SANTA CRUZ BIOTECHNOLOGY, INC.

SULT2A1 (F-10): sc-376629

The Power to Question

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 3β-hydroxysteroids such as pregnenolone, epiandrosterone, DHEA and androstenediol. SULT2B1b is expressed in prostate, skin, placenta and lung.

REFERENCES

1. Nagata, K., et al. 1997. Arylamine activating sulfotransferase in liver. Mutat. Res. 376: 267-272.
2. Yamazoe, Y., et al. 1999. Sulfotransferase catalyzing sulfation of heterocyclic amines. Cancer Lett. 143: 103-107.
3. Meinl, W., et al. 2001. Structure and localization of the human SULT1B1 gene: neighborhood to SULT1E1 and a SULT1D pseudogene. Biochem. Biophys. Res. Commun. 288: 855-862.
4. Meloche, C.A., et al. 2001. Expression and characterization of the human 3 β-hydroxysteroid sulfotransferases (SULT2B1a and SULT2B1b). J. Steroid Biochem. Mol. Biol. 77: 261-269.
5. He, D., et al. 2004. Different subcellular localization of sulphotransferase 2B1b in human placenta and prostate. Biochem. J. 379: 533-540.
6. Fang, H.L., et al. 2005. Regulation of human hepatic hydroxysteroid sulfotransferase gene expression by the peroxisome proliferator-activated receptor α transcription factor. Mol. Pharmacol. 67: 1257-1267.
7. 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.
8. 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: SULT2A1 (human) mapping to 19q13.33.

SOURCE

SULT2A1 (F-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 57-93 within an internal region of SULT2A1 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.in.

APPLICATIONS

SULT2A1 (F-10) is recommended for detection of SULT2A1 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for SULT2A1 siRNA (h): sc-44397, SULT2A1 shRNA Plasmid (h): sc-44397-SH and SULT2A1 shRNA (h) Lentiviral Particles: sc-44397-V.

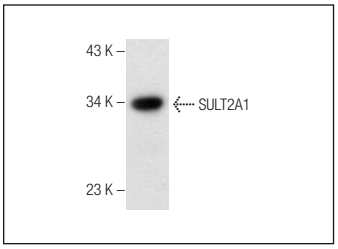
Molecular Weight of SULT2A1: 35 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

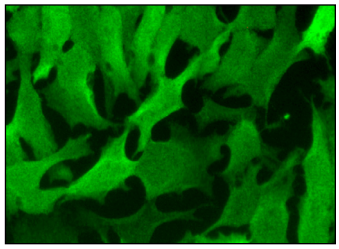
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



SULT2A1 (F-10): sc-376629. Western blot analysis of SULT2A1 expression in Hep G2 whole cell lysate.



SULT2A1 (F-10): sc-376629. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic and membrane localization.

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.