

Estrogen Receptor α (10H12B10): sc-130072

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. 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. 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

- Mason, B.H., et al. 1983. Progesterone and estrogen receptors as prognostic variables in breast cancer. *Cancer Res.* 43: 2985-2990.
- Evans, R.M. 1988. The steroid and thyroid hormone receptor superfamily. *Science* 240: 889-895.

CHROMOSOMAL LOCATION

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

SOURCE

Estrogen Receptor α (10H12B10) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 301-595 of Estrogen Receptor α of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Estrogen Receptor α (10H12B10) is recommended for detection of Estrogen Receptor α of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of Estrogen Receptor α long isoform: 66 kDa.

Molecular Weight of Estrogen Receptor α short isoform: 54 kDa.

Molecular Weight of ER46: 48 kDa.

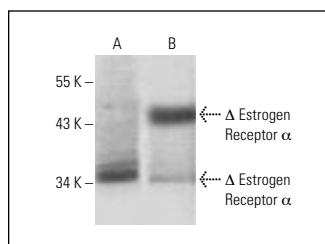
Molecular Weight of ER36: 36 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, ZR-75-1 cell lysate: sc-2241 or MCF7 nuclear extract: sc-2149.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Estrogen Receptor α (10H12B10): sc-130072. Western blot analysis of truncated human ER α -His (A) and truncated human ER α -Trx (B) recombinant proteins.

SELECT PRODUCT CITATIONS

- Zhang, J., et al. 2016. Alternative splicing of estrogen receptor α in hepatocellular carcinoma. *BMC Cancer* 16: 926.
- Yang, H., et al. 2018. SMURF1 facilitates estrogen receptor α signaling in breast cancer cells. *J. Exp. Clin. Cancer Res.* 37: 24.
- Lee, S., et al. 2021. Estrogen aggravates tumor growth in a diffuse gastric cancer xenograft model. *Pathol. Oncol. Res.* 27: 622733.

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.

PROTOCOLS

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



See **Estrogen Receptor α (C-3): sc-514857** for Estrogen Receptor α antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.