

DESCRIPTION

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| Species Reactivity | Human |
| Specificity | Detects human ER α /NR3A1 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human ER β is observed. |
| Source | Monoclonal Mouse IgG _{2B} Clone # 681104 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | <i>E. coli</i> -derived recombinant human ER α /NR3A1 Thr2-Gln116 Accession # P03372 |
| Formulation | Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m filtered solution in PBS. |

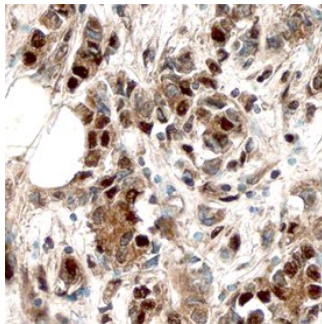
APPLICATIONS

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 |
|-----------------------------|----------------------------------|---------------|
| Immunohistochemistry | 8-25 μ g/mL | See Below |

DATA

Immunohistochemistry



ER α /NR3A1 in Human Breast.
ER α /NR3A1 was detected in immersion fixed paraffin-embedded sections of human breast using Mouse Anti-Human ER α /NR3A1 Monoclonal Antibody (Catalog # MAB57152) at 15 μ g/mL overnight at 4 °C. 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 the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to nuclei. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

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|--------------------------------|--|
| Reconstitution | Sterile PBS to a final concentration of 0.5 mg/mL. |
| 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. <ul style="list-style-type: none"> ● 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

ER α (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. ER α is normally quiescent and bound to heat-shock proteins and immunophilins. Following β -estradiol binding, it becomes activated, either homodimerizes or heterodimerizes with ER β , and binds to DNA with multiple coactivators. Human ER α 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 ER α is only 46% aa identical to human ER β . Over aa 1-116, human ER α shares 85% aa identity with mouse ER α .