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Mouse Monoclonal Antibody to ESR1

Purified Mouse Monoclonal Antibody
Catalog # AO2483a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P03372
Reactivity	Human, Rat
Host	Mouse
Clonality	Monoclonal
Clone Names	6A6E8
Isotype	Mouse IgG1
Calculated MW	66216
Description	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.;
Immunogen	Purified recombinant fragment of human ESR1 (AA: 2-185) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide
Application Note	ELISA: 1/10000; WB: 1/500 - 1/2000; IHC: 1/200 - 1/1000; ICC: 1/200 - 1/1000; FCM: 1/200 - 1/400

Additional Information

Gene ID	2099
Other Names	ER; ESR; Era; ESRA; ESTRR; NR3A1
Dilution	WB~~1:1000 IHC~~1:100~500 FC~~1:10~50 ICC~~N/A E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Monoclonal Antibody to ESR1 is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

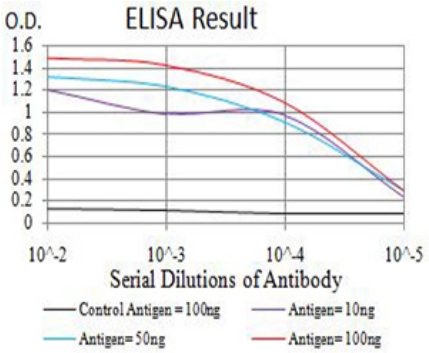
Name	ESR1
Synonyms	ESR, NR3A1
Function	Nuclear hormone receptor. The steroid hormones and their receptors are involved in the regulation of eukaryotic gene expression and affect cellular proliferation and differentiation in target tissues. Ligand-dependent nuclear transactivation involves either direct 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)

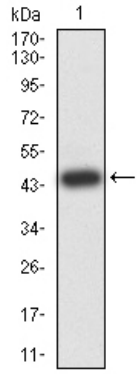
References

1.Tumour Biol. 2015 Aug;36(8):6349-59. ; 2.Breast Cancer Res. 2014 Dec 12;16(6):494.;

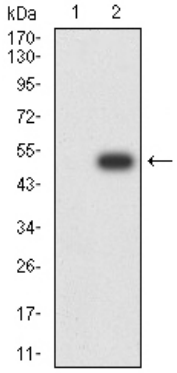
Images

Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

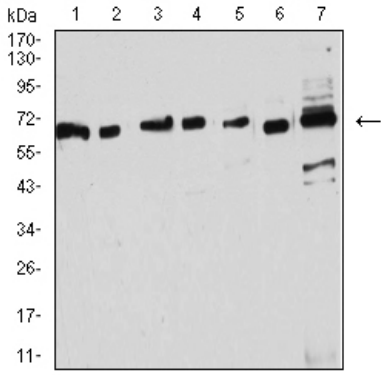




Western blot analysis using ESR1 mAb against human ESR1 (AA: 2-185) recombinant protein. (Expected MW is 45.8 kDa)

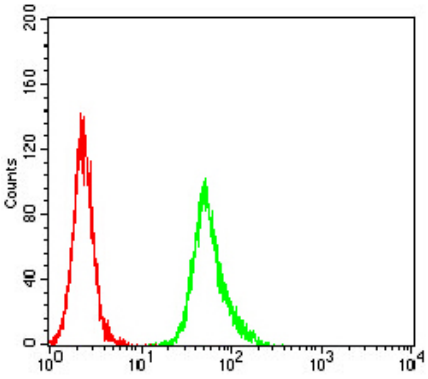


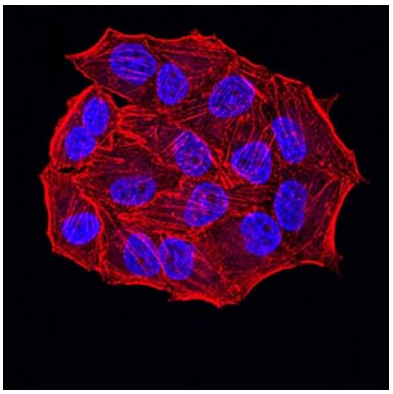
Western blot analysis using ESR1 mAb against HEK293 (1) and ESR1 (AA: 2-185)-hIgGFc transfected HEK293 (2) cell lysate.



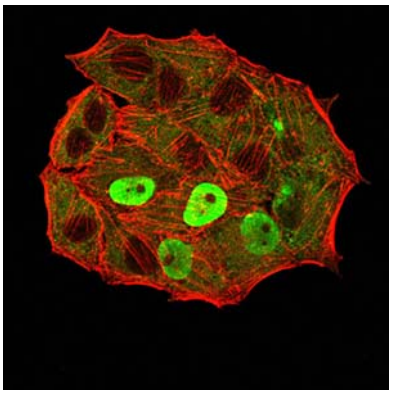
Western blot analysis using ESR1 mouse mAb against MOLT4 (1), Raji (2), MCF-7 (3), T47D (4), SK-Br-3 (5), Hela (6), and C6 (7) cell lysate.

Flow cytometric analysis of Hela cells using ESR1 mouse mAb (green) and negative control (red).





Immunofluorescence analysis of Hela cells using ESR1 mouse mAb. Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin.



Immunofluorescence analysis of Hela cells using ESR1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin. Secondary antibody from Fisher

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