**BACKGROUND**

Estrogen receptors (ER) are members of the steroid/thyroid hormone receptor superfamly 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.

**CHROMOSOMAL LOCATION**

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

**SOURCE**

ERβ (1531) is a mouse monoclonal antibody raised against amino acids 256-505 of estrogen receptor β of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

ERβ (1531) is recommended for detection of 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 (1ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non-cross-reactive with ERα.

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

Molecular Weight of ERβ: 56 kDa.

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

**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.

**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 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**


See ERβ (B-3): sc-373853 for ERβ antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.