

# Human/Mouse/Rat ERα/NR3A1 Antibody

Monoclonal Mouse IgG<sub>2B</sub> Clone # 681118 Catalog Number: MAB57151

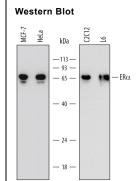
DESCRIPTION			
Species Reactivity	Human/Mouse/Rat		
Specificity	Detects human ERα/NR3A1 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human ERβ is observed.		
Source	Monoclonal Mouse IgG <sub>2B</sub> Clone # 681118		
Purification	Protein A or G purified from hybridoma 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

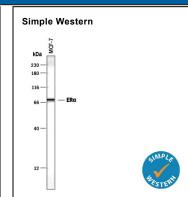
Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	0.05 μg/mL	See Below
Simple Western	1 μg/mL	See Below

## DATA



Detection of Human, Mouse, and Rat ERα/NR3A1 by Western Blot. Western blot shows lysates of MCF-7 human breast cancer cell line, HeLa human cervical epithelial carcinoma cell line, C2C12 mouse myoblast cell line, and L6 rat myoblast cell line. PVDF Membrane was probed with 0.05 μg/mL of Human ERα/NR3A1 Monoclonal Antibody (Catalog # MAB57151) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). 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 Immunoblot Buffer Group 1.



Detection of Human ERα/NR3A1 by Simple Western™. Simple Western lane view shows lysates of MCF-7 human breast cancer cell line, loaded at 0.2 mg/mL. A specific band was detected for ERα/NR3A1 at approximately 75 kDa (as indicated) using µg/mL of Mouse Anti-Human/Mouse/Rat ERα/NR3A1 Monoclonal Antibody (Catalog # MAB57151). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

## PREPARATION AND STORAGE

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

- 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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