SANTA CRUZ BIOTECHNOLOGY, INC.

SULT1C2 siRNA (h): sc-94306

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

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2. Her, C., et al. 1997. Human sulfotransferase SULT1C1: cDNA cloning, tissue-specific expression, and chromosomal localization. Genomics 41: 467-470.
3. 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.
4. Li, X., et al. 2000. Sulfation of iodothyronines by human sulfotransferase 1C1 (SULT1C1). Biochem. Pharmacol. 60: 1713-1716.
5. Freimuth, R.R., et al. 2000. Human sulfotransferases SULT1C1 and SULT1C2: cDNA characterization, gene cloning, and chromosomal localization. Genomics 65: 157-165.
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CHROMOSOMAL LOCATION

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

PRODUCT

SULT1C2 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SULT1C2 shRNA Plasmid (h): sc-94306-SH and SULT1C2 shRNA (h) Lentiviral Particles: sc-94306-V as alternate gene silencing products.

For independent verification of SULT1C2 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-94306A, sc-94306B and sc-94306C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCL, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SULT1C2 siRNA (h) is recommended for the inhibition of SULT1C2 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SULT1C2 gene expression knockdown using RT-PCR Primer: SULT1C2 (h)-PR: sc-94306-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.