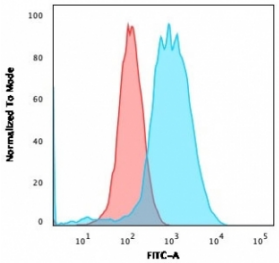
Estrogen Receptor alpha Antibody FACS Intracellular Detection [clone ESR1/3559] (V7751)

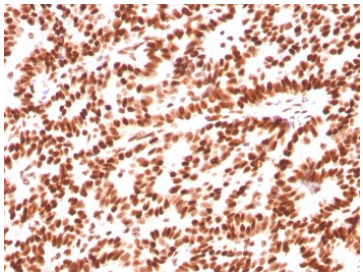
Catalog No.	Formulation	Size
V7751-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7751-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7751SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

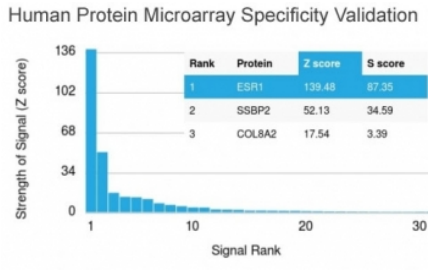
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	ESR1/3559
Purity	Protein G affinity chromatography
UniProt	P03372
Localization	Nuclear
Applications	Flow Cytometry : 1-2ug/10^6 cells in 0.1ml Immunohistochemistry (FFPE) : 1-2ug/ml Western Blot : 2-4ug/ml
Limitations	This Estrogen Receptor alpha Antibody for Estrogen Receptor alpha Antibody FACS Intracellular Detection is available for research use only.



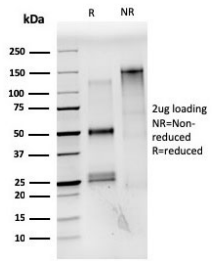
Estrogen Receptor alpha Antibody for FACS MCF7 Cell. Flow cytometry analysis of permeabilized human MCF7 cells using Estrogen Receptor alpha antibody shows a clear rightward shift in fluorescence intensity compared to the isotype control, consistent with intracellular detection of ESR1 in hormone-responsive breast cancer cells; red histogram represents isotype control and blue histogram represents Estrogen Receptor alpha antibody staining, with detection performed using clone ESR1/3559.



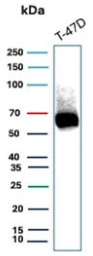
Estrogen Receptor alpha Antibody Breast Carcinoma IHC. Immunohistochemistry of FFPE human breast carcinoma tissue using Estrogen Receptor alpha antibody shows strong HRP-DAB brown nuclear staining in tumor epithelial cells, consistent with ESR1 expression in hormone-responsive breast cancer, while surrounding stromal cells display minimal background; detection was performed with clone ESR1/3559. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min and allow to cool before testing.



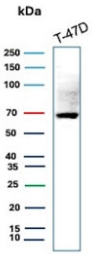
Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using Estrogen Receptor alpha antibody (clone ESR1/3559). These results demonstrate the foremost specificity of the ESR1/3559 mAb.
Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



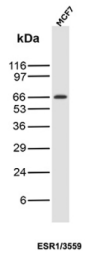
SDS-PAGE analysis of purified, BSA-free Estrogen Receptor alpha antibody (clone ESR1/3559) as confirmation of integrity and purity.



Estrogen Receptor alpha Antibody T-47D WB. Western blot analysis of human T-47D cell lysate using Estrogen Receptor alpha antibody detects a band at approximately 65-70 kDa, consistent with the predicted molecular weight of Estrogen receptor alpha (ESR1), a nuclear hormone receptor expressed in hormone-responsive breast cancer cells; detection was performed with clone ESR1/3559.



Estrogen Receptor alpha Antibody Breast Cancer Cell WB. Western blot analysis of human T-47D cell lysate using Estrogen Receptor alpha antibody detects a band at approximately 65-70 kDa, consistent with the predicted molecular weight of Estrogen receptor alpha (ESR1), a nuclear hormone receptor expressed in hormone-responsive breast cancer cells; detection was performed with clone ESR1/3559.



Estrogen Receptor alpha Antibody MCF7 WB. Western blot analysis of human MCF7 cell lysate using Estrogen Receptor alpha Antibody / Hormone Receptor and Breast Cancer Marker Antibody (clone ESR1/3559) detects a band at approximately 65-70 kDa, consistent with the predicted molecular weight of Estrogen receptor alpha (ESR1), a ligand-activated nuclear receptor expressed in breast cancer cells.

Description

Estrogen receptor alpha (ESR1) is a ligand-activated nuclear hormone receptor that regulates gene transcription in response to estrogen signaling. ESR1 plays a central role in the development and function of reproductive tissues and is a key driver of hormone-dependent gene expression in breast epithelial cells. Upon binding estrogen, ESR1 undergoes conformational changes that promote dimerization, nuclear localization, and interaction with estrogen response elements in target genes. This signaling pathway controls cellular proliferation, differentiation, and survival, particularly in hormone-responsive tissues.

Estrogen Receptor alpha antibody, also referred to as ESR1 antibody, ER alpha antibody, and ERa antibody in the literature, recognizes a nuclear receptor that is widely used as a biomarker in breast cancer research. ESR1 expression is a defining feature of many breast tumors, where it is used to classify hormone receptor status and guide therapeutic strategies. Detection of ESR1 is therefore critical for studying tumor biology, endocrine responsiveness, and mechanisms of resistance to hormone-based therapies.

This Estrogen Receptor alpha Antibody for FACS / Hormone Receptor and Breast Cancer Marker Antibody (clone ESR1/3559) is uniquely positioned for intracellular flow cytometry applications. Because ESR1 is a nuclear protein, detection by flow cytometry requires fixation and permeabilization to allow antibody access to intracellular compartments. In this context, ESR1 antibody enables analysis of receptor expression at the single-cell level, supporting studies of heterogeneous cell populations, tumor subpopulations, and hormone-responsive signaling dynamics. This approach is particularly useful in breast cancer models where ESR1 expression may vary across cell states or treatment conditions.

In addition to flow cytometry, ESR1 expression can be observed in tissue-based and protein analysis studies, where it typically shows nuclear localization in epithelial and tumor cells. These expression patterns align with the receptorÃ¢Â€Â™s role as a transcription factor and provide complementary validation across different experimental systems. The ability to detect ESR1 across multiple assay types supports integrated analysis of receptor expression and function.

Microarray validation of clone ESR1/3559 supports its specificity for the ESR1 protein, providing confidence in target recognition across a wide range of proteins. As a mouse monoclonal antibody, clone ESR1/3559 offers reproducible performance for detecting Estrogen receptor alpha in research applications. An Estrogen Receptor alpha antibody is suitable for detecting ESR1 expression in flow cytometry, cancer biology studies, and investigations of hormone receptor signaling.

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

Optimal dilution of the Estrogen Receptor alpha Antibody FACS Intracellular Detection should be determined by the researcher.

Immunogen

A recombinant human partial protein (amino acids 129-312) was used as the immunogen for this Estrogen Receptor alpha antibody.

Storage

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

Alternate Names

Estrogen receptor alpha antibody, ESR1 antibody, ER alpha antibody, ERa antibody, ESR1 FACS antibody