

# ER alpha Rabbit mAb

Catalog # AP75412

## Product Information

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<b>Application</b>	WB, IHC-P, FC
<b>Primary Accession</b>	<a href="#">P03372</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Purification</b>	Affinity Purified
<b>Calculated MW</b>	66216

## Additional Information

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<b>Gene ID</b>	2099
<b>Other Names</b>	ESR1
<b>Dilution</b>	WB~~1:500-1:1000 IHC-P~~N/A FC~~1:200-1:1000
<b>Format</b>	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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<b>Name</b>	ESR1
<b>Synonyms</b>	ESR, NR3A1
<b>Function</b>	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. Essential for MTA1-mediated transcriptional regulation of BRCA1 and BCAS3 (PubMed:[17922032](#)). Maintains neuronal survival in response to ischemic reperfusion injury when in the presence of circulating estradiol (17-beta-estradiol/E2) (By similarity).

### Cellular Location

[Isoform 1]: Nucleus {ECO:0000255 | PROSITE- ProRule:PRU00407, ECO:0000269 | PubMed:12682286, ECO:0000269 | PubMed:20074560}. Cytoplasm. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Note=A minor fraction is associated with the inner membrane Nucleus. Golgi apparatus. Cell membrane. Note=Colocalizes with ZDHHC7 and ZDHHC21 in the Golgi apparatus where most probably palmitoylation occurs. Associated with the plasma membrane when palmitoylated

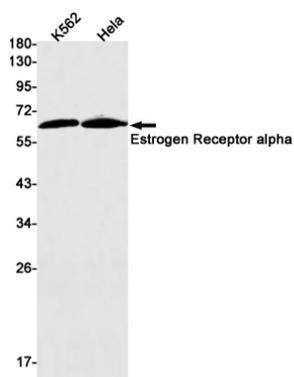
### Tissue Location

Widely expressed (PubMed:10970861). Not expressed in the pituitary gland (PubMed:10970861)

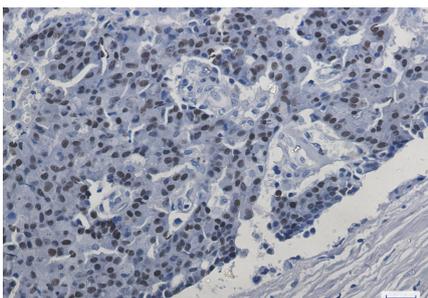
## Background

ER (estrogen receptor 1) a member of the steroid receptor superfamily, contains highly conserved DNA binding (DBD) and ligand binding domains (LBD). Through its estrogen-independent and estrogen-dependent activation domains (AF-1 and AF-2, respectively), ER regulates transcription by recruiting coactivator proteins and interacting with general transcriptional machinery. Phosphorylation provides an important mechanism to regulate ER activity. ER is phosphorylated on multiple sites.

## Images



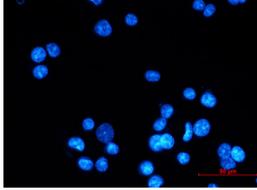
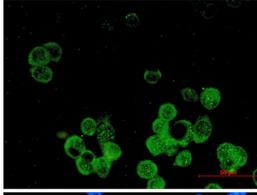
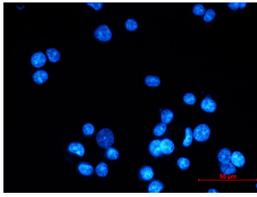
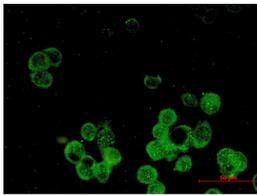
Western blot analysis of Estrogen Receptor alpha in K562, HeLa lysates using Estrogen Receptor alpha antibody.



Immunohistochemistry analysis of paraffin-embedded Human breast cancer using Estrogen Receptor alpha antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.

Immunocytochemistry analysis of Estrogen Receptor

alpha (green) in MCF-7 using Estrogen Receptor alpha antibody, and DAPI(blue)



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