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Product datasheet for AM32843PU-S

Estrogen Receptor 1 (ESR1) Mouse Monoclonal Antibody [Clone ID: ER506]

Product data:

Product Type:	Primary Antibodies
Clone Name:	ER506
Applications:	FC, IHC, WB
Recommended Dilution:	**Western Blot:** 0.5-1 µg/ml for 2 hours at RT. **Flow Cytometry:** 0.5-2 µg/10^6 cells. **Immunohistochemistry on Frozen and Formalin-Fixed Paraffin Sections:** 1/25 (Clone *ER505* is better). Staining of formalin-fixed tissues requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes. ***Positive Control:*** MCF-7 Cells or Breast Cancers.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Recombinant Human Estrogen Receptor alpha protein (aa 2-185).
Specificity:	This Monoclonal *ER506* antibody is specific to ER alpha and shows minimal cross-reaction with other members of the family. ER is an important regulator of growth and differentiation in the mammary gland. Presence of ER in breast tumors indicates an increased likelihood of response to anti-estrogen (e.g. tamoxifen) therapy. It strongly stains nuclei of epithelial cells in breast carcinomas. ***Cellular Localization:*** Nucleus.
Formulation:	10mM PBS State: Purified State: Liquid purified IgG fraction from Bioreactor Concentrate Stabilizer: 0.05% BSA Preservative: 0.05% Sodium Azide
Concentration:	lot specific
Purification:	Protein A/G Chromatography
Conjugation:	Unconjugated

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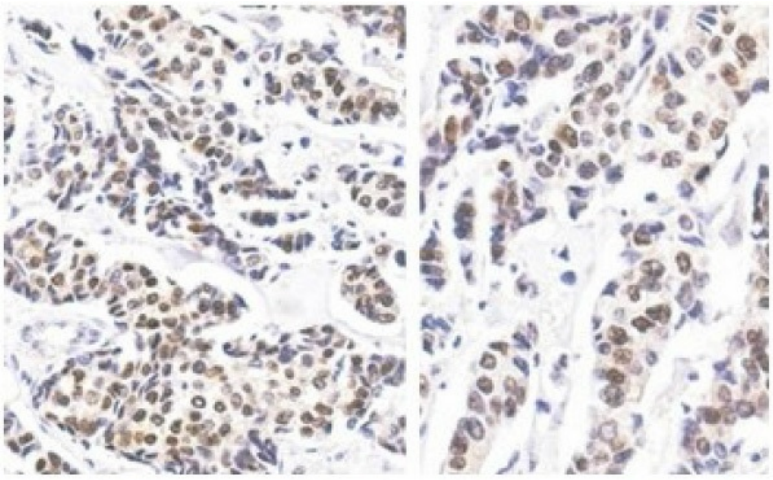
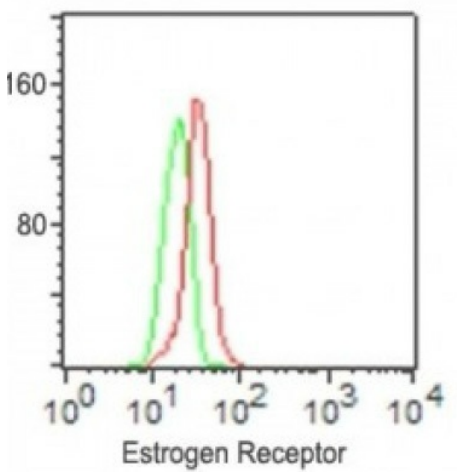
Storage:	Store undiluted at 2-8°C.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~67 kDa
Gene Name:	estrogen receptor 1
Database Link:	Entrez Gene 2099 Human P03372
Background:	The estrogen receptor (ER) is a ~ 67kDa protein, originally described by Jensen and Jacobson, 1962 as a uterine protein which bound 3H-estradiol with high affinity. More than two decades later the cDNA encoding the human estrogen receptor was finally cloned and sequenced. The estrogen receptor gene consists of more than 140kb of genomic DNA divided into 8 exons, being translated into a protein with six functionally discrete domains, labeled A through F. The A/B domain of the estrogen receptor contains a constitutively active transcription activation function called TAF-1. Domain C contains two Cys4 zinc fingers, which form the core of the DNA binding domain; it also contains a weak constitutive dimerization activity. The zinc fingers interact with DNA, and the ER homodimer appears to bind most tightly to the palindromic estrogen response element (ERE) sequence GGATCNNNGATCC. The hinge domain D appears to be the location for binding by heat shock proteins. The estrogen receptor is an important regulator of growth and differentiation in the mammary gland. Estrogens play an important role also in breast cancer development, although tumors often progress towards an autocrine growth. This hormone-independence and the incomplete correlation between ER-status and response to endocrine (tamoxifen) therapy may be explained by the presence of receptor variants with either constitutive transcriptional activity or a dominant negative inhibition of normal ER function. Many investigators have reported on the isolation of cDNAs which encode variant ER sequences. Many of these variants appear to be formed by errors in RNA splicing which result in one or more exons being lost during processing of the ER message.
Synonyms:	ER-alpha, ER-beta, ER, ESR, ESR1, ESR2, ESRA, ESRB, ERA, NR3A1, Estradiol Receptor

Product images:



Formalin-Fixed, Paraffin-Embedded Human breast invasive ductal carcinoma stained with Estrogen Receptor Antibody (Clone ER506).



Intracellular staining of the Human breast cancer line MCF7 using Estrogen Receptor Antibody (Clone ER506). Paraformaldehyde and 0.1% Tween-PBS were used to fix/perm the cells.