

ER α (1D5): sc-56833

BACKGROUND

Estrogen receptors (ER) are members of the steroid/thyroid hormone receptor superfamily of ligand-activated transcription factors. Estrogen receptors, including ER α and ER β , contain DNA binding and ligand binding domains and are critically involved in regulating the normal function of reproductive tissues. ER α and ER β 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 ER α and ER β may be regulated by distinct mechanisms even though they share many functional characteristics.

REFERENCES

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- 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.
- Kliwer, S.A., et al. 1992. Retinoid X receptor interacts with nuclear receptors in retinoic acid, thyroid hormone and vitamin D₃ signaling. *Nature* 355: 446-449.
- Arnold, S.F., et al. 1995. Phosphorylation of the human estrogen receptor on Tyrosine 537 *in vivo* and by Src family tyrosine kinases *in vitro*. *Mol. Endocrinol.* 9: 24-33.
- Mosselman, S., et al. 1996. ER β : identification and characterization of a novel human estrogen receptor. *FEBS Lett.* 392: 49-53.
- Byers, M., et al. 1997. ER β mRNA expression in rat ovary: downregulation by gonadotropins. *Mol. Endocrinol.* 11: 172-182.

CHROMOSOMAL LOCATION

Genetic locus: ESR1 (human) mapping to 6q25.1.

SOURCE

ER α (1D5) is a mouse monoclonal antibody raised against recombinant full length ER α of human origin.

PRODUCT

Each vial contains 250 μ l culture supernatant containing IgG₁ with < 0.1% sodium azide.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

APPLICATIONS

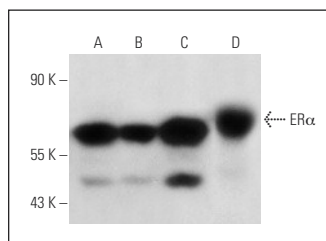
ER α (1D5) is recommended for detection of ER α of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ l per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:500) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:30-1:3000).

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

Molecular Weight of ER α : 66 kDa.

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

DATA



ER α (1D5): sc-56833. Western blot analysis of ER α expression in MCF7 (A) and T-47D (B) whole cell lysates and MCF7 nuclear extract (C) and human breast tissue extract (D).

SELECT PRODUCT CITATIONS

- Wang, X.Y., et al. 2010. Musashi1 regulates breast tumor cell proliferation and is a prognostic indicator of poor survival. *Mol. Cancer* 9: 221.
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- Wong, P.P., et al. 2014. Identification of MAGEA antigens as causal players in the development of tamoxifen-resistant breast cancer. *Oncogene* 33: 4579-4588.
- Hagrass, H.A., et al. 2014. Methylation status and protein expression of RASSF1A in breast cancer patients. *Mol. Biol. Rep.* 41: 57-65.
- Hagrass, H.A., et al. 2015. Circulating microRNAs—a new horizon in molecular diagnosis of breast cancer. *Genes Cancer* 6: 281-287.

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.