

STS (A-6): sc-518238



The Power to Question

BACKGROUND

Steroid sulfatase (STS) 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. Many studies have reported on the effects of reversible and irreversible STS activity inhibition from a wide array of molecules, though the little is known about the regulation of STS expression or activity. Mutations in the STS gene result in X-linked ichthyosis, a diskernization disorder characterized by the presence of prominent scales. High expression levels have been reported in human breast carcinoma and acute promyelocytic leukemia, as STS supports tumor growth. Therefore, STS is currently a potential drug target in the treatment of estrogen- and androgen-dependent diseases.

REFERENCES

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2. Hernandez-Guzman, F.G., et al. 2003. Structure of human estrone sulfatase suggests functional roles of membrane association. *J. Biol. Chem.* 278: 22989-22997.
3. 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.
4. Utsunomiya, H., et al. 2004. Steroid sulfatase and estrogen sulfotransferase in human endometrial carcinoma. *Clin. Cancer. Res.* 10: 5850-5856.
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6. Hughes, P.J., et al. 2005. Retinoid-mediated stimulation of steroid sulfatase activity in myeloid leukemic cell lines requires RAR α and RXR and involves the phosphoinositide 3-kinase and ERK-MAP kinase pathways. *J. Cell. Biochem.* 97: 327-350.
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CHROMOSOMAL LOCATION

Genetic locus: STS (human) mapping to Xp22.31.

SOURCE

STS (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 514-531 of STS of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

STS (A-6) is recommended for detection of STS of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

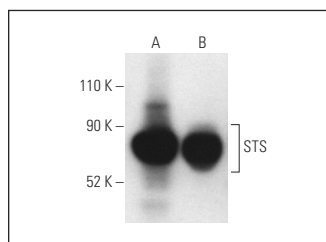
Molecular Weight of STS: 65 kDa.

Positive Controls: human placenta extract: sc-363772 or HeLa whole cell lysate: sc-2200.

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. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



STS (A-6): sc-518238. Western blot analysis of STS expression in human placenta tissue extract (A) and HeLa whole cell lysate (B). Detection reagent used: m-IgG κ BP-HRP: sc-516102.

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 for detailed protocols and support products.