

DESCRIPTION	
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human ERβ/NR3A2 in direct ELISAs and Western blot. In direct ELISA and Western blot, no cross-reactivity with recombinant human ERα is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 733930
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human ERβ/NR3A2 Met1-Gly318 Accession # Q92731
<b>Formulation</b>	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

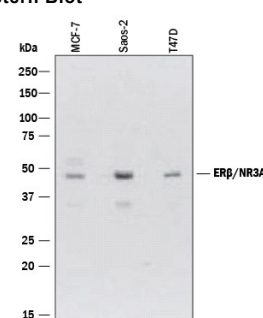
**APPLICATIONS**

**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
<b>Western Blot</b>	2 μg/mL	See Below
<b>Immunocytochemistry</b>	8-25 μg/mL	See Below
<b>Intracellular Staining by Flow Cytometry</b>	0.25 μg/10 <sup>6</sup> cells	See Below
<b>CyTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

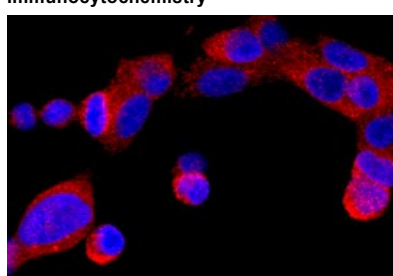
**DATA**

**Western Blot**



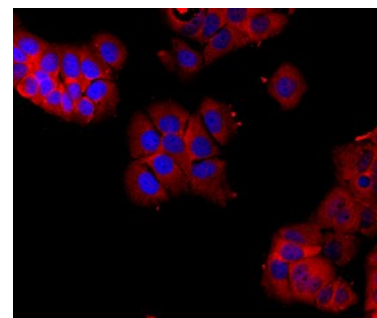
**Detection of Human ERβ/NR3A2 by Western Blot.** Western blot shows lysates of MCF-7 human breast cancer cell line, Saos-2 human osteosarcoma cell line, and T47D human breast cancer cell line. PVDF membrane was probed with 2 μg/mL of Mouse Anti-Human ERβ/NR3A2 Monoclonal Antibody (Catalog # MAB7106) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for ERβ/NR3A2 at approximately 48 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Immunocytochemistry**



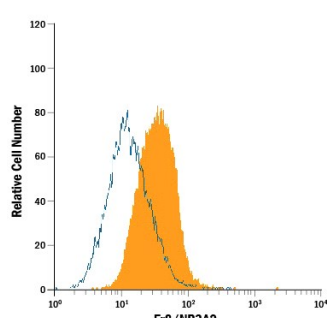
**ERβ/NR3A2 in LNCaP Human Cell Line.** ERβ/NR3A2 was detected in immersion fixed LNCaP human prostate cancer cell line using Mouse Anti-Human ERβ/NR3A2 Monoclonal Antibody (Catalog # MAB7106) at 10 μg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counter-stained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

**Immunocytochemistry**



**ERβ/NR3A2 in MCF-7 Human Cell Line.** ERβ/NR3A2 was detected in immersion fixed MCF-7 human breast cancer cell line using Mouse Anti-Human ERβ/NR3A2 Monoclonal Antibody (Catalog # MAB7106) at 10 μg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counter-stained with DAPI (blue). Specific staining was localized to cytoplasm and nuclei. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

**Intracellular Staining by Flow Cytometry**



**Detection of ERβ/NR3A2 in MCF-7 Human Cell Line by Flow Cytometry.** MCF-7 human breast cancer cell line was stained with Mouse Anti-Human ERβ/NR3A2 Monoclonal Antibody (Catalog # MAB7106, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>

## BACKGROUND

Estrogen Receptor beta (ER $\beta$ ; NR3A2) is a member of the steroid receptor family. The natural ligand for ER is the classical estrogenic compound 17 $\beta$ -estradiol. ER $\beta$  is expressed in the granulosa cell layer of primary, secondary and mature follicles in the ovary, in bone, bladder, uterus, testis, epididymis, gastrointestinal tract, kidney, breast, heart, vessel wall, immune system, lung, pituitary, hippocampus and hypothalamus. Roles for ER $\beta$  in the reproductive and cardiovascular systems have been reported, although these are the subject of conflicting reports. ER $\beta$  has been postulated to act primarily as a modulator of ER $\alpha$  function. ER $\beta$  has been shown to form homodimers as well as heterodimers with ER $\alpha$ . Both ER $\alpha$  and ER $\beta$  can give rise to numerous isoforms.