

Product Specification Sheet

Estrogen Receptor α (ER-alpha) antibodies

Cat. ERA12-A	Rabbit anti-human Anti-ER α peptide IgG	SIZE: 100 ug
Cat. ERA12-C	Human Cell-18 total protein lysate WB control for ER-alpha	SIZE: 100 ul

Estrogens, produced by ovaries and testis, affect growth and differentiation of many target tissues. Estrogens bind to the intracellular proteins known as estrogen receptors (ER). Estrogen receptor is a member of the super family of nuclear receptor that show a similar structure and mode of action. Once bound by their ligand, ER undergoes a conformational change to a form that can specifically binds to its target genes and later their transcription. Structurally, nuclear receptors have been divided into six distinct domains termed A-F: The hypervariable N-terminal transactivation domain, the DNA-binding, dimerization, and nuclear localization conserved region C, and the ligand binding conserved region E. A great deal of knowledge has been obtained from the cloning, structure and functional studies of previously known ER (now called **ER-alpha** or **ER-a**).

The ER-alpha, initially cloned from uterus, is highly homologous to the ER α from mouse, human, and chicken. Recently, another form of the ER, termed **ERb1**, has been cloned from rat and human tissue. Both ER α and ERb1 binds to common agonists and antagonists with more or less overlapping specificity.

Source of Antigen and Antibodies

Antigen	A synthetic peptide from the N-terminus of human estrogen receptor, alpha protein
Ab Host/type	Rabbit, polyclonal IgG aff pure #ERA12-A
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Human Cell-18 express high level of ER-alpha. For **#ERA12-C** western blot positive control, total cell protein lysate of Cell-18 lysate is supplied in SDS-PAGE sample buffer (reduced). Load 10-20 ul/lane of #PR12-C for good visibility with antibody Cat #ERA12-A. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the #ERA12-C solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage

Affinity pure IgG

100 ug/100ul solution lyophilized powder

supplied in Buffer: PBS, pH 7.2,

Reconstitute powder in PBS at 1 mg/ml

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1-5 ug/ml). The antibody recognizes a band of approx. 67 kDa in nuclear extracts of MCF-7 cells. (1).



Western blot of MCF-7 cell extracts using ERA11-M (1:250).

ELISA (1:100K; using 50-100 ng control antigen/well).

Immunoprecipitation We recommend 10 ul antibody per 500 ug of MCF-7 nuclear extracts. Other cell lines should be tested and optimized. Use protein G for IP.

Histochemistry & Immunofluorescence: We recommend 5-10 ul/ml antibody to detect nuclear staining of the receptor using paraffin embedded sections.

Specificity & Cross-reactivity

This antibody recognizes ER α from human, bovine, rat, and mouse. No crossreactivity is seen with ER-beta. Antibody crossreactivity antibodies in other species is not established.

General References: Evans RM (1988) Science 240, 889-895. Green S et al (1986) Nature 324, 615-617.

*This product is for in vitro research use only.

Related material available from ADI

Anti-ER alpha ; Beta 1 and Beta 2)

ERA12-A-C 80618A

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