

# ER $\beta$ (1531): sc-53494

## BACKGROUND

Estrogen receptors (ER) are members of the steroid/thyroid hormone receptor superfamily of ligand-activated transcription factors. Estrogen receptors, including ER $\alpha$  and ER $\beta$ , 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 $\alpha$  and ER $\beta$  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 $\alpha$  and ER $\beta$  may be regulated by distinct mechanisms even though they share many functional characteristics.

## CHROMOSOMAL LOCATION

Genetic locus: ESR2 (human) mapping to 14q23.2; Esr2 (mouse) mapping to 12 C3.

## SOURCE

ER $\beta$  (1531) is a mouse monoclonal antibody raised against amino acids 256-505 of estrogen receptor  $\beta$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ER $\beta$  (1531) is available conjugated to agarose (sc-53494 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53494 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53494 PE), fluorescein (sc-53494 FITC), Alexa Fluor<sup>®</sup> 488 (sc-53494 AF488), Alexa Fluor<sup>®</sup> 546 (sc-53494 AF546), Alexa Fluor<sup>®</sup> 594 (sc-53494 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-53494 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-53494 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-53494 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

ER $\beta$  (1531) is recommended for detection of ER $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with ER $\alpha$ .

Suitable for use as control antibody for ER $\beta$  siRNA (h): sc-35325, ER $\beta$  siRNA (m): sc-35326, ER $\beta$  siRNA (r): sc-77356, ER $\beta$  shRNA Plasmid (h): sc-35325-SH, ER $\beta$  shRNA Plasmid (m): sc-35326-SH, ER $\beta$  shRNA Plasmid (r): sc-77356-SH, ER $\beta$  shRNA (h) Lentiviral Particles: sc-35325-V, ER $\beta$  shRNA (m) Lentiviral Particles: sc-35326-V and ER $\beta$  shRNA (r) Lentiviral Particles: sc-77356-V.

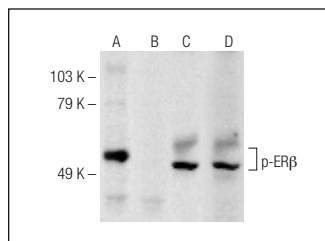
Molecular Weight of ER $\beta$ : 56 kDa.

Positive Controls: F9 cell lysate: sc-2245, NIH/3T3 whole cell lysate: sc-2210 or rat brain extract: sc-2392.

## STORAGE

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

## DATA



Western blot analysis of ER $\beta$  phosphorylation in untreated (A, C) and lambda protein phosphatase (sc-200312A) treated (B, D) rat brain tissue extracts. Antibodies tested include p-ER $\beta$  (Ser 87): sc-32826 (A, B) and ER $\beta$  (1531): sc-53494 (C, D).

## SELECT PRODUCT CITATIONS

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- Dietel, E., et al. 2019. Crosstalks of the PTPIP51 interactome revealed in Her2 amplified breast cancer cells by the novel small molecule LDC3/dynarrestin. *PLoS ONE* 14: e0216642.
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## RESEARCH USE

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

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