Anti-Estrogen Receptor alpha Antibody [JE26-14]

ET7110-60

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 66 kDa
Clone number:	JE26-14

Description: 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.

Immunogen:	Synthetic peptide within Human Estrogen Receptor alpha aa 1-50 / 595.
Positive control:	MCF7 cell lysate, T-47D cell lysate, human endometrium tissue, mouse endometrium tissue.
Subcellular location:	Cell membrane, nucleus, cytoplasm.
Database links:	SwissProt: P03372 Human | P19785 Mouse
Recommended Dilutions:	
WB	1:2,000-1:5,000
IHC-P	1:200
Storage Buffer:	1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.
Purity:	Protein A affinity purified.

Images

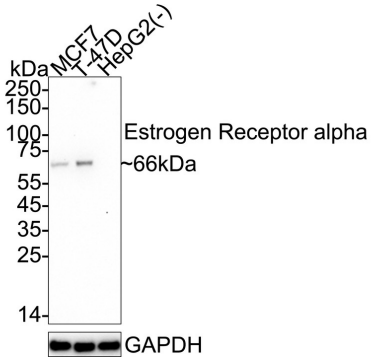

Fig1: Western blot analysis of Estrogen Receptor alpha on different lysates with Rabbit anti-Estrogen Receptor alpha antibody (ET7110-60) at 1/5,000 dilution.

Lane 1: MCF7 cell lysate (20 µg/Lane)
Lane 2: T-47D cell lysate (20 µg/Lane)
Lane 3: HepG2 cell lysate (negative) (20 µg/Lane)

Predicted band size: 66 kDa
Observed band size: 66 kDa

Exposure time: 3 minutes; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET7110-60) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

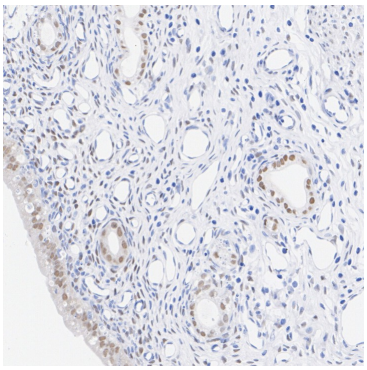

Fig2: Immunohistochemical analysis of paraffin-embedded human endometrium tissue with Rabbit anti-Estrogen Receptor alpha antibody (ET7110-60) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET7110-60) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

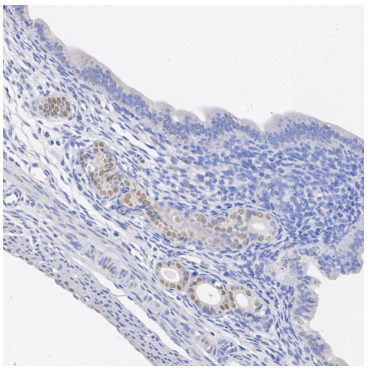

Fig3: Immunohistochemical analysis of paraffin-embedded mouse endometrium tissue with Rabbit anti-Estrogen Receptor alpha antibody (ET7110-60) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET7110-60) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Pejerrey SM. et. al. The Impact of ESR1 Mutations on the Treatment of Metastatic Breast Cancer. Horm Cancer. 2018 Aug;9(4):215-228.
2. Reinert T. et. al. Implications of ESR1 Mutations in Hormone Receptor-Positive Breast Cancer. Curr Treat Options Oncol. 2018 Apr 17;19(5):24.