

#2517 Store at -20°C

Phospho-Estrogen Receptor α (Ser104/106) Antibody

✓ Small 100 μ l (10 Western mini-blot)



Orders ■ 877-616-CELL (2355) orders@cellsignal.com
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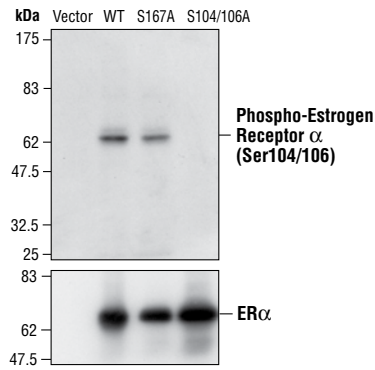
This product is for *in vitro* research use only and is not intended for use in humans or animals. This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IF-IC Endogenous	H, (M)	66 kDa	Rabbit**

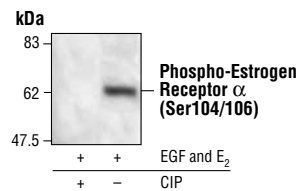
Background: Estrogen receptor α (ER α), a member of the steroid receptor superfamily, contains highly conserved DNA binding (DBD) and ligand binding domains (LBD) (1). Through its estrogen-independent and estrogen-dependent activation domains (AF-1 and AF-2, respectively), ER α regulates transcription 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 (Ser104/106) Antibody detects endogenous levels of ER α only when phosphorylated at Ser104/106. It does not cross-react with the phosphorylated ER isoform β .

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phospho-peptide (KLH-coupled) corresponding to residues surrounding serine 104/106 of human ER α . Antibodies are purified by protein A and peptide affinity chromatography.



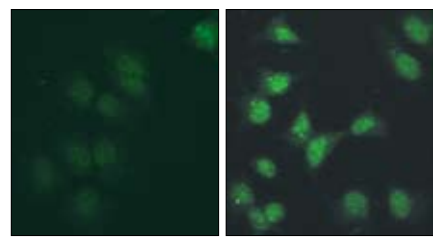
Western blot analysis of extracts from COS-1 cells expressing wild-type or mutant ER α , stimulated with β -estradiol (100 nM) and EGF (100 ng/ml) for 30 minutes, using Phospho-Estrogen Receptor α (Ser104/106) Antibody or control ER α Antibody #2512 (lower). (Cell lysates provided by Dr. Simak Ali, Hammersmith Hospital, London.)



Dephosphorylation of wild-type ER α abolishes Phospho-Estrogen Receptor α (Ser104/106) Antibody's recognition.

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.



Immunofluorescent staining of MCF-7 cells unstimulated (left) or stimulated with β -estradiol (100 nM) and EGF (100 ng/ml) for 30 minutes (right), using Phospho-Estrogen Receptor α (Ser104/106) Antibody.

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—zebra fish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% sequence homology.

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
Immunofluorescence (IF-IC) 1:50

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

- Companion Products:**
 Phospho-Estrogen Receptor α (Ser118) (16J4) Mouse mAb #2511
 Estrogen Receptor α (62A3) Mouse mAb #2512
 Phospho-Estrogen Receptor α (Ser167) Antibody #2514
 Phospho-Estrogen Receptor α (Ser118) Antibody #2515
 Phototope[®]-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
 Anti-rabbit IgG, HRP-linked Antibody #7074
 Prestained Protein Marker, Broad Range (Premixed Format) #7720
 Biotinylated Protein Ladder Detection Pack #7727
 20X LumiGLO[®] Reagent and 20X Peroxide #7003

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

