**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**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

ERα (D-12) is a mouse monoclonal antibody raised against amino acids 2-185 mapping at the N-terminus of estrogen receptor α of human origin.

**PRODUCT**

Each vial contains 200 µg IgG₂κ kappa light chain 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-8005 X, 200 µg/0.1 ml.

ERα (D-12) is available conjugated to agaroze (sc-8005 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8005 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycocerythrin (sc-8005 PE), fluorescein (sc-8005 FITC), Alexa Fluor® 488 (sc-8005 AF488), Alexa Fluor® 546 (sc-8005 AF546), Alexa Fluor® 594 (sc-8005 AF594) or Alexa Fluor® 647 (sc-8005 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8005 AF680) or Alexa Fluor® 790 (sc-8005 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, ERα (D-12) is available conjugated to TRITC (sc-8005 TRITC, 200 µg/ml), for IF, IHC(P) and FCM.

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**APPLICATIONS**

ERα (D-12) 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).

Suitable for use as control antibody for ERα siRNA (h): sc-29305, ERα siRNA (m): sc-29306, ERα shRNA (h): sc-45949, ERα shRNA Plasmid (h): sc-29305-Sh, ERα shRNA Plasmid (m): sc-29305-Sh, ERα shRNA Plasmid (r): sc-45949-9, ERα shRNA (h) Lentiviral Particles: sc-29305-V, ERα shRNA (m) Lentiviral Particles: sc-29305-V and ERα shRNA (r) Lentiviral Particles: sc-45949-V.

ERα (D-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ERα long isoform: 86 kDa.
Molecular Weight of ERα short isoform: 54 kDa.
Molecular Weight of ERβ: 48 kDa.
Molecular Weight of ERβ: 36 kDa.
Positive Controls: MCF7 whole cell lysate: sc-2206, T-47D cell lysate: sc-2293 or ZR-75-1 cell lysate: sc-2241.

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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