

**Estrogen Receptor, alpha (Marker of Estrogen Dependence) Antibody - Purified Ab conjugated to PE****Mouse Monoclonal Antibody [Clone ER506 ]  
Catalog # AH10448****Specification**

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**Estrogen Receptor, alpha (Marker of Estrogen Dependence) Antibody - Purified Ab conjugated to PE - Product Information**

Application	IF, FC
Primary Accession	<a href="#">P03372</a>
Other Accession	<a href="#">2099</a> , <a href="#">208124</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Calculated MW	~67kDa KDa

**Estrogen Receptor, alpha (Marker of Estrogen Dependence) Antibody - Purified Ab conjugated to PE - 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

**Application Note**

IF~~1:50~200  
FC~~1:10~50

**Format**

Antibody purified from Bioreactor Concentrate by Protein A/G and conjugated to various reporter molecules. Prepared in 10mM PBS with 0.05% BSA and 0.05% azide. Contact us if you require this Ab in a different format.

**Storage**

Store at 2 to 8°C. Antibody is stable for 24 months.

**Precautions**

Estrogen Receptor, alpha (Marker of Estrogen Dependence) Antibody - Purified Ab conjugated to PE is for research use only and not for use in diagnostic or therapeutic procedures.

**Estrogen Receptor, alpha (Marker of Estrogen Dependence) Antibody - Purified Ab conjugated to PE - 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>). 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

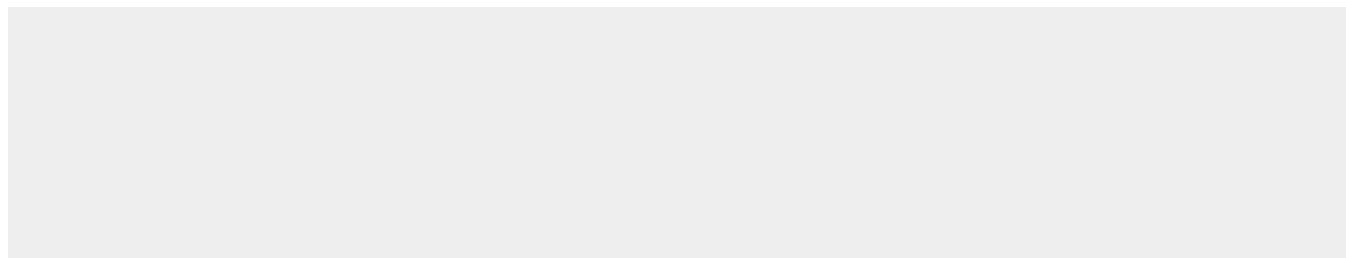
**Tissue Location**

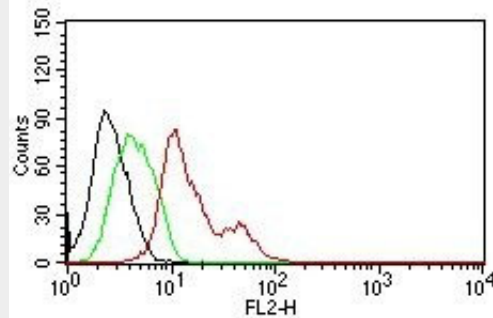
Widely expressed (PubMed:10970861). Not expressed in the pituitary gland (PubMed:10970861)

**Estrogen Receptor, alpha (Marker of Estrogen Dependence) Antibody - Purified Ab conjugated to PE - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Estrogen Receptor, alpha (Marker of Estrogen Dependence) Antibody - Purified Ab conjugated to PE - Images**



Flow Cytometry for human ER-alpha on MCF-7 Cells. Black: Cells alone; Green: Isotype Control; Red: PE-labeled ER-alpha Monoclonal Antibody (ER506).

### **Estrogen Receptor, alpha (Marker of Estrogen Dependence) Antibody - Purified Ab conjugated to PE - Background**

This MAb is specific to ER alpha and shows minimal cross-reaction with other members of the family. ER is an important regulator of growth and differentiation in the mammary gland. Presence of ER in breast tumors indicates an increased likelihood of response to anti-estrogen (e.g. tamoxifen) therapy. It strongly stains nuclei of epithelial cells in breast carcinomas.

### **Estrogen Receptor, alpha (Marker of Estrogen Dependence) Antibody - Purified Ab conjugated to PE - References**

Zafrani B, et. al. Histopathology 2000; 37(6), 536-545. | Harvey JM, et. al. Journal of Clinical Oncology 1999; 17(5), 1474-1481