

SULT1C2 (E-15): sc-324367

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. SULT1C2 (sulfotransferase family, cytosolic, 1C, member 2), also known as ST1C1, ST1C2 or SULT1C1, is a 296 amino acid member of the SULT1 group of sulfotransferases. Localized to the cytoplasm and expressed in adult kidney, thyroid and stomach, as well as in fetal kidney and liver, SULT1C2 catalyzes the transfer of sulfate from PAPS (3'-phosphoadenosine-5'-phosphosulfate) to phenol-containing compounds, including hormones and neurotransmitters. Two isoforms of SULT1C2, designated short and long, exist as a result of alternative splicing events.

REFERENCES

- Weinshilboum, R.M., et al. 1997. Sulfation and sulfotransferases 1: Sulfotransferase molecular biology: cDNAs and genes. *FASEB J.* 11: 3-14.
- Her, C., et al. 1997. Human sulfotransferase SULT1C1: cDNA cloning, tissue-specific expression, and chromosomal localization. *Genomics* 41: 467-470.
- Sakakibara, Y., et al. 1998. Molecular cloning, expression, and characterization of novel human SULT1C sulfotransferases that catalyze the sulfonation of N-hydroxy-2-acetylaminofluorene. *J. Biol. Chem.* 273: 33929-33935.
- Li, X., et al. 2000. Sulfation of iodothyronines by human sulfotransferase 1C1 (SULT1C1)*. *Biochem. Pharmacol.* 60: 1713-1716.
- Freimuth, R.R., et al. 2000. Human sulfotransferases SULT1C1 and SULT1C2: cDNA characterization, gene cloning, and chromosomal localization. *Genomics* 65: 157-165.
- Glatt, H., et al. 2000. Sulfotransferases: genetics and role in toxicology. *Toxicol. Lett.* 112-113: 341-348.
- Glatt, H., et al. 2001. Human cytosolic sulphotransferases: genetics, characteristics, toxicological aspects. *Mutat. Res.* 482: 27-40.
- Freimuth, R.R., et al. 2001. Human sulfotransferase SULT1C1 pharmacogenetics: gene resequencing and functional genomic studies. *Pharmacogenetics.* 11: 747-756.

CHROMOSOMAL LOCATION

Genetic locus: SULT1C2 (human) mapping to 2q12.3.

SOURCE

SULT1C2 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SULT1C2 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-324367 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SULT1C2 (E-15) is recommended for detection of SULT1C2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with SULT1C3 or SULT1C4.

Suitable for use as control antibody for SULT1C2 siRNA (h): sc-94306, SULT1C2 shRNA Plasmid (h): sc-94306-SH and SULT1C2 shRNA (h) Lentiviral Particles: sc-94306-V.

Molecular Weight of SULT1C2: 35 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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