

Product datasheet for **AM50107PU-S**

Estrogen Receptor 1 (ESR1) Mouse Monoclonal Antibody [Clone ID: SPM567]

Product data:

Product Type:	Primary Antibodies
Clone Name:	SPM567
Applications:	IHC, WB
Recommended Dilution:	Western blotting: 0.5-1 µg/ml for 2 hours at RT. Immunohistochemistry on Paraffin Sections: 0.5-1 µg/ml for 30 minutes at RT. 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 (aa2-185).
Specificity:	This Monoclonal 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. This Monoclonal Antibody is excellent for staining of Formalin-Fixed, Paraffin-Embedded breast carcinomas. Cellular Localization: Nuclear.
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
Storage:	Store undiluted at 2-8°C.
Stability:	Shelf life: one year from despatch.



[View online »](#)

Predicted Protein Size: ~67 kDa

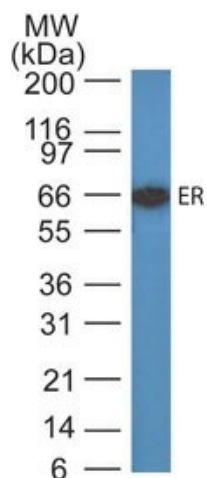
Gene Name: estrogen receptor 1

Database Link: [Entrez Gene 2099 Human P03372](#)

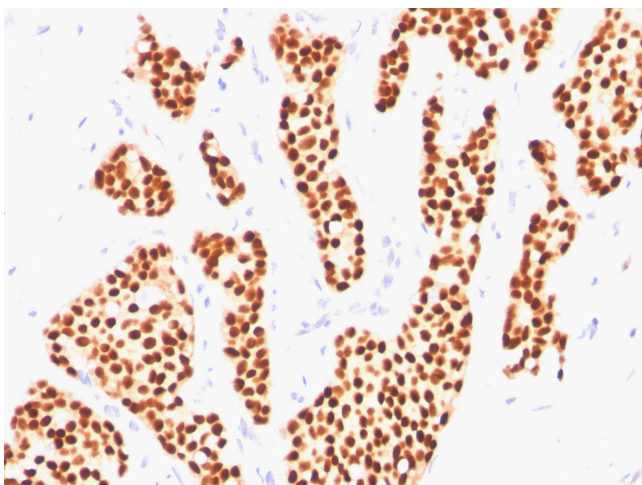
Background: The estrogen receptor (ER) is a ~ 67kDa protein, originally described by Jensen and Jacobson, 1962 as a uterine protein which bound 3H-estradiol with high affinity. More than two decades later the cDNA encoding the human estrogen receptor was finally cloned and sequenced. The estrogen receptor 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 GGATC>NNGATCC. 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, Estradiol receptor, ESR1, ESR, NR3A1

Product images:



Western blot analysis of Estrogen Receptor in MCF-7 lysate using Estrogen receptor alpha Antibody (Clone SPM567).



Formalin-Fixed, Paraffin-Embedded human breast invasive carcinoma stained with Estrogen receptor alpha Antibody (Clone SPM567).