

## ER $\alpha$ Monoclonal Antibody

<b>Catalog No :</b>	YM0252
<b>Reactivity :</b>	Human
<b>Applications :</b>	WB;IHC;IF;ELISA
<b>Target :</b>	Estrogen Receptor- $\alpha$
<b>Fields :</b>	>>Endocrine resistance;>>Estrogen signaling pathway;>>Prolactin signaling pathway;>>Thyroid hormone signaling pathway;>>Endocrine and other factor-regulated calcium reabsorption;>>Pathways in cancer;>>Proteoglycans in cancer;>>Chemical carcinogenesis - receptor activation;>>Breast cancer
<b>Gene Name :</b>	ESR1
<b>Protein Name :</b>	Estrogen receptor
<b>Human Gene Id :</b>	2099
<b>Human Swiss Prot No :</b>	P03372
<b>Mouse Swiss Prot No :</b>	P19785
<b>Immunogen :</b>	Purified recombinant fragment of human ER $\alpha$ expressed in E. Coli.
<b>Specificity :</b>	ER $\alpha$ Monoclonal Antibody detects endogenous levels of ER $\alpha$ protein.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Monoclonal, Mouse
<b>Dilution :</b>	WB 1:500 - 1:2000. IHC 1:200 - 1:1000. IF 1:200 - 1:1000. ELISA: 1:10000. Not yet tested in other applications.
<b>Purification :</b>	Affinity purification
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)

**Molecularweight :** 66kD

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**P References :**

1. Calcif Tissue Int. 2010 Jul;87(1):25-35.
2. Arch Gynecol Obstet. 2010 Jun 18.
3. Biochemistry. 2010 Jul 27;49(29):5978-88.

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**Background :** 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],

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**Function :** domain:Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal steroid-binding domain.,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.,online information:Estrogen receptor entry,polymorphism:Genetic variations in ESR1 are correlated with bone mineral density (BMD). Low BMD is a risk factor for osteoporotic fracture. Osteoporosis is characterized by reduced bone mineral density, disruption of bone microarchitecture, and the alteration of the amount and variety of non-collagenous proteins in bone. Osteoporotic bones are more at risk of fracture.,PTM:Glycosylated; contains N-acetylglucosamine, probably O-linked.,PTM:Phosphorylated by cyclin A/CDK2. Phosphorylation probably enhances transcri

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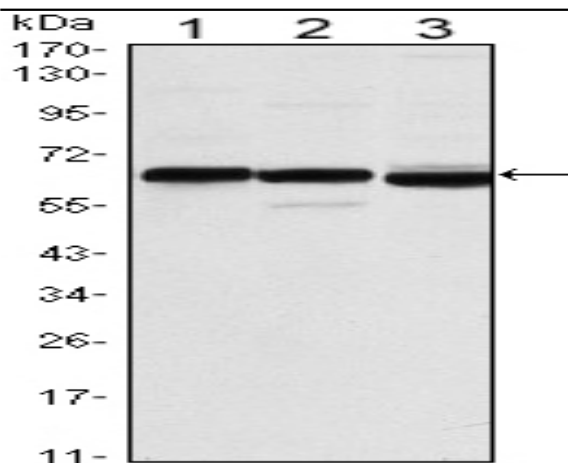
**Subcellular Location :** [Isoform 1]: Nucleus . Cytoplasm . Cell membrane ; Peripheral membrane protein ; Cytoplasmic side . A minor fraction is associated with the inner membrane.; [Isoform 3]: Nucleus. Cytoplasm. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cell membrane; Single-pass 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.

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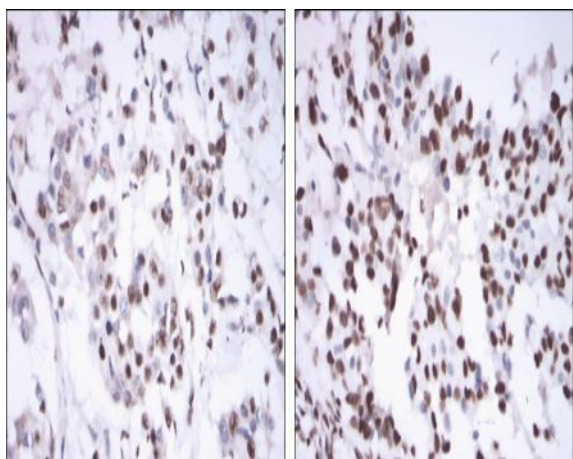
**Expression :** Widely expressed (PubMed:10970861). Not expressed in the pituitary gland (PubMed:10970861). ; [Isoform 3]: Widely expressed, however not expressed in the pituitary gland.

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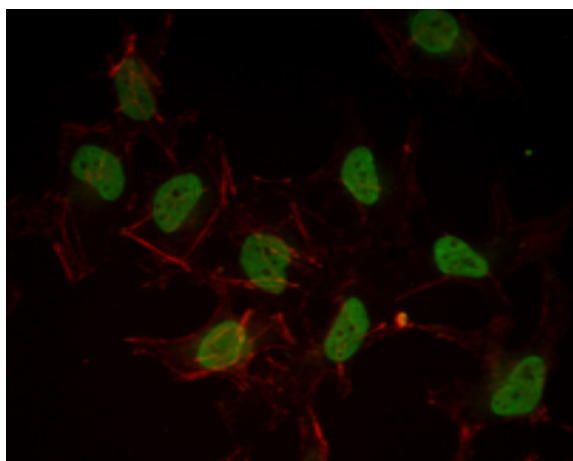
**Products Images**



Western Blot analysis using ER $\alpha$  Monoclonal Antibody against MCF-7 (1), T47D (2) and SKBR3 (3) cell lysate.



Immunohistochemistry analysis of paraffin-embedded mammary cancer tissues with DAB staining using ER $\alpha$  Monoclonal Antibody.



Immunofluorescence analysis of HeLa cells using ER $\alpha$  Monoclonal Antibody (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.