SANTA CRUZ BIOTECHNOLOGY, INC.

ERα (H-184): sc-7207

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. 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.

CHROMOSOMAL LOCATION

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

SOURCE

ERα (H-184) is a rabbit polyclonal antibody raised against amino acids 2-185 of ERα of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-7207 X, 200 µg/0.1 ml.

APPLICATIONS

ERα (H-184) is recommended for detection of ERα of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

ERα (H-184) is also recommended for detection of ERα in additional species, including equine, canine, bovine and porcine.

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

ERα (H-184) 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.

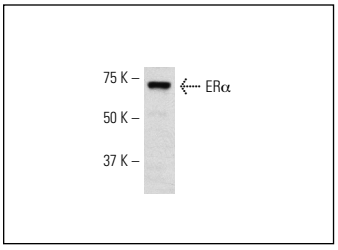
Molecular Weight of ER36: 36 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, MCF7 nuclear extract: sc-2149 or T-47D cell lysate: sc-2293.

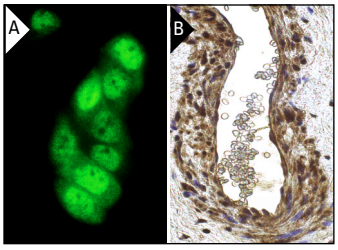
STORAGE

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

DATA



ERα (H-184): sc-7207. Western blot analysis of ERα expression in MCF7 whole cell lysate.



ERα (H-184): sc-7207. Immunofluorescence staining of methanol-fixed T-47D cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraf-fin-embedded human cervix tissue showing nuclear and cytoplasmic staining of epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Chen, H., et al. 1999. Regulation of hormone-induced histone hyperacetylation and gene activation via acetylation of an acetylase. Cell 98: 675-686.
2. Swedenborg, E., et al. 2012. The aryl hydrocarbon receptor ligands 2,3,7,8-tetrachlorodibenzo-p-dioxin and 3-methylcholanthrene regulate distinct genetic networks. Mol. Cell. Endocrinol. 362: 39-47.
3. Sanchez-Alvarez, R., et al. 2013. Ethanol exposure induces the cancer-associated fibroblast phenotype and lethal tumor metabolism: implications for breast cancer prevention. Cell Cycle 12: 289-301.
4. González-Morán, M.G., et al. 2013. Changes in the content of sex steroid hormone receptors in the growing and regressing ovaries of *Gallus domesticus* during development. Gen. Comp. Endocrinol. 189: 51-58.
5. Shan, L., et al. 2014. GATA3 cooperates with PARP1 to regulate CCND1 transcription through modulating histone H1 incorporation. Oncogene 33: 3205-3216.
6. Haas, M.J., et al. 2014. Induction of hepatic apolipoprotein A-I gene expression by the isoflavones quercetin and isoquercetrin. Life Sci. 110: 8-14.
7. Kreizman-Shefer, H., et al. 2014. Distribution of estrogen and progesterone receptors isoforms in endometrial cancer. Diagn. Pathol. 9: 77.

RESEARCH USE

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