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Estrogen Receptor alpha Rabbit pAb

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Catalog # AP52087

Product Information

Application	WB
Primary Accession	P03372
Reactivity	Rat, Human
Predicted	Dog, Mouse, Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	66216
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from the middle of human Estrogen Receptor alpha
Epitope Specificity	331-360/595
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Isoform 1: Nucleus. Cytoplasm. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Note=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. Note=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. Note=Colocalizes with ZDHHC7 and ZDHHC21 in the Golgi apparatus where most probably palmitoylation occurs. Associated with the plasma membrane when palmitoylated.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Estrogen and progesterone receptor are members of a family of transcription factors that are regulated by the binding of their cognate ligands. The interaction of hormone-bound estrogen receptors with estrogen responsive elements(EREs) alters transcription of ERE-containing genes. The carboxy terminal region of the estrgen receptor contains the ligand binding domain, the amino terminus serves as the transactivation domain, and the DNA binding domain is centrally located. Two forms of estrogen receptor have been identified, ER Alpha and ER Beta. ER Alpha and ER Beta have been shown to be differentially activated by various ligands. The biological response to progesterone is mediated by two distinct forms of the human progesterone receptor (hPR-A and hPR-B), which arise from alternative splicing. In most cells, hPR-B functions as a transcriptional activator of progesterone-responsive gene, whereas hPR-A function as a transcriptional inhibitor of all steroid hormone receptors.

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
Dilution	WB=1:500-2000,ICC/IF=1:50-200
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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: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)

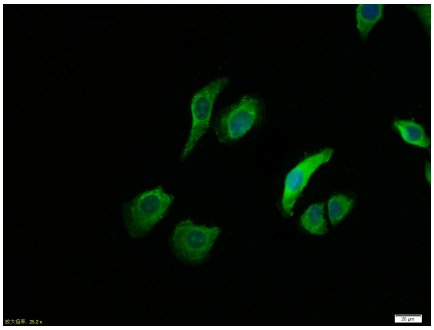
Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

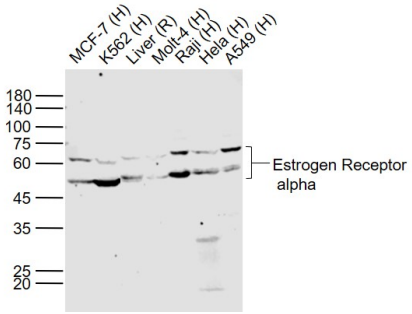
References

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Koike S.,et al.Nucleic Acids Res. 15:2499-2513(1987).
Maggi A.M.A.,et al.Submitted (JUN-1991) to the EMBL/GenBank/DDBJ databases.
Fan M.,et al.Mol. Endocrinol. 16:315-330(2002).
Eriksson M.,et al.Biochem. Biophys. Res. Commun. 361:127-132(2007).

Images



Tissue/cell:MCF7 cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (Estrogen Receptor alpha) polyclonal Antibody, Unconjugated (AP52087) 1:100, 90 minutes at 37°C; followed by a FITC conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.



Sample:
Lane 1: MCF-7 (Human) Cell Lysate at 30 ug
Lane 2: K562 (Human) Cell Lysate at 30 ug
Lane 3: Liver (Rat) Lysate at 40 ug
Lane 4: Molt-4 (Human) Cell Lysate at 30 ug
Lane 5: Raji (Human) Cell Lysate at 30 ug
Lane 6: Hela (Human) Cell Lysate at 30 ug
Lane 7: A549 (Human) Cell Lysate at 30 ug
Primary: Anti- Estrogen Receptor alpha (AP52087) at 1/300 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 67 kD
Observed band size: 62/50 kD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.