



# SULT2A1 (h): 293T Lysate: sc-174555

## 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 $\beta$ -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. Meini, 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.
4. 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.
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  $\alpha$  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: 119-26.

## CHROMOSOMAL LOCATION

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

## PRODUCT

SULT2A1 (h): 293T Lysate represents a lysate of human SULT2A1 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## RESEARCH USE

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

## APPLICATIONS

SULT2A1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive SULT2A1 antibodies. Recommended use: 10-20  $\mu$ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.