SANTA CRUZ BIOTECHNOLOGY, INC.

ERα (C-3): sc-514857

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Estrogen receptors (ER) are members of the steroid/thyroid hormone receptor superfamily of ligand-activated transcription factors. Estrogen receptors, including ERα and ERβ, contain DNA binding and ligand binding domains and are critically involved in regulating the normal function of reproductive tissues. They are located in the nucleus, though some estrogen receptors associate with the cell surface membrane and can be rapidly activated by exposure of cells to estrogen. ERα and ERβ have been shown to be differentially activated by various ligands. Receptor-ligand interactions trigger a cascade of events, including dissociation from heat shock proteins, receptor dimerization, phosphorylation and the association of the hormone activated receptor with specific regulatory elements in target genes. Evidence suggests that ERα and ERβ may be regulated by distinct mechanisms even though they share many functional characteristics.

REFERENCES

1. Mason, B.H., et al. 1983. Progesterone and estrogen receptors as prognostic variables in breast cancer. Cancer Res. 43: 2985-2990.
2. Evans, R.M. 1988. The steroid and thyroid hormone receptor superfamily. Science 240: 889-895.
3. Danielian, P.S., et al. 1992. Identification of a conserved region required for hormone dependent transcriptional activation by steroid hormone receptors. EMBO J. 11: 1025-1033.

CHROMOSOMAL LOCATION

Genetic locus: ESR1 (human) mapping to 6q25.1; Esr1 (mouse) mapping to 10 A1.

SOURCE

ERα (C-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 575-599 at the C-terminus of ERα of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_3 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-514857 X, 200 µg/0.1 ml.

ERα (C-3) is available conjugated to agarose (sc-514857 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514857 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-514857 PE), fluorescein (sc-514857 FITC), Alexa Fluor® 488 (sc-514857 AF488) or Alexa Fluor® 647 (sc-514857 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-514857 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

ERα (C-3) is recommended for detection of ERα of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ERα siRNA (h): sc-29305, ERα siRNA (m): sc-29306, ERα siRNA (r): sc-45949, ERα shRNA Plasmid (h): sc-29305-SH, ERα shRNA Plasmid (m): sc-29306-SH, ERα shRNA Plasmid (r): sc-45949-SH, ERα shRNA (h) Lentiviral Particles: sc-29305-V. ERα shRNA (m) Lentiviral Particles: sc-29306-V and ERα shRNA (r) Lentiviral Particles: sc-45949-V.

ERα (C-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ERα long isoform: 66 kDa.

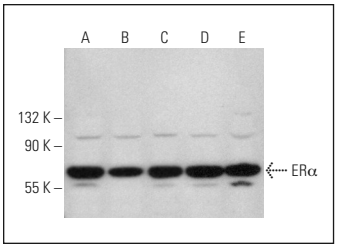
Molecular Weight of ERα short isoform: 54 kDa.

Molecular Weight of ER46: 48 kDa.

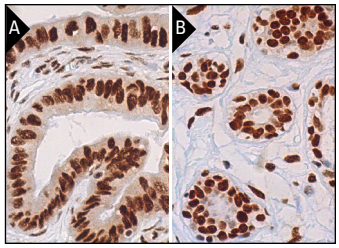
Molecular Weight of ER36: 36 kDa.

Positive Controls: BT-20 cell lysate: sc-2223, MOLT-4 cell lysate: sc-2233 or Raji whole cell lysate: sc-364236.

DATA



ERα (C-3): sc-514857. Western blot analysis of ERα expression in AN3CA (**A**), BT-20 (**B**), MOLT-4 (**C**), Raji (**D**) and T-47D (**E**) whole cell lysates.



ERα (C-3): sc-514857. Immunoperoxidase detection of ERα in formalin fixed, paraffin-embedded human fallopian tube tissue, showing nuclear staining of glandular cells (**A**) and human breast tissue, showing nuclear staining of glandular cells and myoepithelial cells. Detection reagent used: m-IgGκ BP-HRP: sc-516102 (**B**).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.