

DESCRIPTION

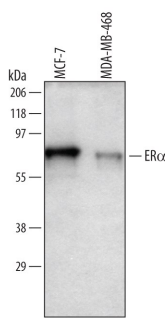
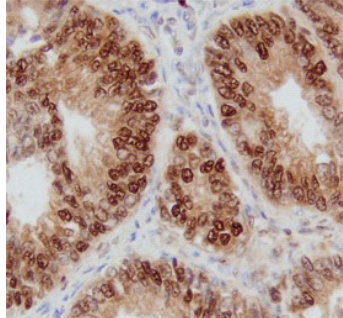
Species Reactivity	Human
Specificity	Detects endogenous human ER α .
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human ER α Met1-Gln116 Accession # P03372
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. 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
Western Blot	0.5 μ g/mL	See Below
Immunohistochemistry	5-15 μ g/mL	See Below

DATA

Western Blot	Immunohistochemistry
 <p>Detection of Human ERα/NR3A1 by Western Blot. Western blot shows lysates of MCF-7 human breast cancer cell line and MDA-MB-468 human breast cancer cell line. PVDF membrane was probed with 0.5 μg/mL of Human ERα/NR3A1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5715) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for ERα/NR3A1 at approximately 65 to 70 kDa (as indicated). This experiment was conducted under reducing conditions and using <i>Immunoblot Buffer Group 1</i>.</p>	 <p>ERα/NR3A1 in Human Endometrial Cancer Tissue. ERα/NR3A1 was detected in immersion fixed paraffin-embedded sections of human endometrial cancer tissue using Human ERα/NR3A1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5715) at 10 μg/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-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). View our protocol for <i>Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</i>.</p>

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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. <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, and 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.