EGF (100 ng/ml) and E₂ (10⁻⁷ M) for 30 minutes, using Phospho-Estrogen Receptor α (Ser118) Antibody (upper) or control ER α antibody (lower).



Western blot analysis of extracts from MCF-7 cells, untreated or treated with EGF (100 ng/ml) and E₂ (100 nM) for 30 minutes, using Phospho-Estrogen Receptor α (Ser118) Antibody (upper) or control ER α antibody (lower).

Entrez-Gene ID #2099
Swiss-Prot Acc. #P03372

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

*Species cross-reactivity is determined by western blot.

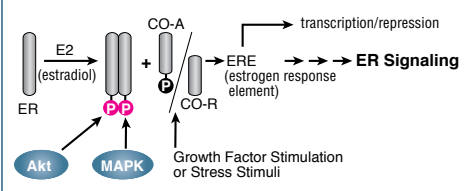
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western Blotting 1:1000

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

Please visit www.cellsignal.com for a complete listing of recommended companion products.



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

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 Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.