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# ER Alpha / Estrogen Receptor Antibody (C-Terminus)

**Rabbit Polyclonal Antibody**

**Catalog # ALS12377**

## Specification

### ER Alpha / Estrogen Receptor Antibody (C-Terminus) - Product Information

| | |
|---|---|
| Application | **IHC** |
| Primary Accession | P03372 |
| Reactivity | **Human** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Calculated MW | **66kDa KDa** |

### ER Alpha / Estrogen Receptor Antibody (C-Terminus) - Additional Information

**Gene ID** 2099

**Other Names**
Estrogen receptor, ER, ER-alpha, Estradiol receptor, Nuclear receptor subfamily 3 group A member 1, ESR1, ESR, NR3A1

**Reconstitution & Storage**
Store at -20°C. Aliquot to avoid freeze/thaw cycles.

**Precautions**
ER Alpha / Estrogen Receptor Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

### ER Alpha / Estrogen Receptor Antibody (C-Terminus) - Protein Information

**Name** ESR1

**Synonyms** ESR, NR3A1

**Function**
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:<a href="http://www.uniprot.org/citations/17922032" target="_blank">17922032</a>).

**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)

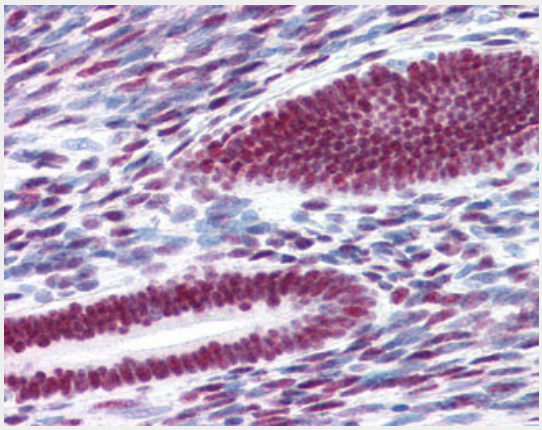
**Volume**
50 µl

## ER Alpha / Estrogen Receptor Antibody (C-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## ER Alpha / Estrogen Receptor Antibody (C-Terminus) - Images



Anti-Estrogen Receptor antibody IHC of human uterus.

## ER Alpha / Estrogen Receptor Antibody (C-Terminus) - Background

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.

**ER Alpha / Estrogen Receptor Antibody (C-Terminus) - References**

Green S.,et al.Nature 320:134-139(1986).
Greene G.L.,et al.Science 231:1150-1154(1986).
Pink J.J.,et al.Nucleic Acids Res. 24:962-969(1996).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).
Wang Z.,et al.Biochem. Biophys. Res. Commun. 336:1023-1027(2005).