



# Estrogen Receptor $\alpha$ (ABT4R) Rabbit mAb (Ready to Use)

<b>Catalog No</b>	YP-rAb-18225
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human
<b>Applications</b>	IHC
<b>Gene Name</b>	Estrogen receptor (ER) (ER-alpha) (Estradiol receptor) (Nuclear receptor subfamily 3 group A member 1)
<b>Protein Name</b>	Estrogen receptor (ER) (ER-alpha) (Estradiol receptor) (Nuclear receptor subfamily 3 group A member 1)
<b>Purification Process</b>	Protein A
<b>Specificity</b>	This antibody detects endogenous levels of ESR1
<b>Formulation</b>	The prediluted ready-to-use antibody is diluted in phosphate buffer saline containing stabilizing protein and 0.05% Proclin 300
<b>Source</b>	Monoclonal, Rabbit,IgG
<b>Dilution</b>	Ready to use for IHC Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
<b>Concentration</b>	0.5 mg/ml
<b>Purity</b>	$\geq 90\%$
<b>Storage Stability</b>	2° C to 8° C/1 year,Ship by ice bag
<b>Synonyms</b>	ESR1 ESR NR3A1
<b>Observed Band</b>	
<b>Calculated Molecular Weight</b>	
<b>Cell Pathway</b>	[Isoform 1]: Nucleus . Cytoplasm . Cell membrane ; Peripheral membrane protein ; Cytoplasmic side . A minor fraction is associated with the inner membrane.; [Isoform 3]: Nucleus. Cytoplasm. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cell membrane; Single-pass type I membrane protein. Associated with the inner membrane via palmitoylation (Probable). At least a subset exists as a transmembrane protein with a N-terminal extracellular domain. ; Nucleus. Golgi apparatus. Cell membrane. Colocalizes with ZDHHC7 and ZDHHC21 in the Golgi apparatus where most probably palmitoylation occurs. Associated with the plasma membrane when palmitoylated.
<b>Tissue Specificity</b>	Widely expressed (PubMed:10970861). Not expressed in the pituitary gland (PubMed:10970861). ; [Isoform 3]: Widely expressed, however not expressed in the pituitary gland.




**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 . ; [Isoform 3]: 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 . Binds to ERE and inhibits isoform 1 .

**Background**

estrogen receptor 1(ESR1) Homo sapiens This gene encodes an estrogen receptor, a ligand-activated transcription factor composed of several domains important for hormone binding, DNA binding, and activation of transcription. The protein localizes to the nucleus where it may form a homodimer or a heterodimer with estrogen receptor 2. Estrogen and its receptors are essential for sexual development and reproductive function, but also play a role in other tissues such as bone. Estrogen receptors are also involved in pathological processes including breast cancer, endometrial cancer, and osteoporosis. Alternative promoter usage and alternative splicing result in dozens of transcript variants, but the full-length nature of many of these variants has not been determined. [provided by RefSeq, Mar 2014],

**matters needing attention**

Avoid repeated freezing and thawing!

**Usage suggestions**

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

