

## ARG65802 anti-Estrogen Receptor alpha antibody

Package: 100 µl  
Store at: -20°C

### Summary

Product Description	Rabbit Polyclonal antibody recognizes Estrogen Receptor alpha
Tested Reactivity	Hu, Ms
Predict Reactivity	Bov, Rat, Chk, Pig
Tested Application	ICC/IF, IHC-P, WB
Specificity	Recognizes endogenous levels of Estrogen Receptor alpha protein.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Estrogen Receptor alpha
Species	Human
Immunogen	KLH-conjugated synthetic peptide around the C-terminus of Human Estrogen Receptor alpha.
Conjugation	Un-conjugated
Alternate Names	ESTRR; NR3A1; ESR; Estradiol receptor; Era; Estrogen receptor; ESRA; ER-alpha; Nuclear receptor subfamily 3 group A member 1; ER

### Application Instructions

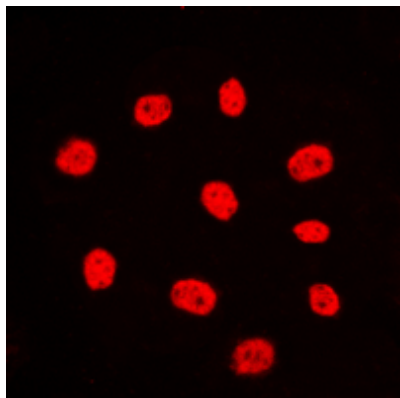
Application table	Application	Dilution
	ICC/IF	1:100 - 1:500
	IHC-P	1:100 - 1:200
	WB	1:500 - 1:1000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

### Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	Liquid (pH 7.3), 0.42% Potassium phosphate, 0.87% NaCl, 0.01% Sodium azide and 30% Glycerol.
Preservative	0.01% Sodium azide
Stabilizer	30% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

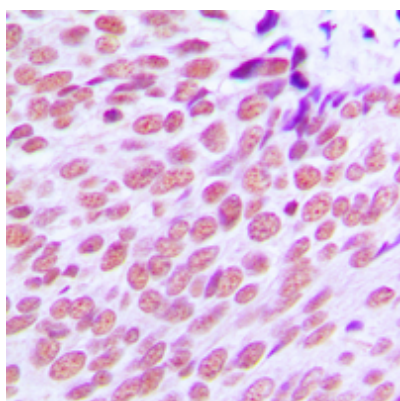
## Bioinformation

Database links	<a href="#">GeneID: 13982 Mouse</a> <a href="#">GeneID: 2099 Human</a> <a href="#">Swiss-port # P03372 Human</a> <a href="#">Swiss-port # P19785 Mouse</a>
Gene Symbol	ESR1
Gene Full Name	estrogen receptor 1
Background	<p>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]</p>
Function	<p>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. [UniProt]</p>
Calculated Mw	66 kDa
PTM	<p>Phosphorylated by cyclin A/CDK2 and CK1. Phosphorylation probably enhances transcriptional activity. Self-association induces phosphorylation. Dephosphorylation at Ser-118 by PPP5C inhibits its transactivation activity. Phosphorylated by LMTK3 in vitro.</p> <p>Glycosylated; contains N-acetylglucosamine, probably O-linked.</p> <p>Ubiquitinated; regulated by LATS1 via DCAF1 it leads to ESR1 proteasomal degradation (PubMed:21602804, PubMed:28068668). Deubiquitinated by OTUB1 (PubMed:19383985).</p> <p>Dimethylated by PRMT1 at Arg-260. The methylation may favor cytoplasmic localization.</p> <p>Palmitoylated (isoform 3). Not biotinylated (isoform 3).</p> <p>Palmitoylated by ZDHHC7 and ZDHHC21. Palmitoylation is required for plasma membrane targeting and for rapid intracellular signaling via ERK and AKT kinases and cAMP generation, but not for signaling mediated by the nuclear hormone receptor.</p>



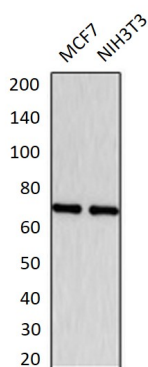
ARG65802 anti-Estrogen Receptor alpha antibody ICC/IF image

Immunofluorescence: Formalin-fixed MCF7 cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 min and blocked with 3% BSA-PBS for 30 min at RT. Cells were stained with ARG65802 anti-Estrogen Receptor alpha antibody in 3% BSA-PBS and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at RT in the dark. DAPI was used to stain the cell nuclei (blue).



ARG65802 anti-Estrogen Receptor alpha antibody IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human breast cancer tissue section. Antigen retrieval: Heat mediated with Sodium citrate buffer (pH 6.0). The section was then stained with ARG65802 anti-Estrogen Receptor alpha antibody at RT and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



ARG65802 anti-Estrogen Receptor alpha antibody WB image

Western blot: MCF7 and NIH3T3 whole cell lysates stained with ARG65802 anti-Estrogen Receptor alpha antibody.