

SULT2B1 (A-3): sc-166423

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.

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. Meinel, 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.

CHROMOSOMAL LOCATION

Genetic locus: SULT2B1 (human) mapping to 19q13.33; Sult2b1 (mouse) mapping to 7 B4.

SOURCE

SULT2B1 (A-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 281-310 at the C-terminus of SULT2B1 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SULT2B1 (A-3) is available conjugated to agarose (sc-166423 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166423 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166423 PE), fluorescein (sc-166423 FITC), Alexa Fluor® 488 (sc-166423 AF488), Alexa Fluor® 546 (sc-166423 AF546), Alexa Fluor® 594 (sc-166423 AF594) or Alexa Fluor® 647 (sc-166423 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166423 AF680) or Alexa Fluor® 790 (sc-166423 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166423 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

SULT2B1 (A-3) is recommended for detection of SULT2B1 isoforms 1 and 2 of mouse, rat and 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), 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).

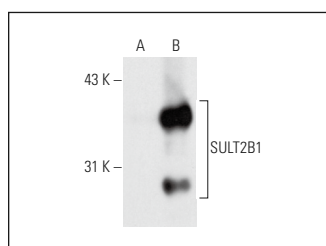
Suitable for use as control antibody for SULT2B1 siRNA (h): sc-44399, SULT2B1 siRNA (m): sc-44400, SULT2B1 shRNA Plasmid (h): sc-44399-SH, SULT2B1 shRNA Plasmid (m): sc-44400-SH, SULT2B1 shRNA (h) Lentiviral Particles: sc-44399-V and SULT2B1 shRNA (m) Lentiviral Particles: sc-44400-V.

Molecular Weight of mouse and rat SULT2B1: 30 kDa.

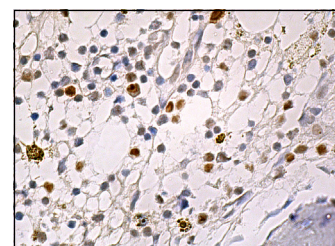
Molecular Weight of human SULT2B1: 41 kDa.

Positive Controls: SULT2B1 (m2): 293T Lysate: sc-127610, mouse small intestine extract: sc-364252 or rat kidney extract: sc-2394.

DATA



SULT2B1 (A-3): sc-166423. Western blot analysis of SULT2B1 expression in non-transfected: sc-117752 (A) and mouse SULT2B1 transfected: sc-127610 (B) 293T whole cell lysates.



SULT2B1 (A-3): sc-166423. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic and nuclear staining of subset of hematopoietic cells.

SELECT PRODUCT CITATIONS

1. Xu, D., et al. 2022. Cholesterol sulfate alleviates ulcerative colitis by promoting cholesterol biosynthesis in colonic epithelial cells. *Nat. Commun.* 13: 4428.

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.

PROTOCOLS

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