

SULT2B1 (E-12): sc-46539

BACKGROUND

The soluble sulfotransferases contribute to the elimination of xenobiotics, the activation of procarcinogens, and the regulation of hormones. Members of the three groups comprising this superfamily show selectivity to certain substrate compounds. SULT1 sulfotransferases exhibit N-sulfating activities of carcinogenic heterocyclic amines, and are selective toward phenols, whereas SULT2 enzymes prefer hydroxysteroids and SULT3 family members are selective for N-substituted aryl and alicyclic compounds. SULT2A1 catalyzes the sulfonation of procarcinogen xenobiotics, hydroxysteroids and bile acids, and is highly expressed in adrenal and liver tissues. SULT2A1 plays a role in hepatic cholesterol homeostasis. SULT2B1 consists of two isoforms, SULT2B1a and SULT2B1b, which are transcribed from the same gene by alternative splicing of their first exons. Both isoforms are highly selective for the sulphation of 3 β -hydroxysteroids, such as pregnenolone, epiandrosterone, DHEA and androstenediol. SULT2B1b is expressed in prostate, skin, placenta and lung tissues.

REFERENCES

- Nagata, K., et al. 1997. Arylamine activating sulfotransferase in liver. *Mutat. Res.* 376: 267-272.
- Yamazoe, Y., et al. 1999. Sulfotransferase catalyzing sulfation of heterocyclic amines. *Cancer Lett.* 143: 103-107.
- Meinl, W. and Glatt, H. 2001. Structure and localization of the human SULT1B1 gene: neighborhood to SULT1E1 and a SULT1D pseudogene. *Biochem. Biophys. Res. Commun.* 288: 855-862.
- Meloche, C.A., et al. 2001. Expression and characterization of the human 3 beta-hydroxysteroid sulfotransferases (SULT2B1a and SULT2B1b). *J. Steroid Biochem. Mol. Biol.* 77: 261-269.
- He, D., et al. 2004. Different subcellular localization of sulphotransferase 2B1b in human placenta and prostate. *Biochem. J.* 379: 533-540.
- Fang, H.L., et al. 2005. Regulation of human hepatic hydroxysteroid sulfotransferase gene expression by the peroxisome proliferator-activated receptor alpha transcription factor. *Mol. Pharmacol.* 67: 1257-1267.
- Saner, K.J., et al. 2005. Steroid sulfotransferase 2A1 gene transcription is regulated by steroidogenic factor 1 and GATA-6 in the human adrenal. *Mol. Endocrinol.* 19: 184-197.
- He, D., et al. 2005. Identification and immunohistochemical localization of Sulfotransferase 2B1b (SULT2B1b) in human lung. *Biochim. Biophys. Acta* 1724: 119-126.

CHROMOSOMAL LOCATION

Genetic locus: Sult2b1 (mouse) mapping to 7 B3.

SOURCE

SULT2B1 (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SULT2B1 of mouse origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-46539 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SULT2B1 (E-12) is recommended for detection of SULT2B1 isoforms 1 and 2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for SULT2B1 siRNA (m): sc-44400, SULT2B1 shRNA Plasmid (m): sc-44400-SH and SULT2B1 shRNA (m) Lentiviral Particles: sc-44400-V.

Molecular Weight of mouse and rat SULT2B1: 30 kDa.

Positive Controls: rat kidney extract: sc-2394 or mouse small intestine tissue extract.

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) 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.

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.