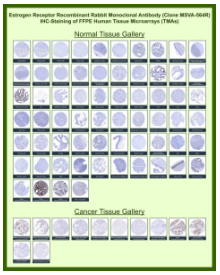
Estrogen receptor alpha Antibody / ER alpha [clone MSVA-564R] (V6071)

Catalog No.	Formulation	Size
V6071-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6071-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-564R
UniProt	P03372
Localization	Nucleus
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This recombinant Estrogen receptor alpha/ER alpha antibody is available for research use only.



Immunohistochemistry tissue microarray analysis of Estrogen receptor alpha expression. This recombinant Estrogen receptor alpha/ER alpha antibody (clone MSVA-564R) was evaluated by immunohistochemistry on formalin-fixed, paraffin-embedded human tissue microarrays covering a broad range of normal and cancer tissues. Staining demonstrates predominantly nuclear immunoreactivity in hormone-responsive epithelial tissues consistent with known Estrogen receptor alpha / ER alpha / ESR1 expression patterns, with limited staining in tissues lacking estrogen signaling activity. Cancer tissues show variable nuclear positivity depending on tumor type and hormone responsiveness. Overall staining distribution and relative expression patterns are concordant with publicly available expression data reported by the Human Protein Atlas, supporting the biological relevance of the observed immunoreactivity.

Description

Estrogen receptor alpha Antibody targets Estrogen receptor alpha, a hormone-responsive nuclear regulatory protein encoded by the ESR1 gene and also commonly referred to as Estrogen receptor 1 in the literature. ER alpha functions as a signal-dependent transcriptional regulator that converts estrogen binding into coordinated gene expression programs governing cellular proliferation, differentiation, and tissue organization. Its activity places Estrogen receptor alpha at the

center of estrogen-responsive transcriptional signaling networks.

Upon ligand binding, Estrogen receptor alpha undergoes conformational changes that promote nuclear retention and recruitment of transcriptional co-regulators. ER alpha regulates gene expression through direct interaction with estrogen response elements as well as indirect mechanisms involving cooperation with other transcription factors. Estrogen receptor alpha Antibody detection therefore supports studies examining nuclear receptor activation states and estrogen-dependent transcriptional responsiveness.

ER alpha signaling is particularly prominent in hormone-regulated tissues such as breast, uterus, ovary, and endocrine-associated tissues, where Estrogen receptor 1 activity governs transcriptional programs linked to cell cycle control, tissue remodeling, and differentiation balance. Estrogen receptor alpha Antibody reagents are useful for investigating estrogen-driven gene regulation and hormone-responsive cellular behavior in tissue-based research models.

Dysregulation of Estrogen receptor alpha signaling alters transcriptional output and contributes to disease-associated changes in hormone responsiveness. Aberrant ER alpha activity can reshape gene expression patterns toward pathological cellular states characterized by altered growth and differentiation control. Studying Estrogen receptor 1 at the level of transcriptional regulation provides insight into how hormonal signaling disturbances influence cellular identity and disease biology.

Clone MSVA-564R is designed to recognize Estrogen receptor alpha in research applications. Estrogen receptor alpha Antibody reagents are suitable for detecting nuclear ER alpha expression and supporting studies focused on estrogen signaling dynamics, transcriptional regulation, and hormone-responsive gene expression programs.

Application Notes

1. Optimal dilution of the recombinant Estrogen receptor alpha/ER alpha antibody should be determined by the researcher.

2. This Estrogen receptor alpha/ER alpha antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

A recombinant fragment (around amino acids 495-595) of human ER alpha protein (exact sequence is proprietary) was used as the immunogen for the recombinant Estrogen receptor alpha/ER alpha antibody.

Storage

Estrogen receptor alpha/ER alpha antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.