

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ERα/NR3A1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant ERβ/NR3A2 is observed.
Source	Monoclonal Mouse IgG ₃ Clone # 585112
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human ERα/NR3A1 Met1-Ser116 (predicted) Accession # P03372
Formulation	Lyophilized from a 0.2 µm filtered solution in TBS 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.

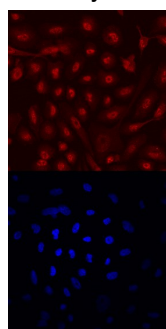
APPLICATIONS

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	8-25 µg/mL	See Below

DATA

Immunocytochemistry



ERα/NR3A1 in PC-3 Human Cell Line. ERα/NR3A1 was detected in immersion fixed PC-3 human prostate cancer cell line using Mouse Anti-Human ERα/NR3A1 Monoclonal Antibody (Catalog # MAB5715) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red, upper panel; Catalog # NL007) and counterstained with DAPI (blue, lower panel). Specific staining was localized to nuclei. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

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
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

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.