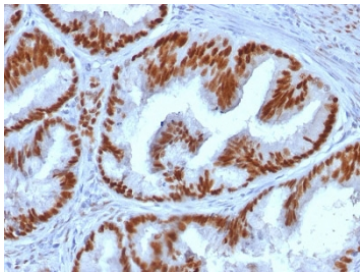
ER alpha Antibody HuProt Array Validated [clone ESR1/1935] (V3843)

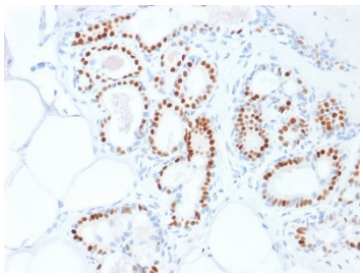
Catalog No.	Formulation	Size
V3843-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3843-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3843SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

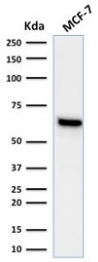
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	ESR1/1935
Purity	Protein G affinity chromatography
UniProt	P03372
Localization	Nuclear
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This ER alpha Antibody HuProt Array Validated is available for research use only.



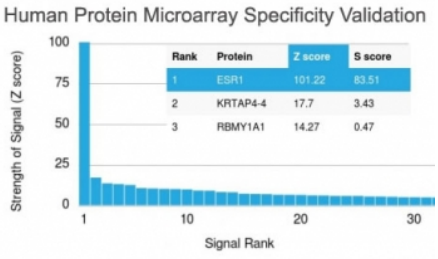
Immunohistochemistry of ER alpha Antibody HuProt Array Validated in human endometrial carcinoma. Formalin-fixed, paraffin-embedded human endometrial carcinoma tissue shows strong nuclear HRP-DAB brown staining in malignant glandular epithelial cells, while surrounding stromal elements demonstrate reduced staining intensity. Staining was performed using clone ESR1/1935 following heat-induced epitope retrieval by boiling tissue sections in pH 9 10 mM Tris buffer with 1 mM EDTA for 10-20 min and cooling at room temperature for 20 min. The nuclear staining pattern is consistent with expected Estrogen Receptor alpha / ESR1 expression in hormone-responsive endometrial carcinoma cells.



IHC testing of human breast carcinoma stained with Estrogen Receptor alpha antibody (clone ESR1/1935). Staining of formalin-fixed tissues requires boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 minutes.

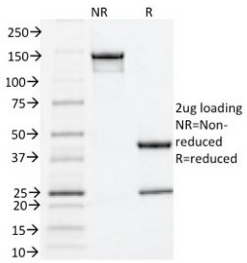


Western blot testing of human MCF-7 lysate with Estrogen Receptor alpha antibody (clone ESR1/1935). Expected molecular weight ~67 kDa.



Human protein microarray specificity validation of ER alpha antibody HuProt array validated clone ESR1/1935. Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins was performed using ER alpha antibody clone ESR1/1935. The antibody demonstrates strongest binding to ESR1 with a Z-score of 101.22 and an S-score of 83.51, indicating clear separation from other proteins on the array. These data support the high specificity of clone ESR1/1935 for Estrogen Receptor alpha.

Z- and S-score explanation: The Z-score represents the strength of signal generated when the antibody, in combination with a fluorescently tagged anti-IgG secondary antibody, binds to a specific protein on the HuProt(TM) array. Z-scores are expressed in standard deviations above the mean signal across all proteins tested. Proteins are ranked in descending order based on Z-score. The S-score represents the difference between sequential Z-scores and reflects the relative specificity of the antibody for its intended target compared to potential off-target interactions.



SDS-PAGE analysis of purified, BSA-free Estrogen Receptor alpha antibody (clone ESR1/1935) as confirmation of integrity and purity.

Description

ER alpha Antibody HuProt Array Validated clone ESR1/1935 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, is a member of the nuclear receptor superfamily that regulates gene expression in response to estrogen signaling. This antibody has undergone HuProt protein array specificity assessment to support selective recognition of ESR1 among thousands of full-length human proteins.

Estrogen Receptor alpha contains a conserved DNA-binding domain composed of zinc finger motifs, a hinge region involved in nuclear localization, and a ligand-binding domain responsible for estrogen interaction. Upon ligand binding, ESR1 undergoes conformational changes that promote receptor dimerization and recruitment of transcriptional coactivators or corepressors. The activated receptor binds estrogen response elements within promoter regions of target genes, thereby regulating transcriptional programs that control cellular 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 critical biomarker in breast carcinoma and other estrogen-dependent malignancies. Alterations in ESR1 signaling, including gene amplification, splice variants, and activating mutations, can influence tumor growth behavior and endocrine responsiveness. Beyond oncology, ER alpha also contributes to bone metabolism, cardiovascular regulation, and neuroendocrine signaling pathways.

HuProt array validation of clone ESR1/1935 provides an orthogonal assessment of target specificity by evaluating antibody binding across more than 19,000 full-length human proteins. Such high-density protein array analysis supports confidence in selective ESR1 recognition in research settings. ER alpha antibody HuProt array validated clone ESR1/1935 enables investigation of Estrogen Receptor alpha localization and expression in cellular and tissue-based models focused on estrogen-driven transcriptional regulation and hormone-dependent disease mechanisms.

For comprehensive detection of Estrogen receptor alpha across hormone signaling and breast cancer studies, see our Estrogen Receptor alpha antibody (clone ESR1/3557).

Application Notes

The optimal dilution of the ER alpha Antibody HuProt Array Validated for each application should be determined by the researcher.

Immunogen

Full length human protein was used as the immunogen for this ER alpha antibody HuProt array validated clone ESR1/1935.

Storage

Store the Estrogen Receptor alpha antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

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