Human ERα/NR3A1 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2424B
Catalog Number: MAB57153

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ERα/NR3A1 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2424B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	*E. coli*-derived recombinant human ERα/NR3A1 Met1-Gln116 Accession # P03372
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

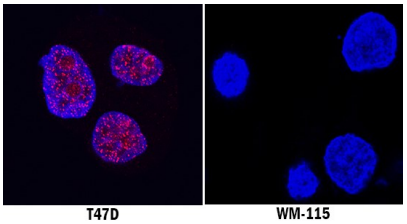
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Immunocytochemistry	3-25 µg/mL	See Below
Immunohistochemistry	10-25 µg/mL	See Below

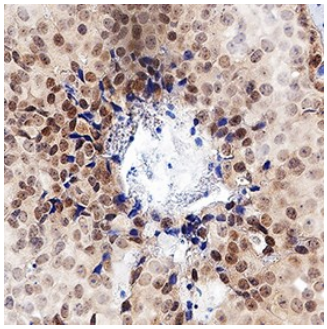
DATA

Immunocytochemistry



ERα/NR3A1 in T47D and WM-115 Human Cell Lines. ERα/NR3A1 was detected in immersion fixed T47D human breast cancer cell line (positive stain) and WM-115 human malignant melanoma cell line (negative stain) using Rabbit Anti-Human ERα/NR3A1 Monoclonal Antibody (Catalog # MAB57153) at 3 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to cell nuclei. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunohistochemistry



ERα/NR3A1 in Human Breast Cancer Tissue. ERα/NR3A1 was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Rabbit Anti-Human ERα/NR3A1 Monoclonal Antibody (Catalog # MAB57153) at 10 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cell nuclei. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

ERα (Estrogen receptor alpha; also Estradiol receptor and NR3A1) is a 65-70 kDa member of the NR3 subfamily, nuclear hormone receptor family of proteins. It is widely expressed, and serves as a strong activator of estrogen-responsive genes. ERα is normally quiescent and bound to heat-shock proteins and immunophilins. Following β-estradiol binding, it becomes activated, either homodimerizes or heterodimerizes with ERβ, and binds to DNA with multiple coactivators. Human ERα is 595 amino acids (aa) in length. It contains a DNA binding region (aa 185-250), three NLSs (aa 256-260; 266-271; 299-303), a steroid-binding site (aa 351-543), a dimerization motif (aa 497-518), and an O-GlcNAc attachment around Thr575. Major phosphorylation sites exist at Tyr537, Ser167 and Ser118. Multiple splice forms exist. There is an 80 kDa isoform that shows a substitution (duplication) of aa 412-517 for Asp411, a second isoform with a deletion of aa 255-366, a third isoform with a deletion of aa 152-412, and a fourth isoform that shows a Thr substitution for aa 152-595. Human ERα is only 46% aa identical to human ERβ. Over aa 1-116, human ERα shares 85% aa identity with mouse ERα.

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