

ES (D-16): sc-33500

BACKGROUND

Estrone sulfatase (ES) is an enzymatic homodimer associated with the endoplasmic reticulum membrane, stimulated by retinoids, and responsible for the conversion of sulfated steroid precursors into bioactive estrogens during pregnancy. High expression levels have been reported in breast carcinoma and acute promyelocytic leukemia, as ES supports tumor growth. Therefore, ES is currently a potential drug target in the treatment of estrogen- and androgen-dependent diseases. Many studies have reported on the effects of reversible and irreversible ES activity inhibition from a wide array of molecules, though the little is known about the regulation of ES expression or activity. Mutations in the ES gene result in X-linked ichthyosis, a diskernization disorder characterized by the presence of prominent scales.

REFERENCES

- Rodig, H., et al. 2002. Distribution of estrone sulfatase in rat brain determined by *in vitro* autoradiography with 16α -[^{18}F]fluoroestradiol-3,17 β -disulfamate. *Appl. Radiat. Isot.* 56: 773-780.
- Hernandez-Guzman, F.G., et al. 2003. Structure of human estrone sulfatase suggests functional roles of membrane association. *J. Biol. Chem.* 278: 22989-22997.
- Walter, G., et al. 2004. 2-phenylindole sulfamates: inhibitors of steroid sulfatase with antiproliferative activity in MCF-7 breast cancer cells. *J. Steroid Biochem. Mol. Biol.* 88: 409-420.
- Utsunomiya, H., et al. 2004. Steroid sulfatase and estrogen sulfotransferase in human endometrial carcinoma. *Clin. Cancer Res.* 10: 5850-5856.
- Billich, A., et al. 2004. Confocal fluorescence detection expanded to UV excitation: the first continuous fluorimetric assay of human steroid sulfatase in nanoliter volume. *Assay Drug Dev. Technol.* 2: 21-30.

CHROMOSOMAL LOCATION

Genetic locus: STS (human) mapping to Xp22.31; Sts (mouse) mapping to X,Y.

SOURCE

ES (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Estrone Sulfatase of rat 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-33500 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

ES (D-16) is recommended for detection of Estrone Sulfatase 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ES (D-16) is also recommended for detection of Estrone Sulfatase in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ES siRNA (h): sc-45269, ES siRNA (m): sc-45270, ES shRNA Plasmid (h): sc-45269-SH, ES shRNA Plasmid (m): sc-45270-SH, ES shRNA (h) Lentiviral Particles: sc-45269-V and ES shRNA (m) Lentiviral Particles: sc-45270-V.

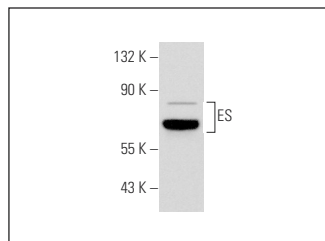
Molecular Weight of ES: 65 kDa.

Positive Controls: human tonsil tissue extract: sc-364263, MCF7 whole cell lysate: sc-2206 or MDA-MB-231 cell lysate: sc-2232.

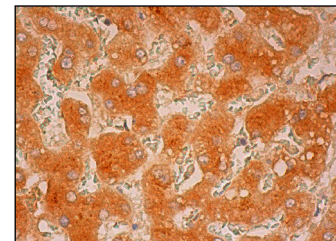
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



ES (D-16): sc-33500. Western blot analysis of ES expression in human tonsil tissue extract.



ES (D-16): sc-33500. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

RESEARCH USE

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