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# SULT1C1 siRNA (m): sc-153921

## BACKGROUND

SULT1C1 (sulfotransferase 1C1), also known as Sult1a2 or phenol sulfotransferase, is a 304 amino acid cytoplasmic protein that belongs to the sulfotransferase 1 family and is only expressed in olfactory tissue. While it may be involved in the activation of carcinogenic hydroxylamines, SULT1C1 acts as a sulfotransferase that utilizes 3'-phospho-5'-adenylyl sulfate (PAPS) as a sulfonate donor to catalyze the sulfate conjugation of drugs, xenobiotic compounds, hormones and neurotransmitters. SULT1C1 shows activity towards p-nitrophenol, N-hydroxy-2-acetylaminofluorene (N-OH-2AAF) and cinnamyl alcohol at pH 6.4, as well as a number of phenolic odorants including eugenol, guaiacol and 2-naphthol. The gene that encodes SULT1C1 maps to mouse chromosome 17 C.

## REFERENCES

1. Khan, A.S., Taylor, B.R., Filie, J.D., Ringer, D.P. and Kozak, C.A. 1995. Rat phenol-preferring sulfotransferase genes (Stp and Stp2): localization to mouse chromosomes 7 and 17. *Genomics* 26: 417-419.
2. Miyawaki, A., Homma, H., Tamura, H., Matsui, M. and Mikoshiba, K. 1996. Zonal distribution of sulfotransferase for phenol in olfactory sustentacular cells. *EMBO J.* 15: 2050-2055.
3. Her, C., Raftogianis, R. and Weinshilboum, R.M. 1996. Human phenol sulfotransferase STP2 gene: molecular cloning, structural characterization, and chromosomal localization. *Genomics* 33: 409-420.
4. Tamura, H.O., Harada, Y., Miyawaki, A., Mikoshiba, K. and Matsui, M. 1998. Molecular cloning and expression of a cDNA encoding an olfactory-specific mouse phenol sulphotransferase. *Biochem. J.* 331: 953-958.
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6. Blanchard, R.L., Freimuth, R.R., Buck, J., Weinshilboum, R.M. and Coughtrie, M.W. 2004. A proposed nomenclature system for the cytosolic sulfotransferase (SULT) superfamily. *Pharmacogenetics* 14: 199-211.

## CHROMOSOMAL LOCATION

Genetic locus: Sult1c1 (mouse) mapping to 17 C.

## PRODUCT

SULT1C1 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SULT1C1 shRNA Plasmid (m): sc-153921-SH and SULT1C1 shRNA (m) Lentiviral Particles: sc-153921-V as alternate gene silencing products.

## PROTOCOLS

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

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

SULT1C1 siRNA (m) is recommended for the inhibition of SULT1C1 expression in mouse 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  $\mu$ M in 66  $\mu$ l. 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 SULT1C1 gene expression knockdown using RT-PCR Primer: SULT1C1 (m)-PR: sc-153921-PR (20  $\mu$ l). 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.