SANTA CRUZ BIOTECHNOLOGY, INC.

ERα (G-20): sc-544

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.

SOURCE

ERα (G-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within the hinge region of estrogen receptor 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-544 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-544 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

ERα (G-20) is recommended for detection of ERα of 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) 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 shRNA Plasmid (h): sc-29305-SH and ERα shRNA (h) Lentiviral Particles: sc-29305-V.

ERα (G-20) 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 ZR-75-1 cell lysate: sc-2241.

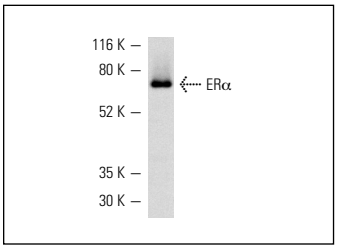
STORAGE

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

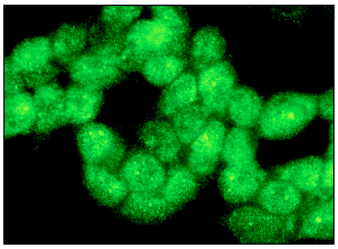
RESEARCH USE

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

DATA



ERα (G-20): sc-544. Western blot analysis of human recombinant ERα.



ERα (G-20): sc-544. Immunofluorescence staining of methanol-fixed T-47D cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Wormke, M., et al. 2000. Crosstalk between estrogen receptor α and the aryl hydrocarbon receptor in breast cancer cells involves unidirectional activation of proteasomes. FEBS Lett. 478: 109-112.
2. Nadal, A., et al. 2000. Nongenomic actions of estrogens and xenoestrogens by binding at a plasma membrane receptor unrelated to estrogen receptor α and estrogen receptor β. Proc. Natl. Acad. Sci. USA 97: 11603-11608.
3. Hershberger, P.A., et al. 2009. Estrogen receptor β (ERβ) subtype-specific ligands increase transcription, p44/p42 mitogen activated protein kinase (MAPK) activation and growth in human non-small cell lung cancer cells. J. Steroid Biochem. Mol. Biol. 116: 102-109.
4. Hong, W., et al. 2010. Inhibition of MAP kinase promotes the recruitment of corepressor SMRT by tamoxifen-bound estrogen receptor α and potentiates tamoxifen action in MCF-7 cells. Biochem. Biophys. Res. Commun. 396: 299-303.
5. Oleaga, C., et al. 2012. CYP1A1 is overexpressed upon incubation of breast cancer cells with a polyphenolic cocoa extract. Eur. J. Nutr. 51: 465-476.
6. Gimigliano, A., et al. 2012. Proteomic profile identifies dysregulated pathways in cornelia de lange syndrome cells with distinct mutations in SMC1A and SMC3 genes. J. Proteome Res. 11: 6111-6123.
7. Neri, F., et al. 2012. Myc regulates the transcription of the PRC2 gene to control the expression of developmental genes in embryonic stem cells. Mol. Cell. Biol. 32: 840-851.
8. Oleaga, C., et al. 2013. Cocoa flavanol metabolites activate HNF-3β, Sp1, and NFY-mediated transcription of apolipoprotein AI in human cells. Mol. Nutr. Food Res. 57: 986-995.