

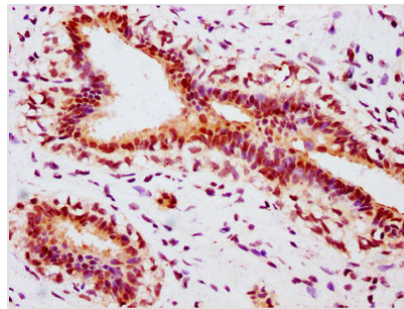


# Phospho-ESR1 (S118) Antibody

<b>Product Code</b>	CSB-RA007830A118phHU
<b>Abbreviation</b>	Estrogen receptor
<b>Storage</b>	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
<b>Uniprot No.</b>	P03372
<b>Immunogen</b>	A synthesized peptide derived from Human Phospho-ESR1 (S118)
<b>Species Reactivity</b>	Human
<b>Tested Applications</b>	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
<b>Relevance</b>	<p>Nuclear hormone receptor. The steroid hormones and their receptors are involved in the regulation of eukaryotic gene expression and affect cellular proliferation and differentiation in target tissues. Ligand-dependent nuclear transactivation involves either direct homodimer binding to a palindromic estrogen response element (ERE) sequence or association with other DNA-binding transcription factors, such as AP-1/c-Jun, c-Fos, ATF-2, Sp1 and Sp3, to mediate ERE-independent signaling. Ligand binding induces a conformational change allowing subsequent or combinatorial association with multiprotein coactivator complexes through LXXLL motifs of their respective components. Mutual transrepression occurs between the estrogen receptor (ER) and NF-kappa-B in a cell-type specific manner. Decreases NF-kappa-B DNA-binding activity and inhibits NF-kappa-B-mediated transcription from the IL6 promoter and displace RELA/p65 and associated coregulators from the promoter. Recruited to the NF-kappa-B response element of the CCL2 and IL8 promoters and can displace CREBBP. Present with NF-kappa-B components RELA/p65 and NFkB1/p50 on ERE sequences. Can also act synergistically with NF-kappa-B to activate transcription involving respective recruitment adjacent response elements; the function involves CREBBP. Can activate the transcriptional activity of TFF1. Also mediates membrane-initiated estrogen signaling involving various kinase cascades. Isoform 3 is involved in activation of NOS3 and endothelial nitric oxide production. Isoforms lacking one or several functional domains are thought to modulate transcriptional activity by competitive ligand or DNA binding and/or heterodimerization with the full-length receptor. Essential for MTA1-mediated transcriptional regulation of BRCA1 and BCAS3. Isoform 3 can bind to ERE and inhibit isoform 1.</p>
<b>Form</b>	Liquid
<b>Conjugate</b>	Non-conjugated
<b>Storage Buffer</b>	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
<b>Purification Method</b>	Affinity-chromatography
<b>Isotype</b>	Rabbit IgG
<b>Clonality</b>	Monoclonal



<b>Alias</b>	Estrogen receptor, ER, ER-alpha, Estradiol receptor, Nuclear receptor subfamily 3 group A member 1, ESR1, ESR, NR3A1
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Research Area</b>	Signal Transduction
<b>Gene Names</b>	ESR1
<b>Accession NO.</b>	4H1

**Image**


IHC image of CSB-RA007830A118phHU diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica Bond<sup>TM</sup> system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.

**Description**

The coding sequence for the phospho-ESR1 (S118) monoclonal antibody (isolated by immunizing animals with the synthetic phosphopeptide derived from human ESR1 around the phosphorylation site of Ser 118) was cloned into the plasmids and then transfected into cell lines for in vitro expression. The product underwent affinity-chromatography-mediated purification to get the phospho-ESR1 (S118) recombinant monoclonal antibody. This p-S118-ESR1 antibody is a rabbit IgG. It is suitable for the detection of human ESR1 phosphorylated at Ser 118 residue in ELISA and IHC applications.

ESR1 is a ligand-dependent transcription factor that affects the expression of target genes. Two transcription activation functions, AF-1 and AF-2, act in a promoter- and cell-specific manner to activate gene expression. While estrogen (E2) binding regulates the activity of AF-2, phosphorylation at several sites regulates the activity of AF-1. S118, one of these phosphorylation sites, is of special relevance because its mutation inhibits ESR1 function considerably. S118 has been demonstrated to be phosphorylated by the ERK1/2 mitogen-activated protein kinases (MAPK) and the cyclin-dependent protein kinase Cdk7 in previous research.