

SULT1E1 (E-12): sc-376009

BACKGROUND

The soluble sulfotransferases contribute to the elimination of xenobiotics, the activation of procarcinogens and the regulation of hormones by catalyzing the sulfate conjugation of these substances. Members of the three groups comprising this superfamily (namely SULT1, SULT2 and SULT3) 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. SULT1E1, also known as STE, is a 294 amino acid member of the SULT1 family. Localized to the cytoplasm and expressed in intestine, liver and kidney, SULT1E1 exists as a homodimer that is thought to control estrogen receptor (ER) levels by sulfurylating free estradiol. Defects in the gene encoding SULT1E1 are associated with an increased risk for endometrial cancer, suggesting a role for SULT1E1 in tumorigenesis.

CHROMOSOMAL LOCATION

Genetic locus: SULT1E1 (human) mapping to 4q13.3; Sult1e1 (mouse) mapping to 5 E1.

SOURCE

SULT1E1 (E-12) is a mouse monoclonal antibody raised against amino acids 54-93 mapping within an internal region of SULT1E1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SULT1E1 (E-12) is available conjugated to agarose (sc-376009 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376009 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376009 PE), fluorescein (sc-376009 FITC), Alexa Fluor[®] 488 (sc-376009 AF488), Alexa Fluor[®] 546 (sc-376009 AF546), Alexa Fluor[®] 594 (sc-376009 AF594) or Alexa Fluor[®] 647 (sc-376009 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376009 AF680) or Alexa Fluor[®] 790 (sc-376009 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SULT1E1 (E-12) is recommended for detection of SULT1E1 of mouse, rat and 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), 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 SULT1E1 siRNA (h): sc-88903, SULT1E1 siRNA (m): sc-153924, SULT1E1 shRNA Plasmid (h): sc-88903-SH, SULT1E1 shRNA Plasmid (m): sc-153924-SH, SULT1E1 shRNA (h) Lentiviral Particles: sc-88903-V and SULT1E1 shRNA (m) Lentiviral Particles: sc-153924-V.

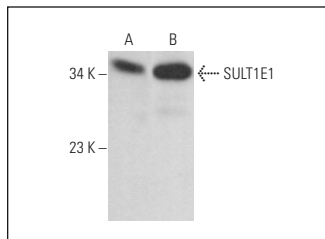
Molecular Weight of SULT1E1: 35 kDa.

Positive Controls: mouse brain extract: sc-2253 or Hep G2 cell lysate: sc-2227.

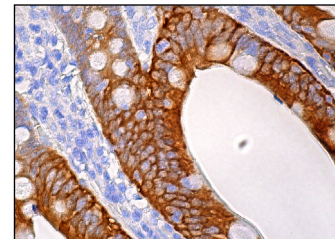
STORAGE

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

DATA



SULT1E1 (E-12): sc-376009. Western blot analysis of SULT1E1 expression in Hep G2 whole cell lysate (A) and mouse brain tissue extract (B).



SULT1E1 (E-12): sc-376009. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Hemachandra, L.P., et al. 2014. SERMs attenuate estrogen-induced malignant transformation of human mammary epithelial cells by upregulating detoxification of oxidative metabolites. *Cancer Prev. Res.* 7: 505-515.
- Dubaisi, S., et al. 2018. Regulation of cytosolic sulfotransferases in models of human hepatocyte development. *Drug Metab. Dispos.* 46: 1146-1156.
- Jacenic, D., et al. 2019. Sex- and age-related estrogen signaling alteration in inflammatory bowel diseases: modulatory role of estrogen receptors. *Int. J. Mol. Sci.* 20: 3175.
- Sipilä, P., et al. 2020. The lack of HSD17B3 in male mice results in disturbed Leydig cell maturation and endocrine imbalance akin to humans with HSD17B3 deficiency. *FASEB J.* 34: 6111-6128.
- Lardone, M.C., et al. 2021. Testicular steroid sulfatase overexpression is associated with Leydig cell dysfunction in primary spermatogenic failure. *Andrology* 9: 657-664.
- Park, H.J., et al. 2021. Evaluation of testicular toxicity upon fetal exposure to bisphenol A using an organ culture method. *Chemosphere* 270: 129445.

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.

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