SANTA CRUZ BIOTECHNOLOGY, INC.

p-ERβ (Ser 87): sc-32826

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.

REFERENCES

1. Evans, R.M. 1988. The steroid and thyroid hormone receptor superfamily. Science 240: 889-895.
2. 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.

CHROMOSOMAL LOCATION

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

SOURCE

p-ERβ (Ser 87) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 87 phosphorylated ERβ 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.

Blocking peptide available for competition studies, sc-32826 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-ERβ (Ser 87) is recommended for detection of Ser 87 phosphorylated ERβ 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-ERβ (Ser 87) is also recommended for detection of correspondingly phosphorylated ERβ in additional species, including equine, canine, bovine, porcine and avian.

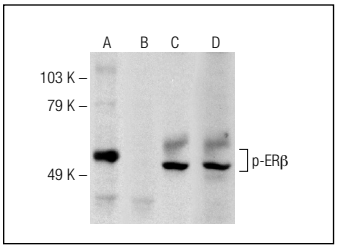
Suitable for use as control antibody for ERβ siRNA (h): sc-35325, ERβ siRNA (m): sc-35326, ERβ shRNA Plasmid (h): sc-35325-SH, ERβ shRNA Plasmid (m): sc-35326-SH, ERβ shRNA (h) Lentiviral Particles: sc-35325-V and ERβ shRNA (m) Lentiviral Particles: sc-35326-V.

Molecular Weight of p-ERβ: 56 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



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

SELECT PRODUCT CITATIONS

1. Majidi, M., et al. 2007. Nongenomic β estrogen receptors enhance β1 adrenergic signaling induced by the nicotine-derived carcinogen 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone in human small airway epithelial cells. Cancer Res. 67: 6863-6871.
2. Sauvé, K., et al. 2009. Positive feedback activation of estrogen receptors by the CXCL12-CXCR4 pathway. Cancer Res. 69: 5793-5800.
3. Richardson, A.E., et al. 2011. Insulin-like growth factor-2 (IGF-2) activates estrogen receptor-α and -β via the IGF-1 and the Insulin receptors in breast cancer cells. Growth Factors 29: 82-93.
4. Qu, N., et al. 2014. Combination of PPT with LiCl treatment prevented bilateral ovariectomy-induced hippocampal-dependent cognition deficit in rats. Mol. Neurobiol. E-published.

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.