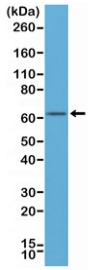
Estrogen Receptor alpha Antibody N-Terminal Region [clone RM292] (R20308)

Catalog No.	Formulation	Size
R20308-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

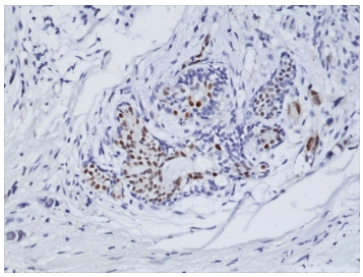
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM292
Purity	Protein A purified from animal origin-free supernatant
UniProt	P03372
Localization	Nuclear
Applications	Immunohistochemistry (FFPE): 1:100-1:200 Western Blot: 1:200-1:500
Limitations	This Estrogen Receptor alpha antibody is available for research use only.



Estrogen Receptor alpha Antibody N-Terminal Region WB. Western blot analysis of Estrogen Receptor alpha antibody in human MCF-7 cell lysate. A distinct band is observed at approximately 66 kDa, consistent with the predicted molecular weight of Estrogen Receptor alpha / ESR1. The antibody used is a recombinant monoclonal directed against the N-terminal region of ER alpha and was applied at a 1:500 dilution. The observed band corresponds to the expected full-length ER alpha protein expressed in hormone-responsive breast carcinoma cells.



Estrogen Receptor alpha Antibody N-Terminal Region IHC. Immunohistochemistry staining of formalin fixed and paraffin embedded human breast cancer tissue using recombinant Estrogen Receptor alpha antibody at a 1:100 dilution. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to testing.

Description

Estrogen Receptor alpha Antibody N-Terminal Region recombinant mAb recognizes Estrogen Receptor alpha, a ligand-activated nuclear transcription factor encoded by the ESR1 gene on chromosome 6q25.1. Estrogen Receptor alpha, also referred to as ER alpha or ESR1, belongs to the nuclear receptor superfamily and regulates gene expression in response to estrogen signaling. This recombinant monoclonal antibody is directed against the N-terminal region of ER alpha, a domain that contains activation function 1 and contributes to transcriptional regulation independently of ligand binding.

The N-terminal domain of Estrogen Receptor alpha plays a critical role in modulating receptor activity through interactions with coactivator proteins and components of the transcriptional machinery. Unlike the ligand-binding domain located in the C-terminal portion of the receptor, the N-terminal activation function 1 domain contributes to transcriptional activity in a context-dependent manner and can influence cell type-specific gene expression patterns. Targeting the N-terminal region allows investigation of receptor isoforms, structural integrity, and potential truncation variants that may alter functional signaling dynamics.

Estrogen Receptor alpha contains multiple functional domains, including a DNA-binding domain with zinc finger motifs, a hinge region involved in nuclear localization, and a ligand-binding domain that mediates estrogen interaction. Upon estrogen binding, ESR1 undergoes conformational changes that promote receptor dimerization and binding to estrogen response elements within promoter regions of target genes. These interactions regulate transcriptional programs controlling proliferation, differentiation, and survival in hormone-responsive tissues.

Expression of ER alpha is most prominent in breast epithelium, endometrium, ovary, and additional reproductive tissues. In oncology research, ESR1 expression status is a central biomarker in breast carcinoma and other estrogen-dependent malignancies. Detection of the N-terminal region of ER alpha can support studies focused on receptor structure, isoform characterization, and estrogen-driven transcriptional regulation. This Estrogen Receptor alpha Antibody N-Terminal Region recombinant mAb targets ESR1 protein in research applications involving cellular and tissue-based analysis of hormone signaling pathways.

For a microarray-validated Estrogen receptor alpha antibody supporting high-specificity detection, see clone ESR1/3557.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Estrogen Receptor alpha antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A peptide corresponding to residues near the N-terminus of human ER-alpha was used as the immunogen for the Estrogen Receptor alpha Antibody N-Terminal Region.

Storage

Store the Estrogen Receptor alpha antibody at -20oC.

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