SANTA CRUZ BIOTECHNOLOGY, INC.

SULT2A1 (FL-285): sc-32941

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 andro-stenediol. SULT2B1b is expressed in prostate, skin, placenta and lung.

REFERENCES

1. Otterness, D.M., et al. 1992. Human liver dehydroepiandrosterone sulfotransferase: molecular cloning and expression of cDNA. Mol. Pharmacol. 41: 865-872.
2. Kong, A.N., et al. 1992. Molecular cloning of the alcohol/hydroxysteroid form (hSTa) of sulfotransferase from human liver. Biochem. Biophys. Res. Commun. 187: 448-454.
3. Comer, K.A., et al. 1993. Cloning and expression of human liver dehydroepiandrosterone sulphotransferase. Biochem. J. 289: 233-240.
4. Luu-The, V., et al. 1995. Structural characterization and expression of the human dehydroepiandrosterone sulfotransferase gene. DNA Cell Biol. 14: 511-518.
5. Forbes, K.J., et al. 1995. Human fetal adrenal hydroxysteroid sulphotransferase: cDNA cloning, stable expression in V79 cells and functional characterization of the expressed enzyme. Mol. Cell Endocrinol. 112: 53-60.

CHROMOSOMAL LOCATION

Genetic locus: SULT2A1 (human) mapping to 19q13.33.

SOURCE

SULT2A1 (FL-285) is a rabbit polyclonal antibody raised against amino acids 1-285 representing full length SULT2A1 of human origin.

PRODUCT

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

STORAGE

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

RESEARCH USE

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

APPLICATIONS

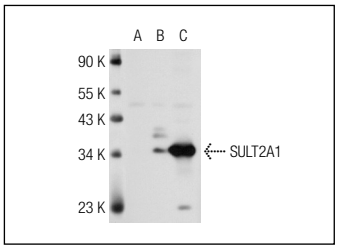
SULT2A1 (FL-285) is recommended for detection of SULT2A1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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); partially cross reactive with other SULT family members.

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.

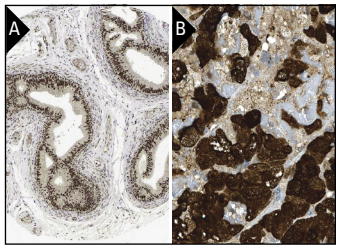
Molecular Weight of SULT2A1: 35 kDa.

Positive Controls: SULT2A1 (h): 293T Lysate: sc-174555 or Hep G2 cell lysate: sc-2227.

DATA



SULT2A1 (FL-285): sc-32941. Western blot analysis of SULT2A1 expression in non-transfected 293T: sc-117752 (**A**), human SULT2A1 transfected 293T: sc-174555 (**B**) and Hep G2 (**C**) whole cell lysates.



SULT2A1 (FL-285): sc-32941. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and nuclear staining of cortical cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

PROTOCOLS

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