



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

SULT1D1 siRNA (m): sc-153923

BACKGROUND

SULT1D1 (sulfotransferase 1 family member D1), also known as St1d1, dopamine sulfotransferase Sult1d1, amine N-sulfotransferase or tyrosine-ester sulfotransferase, is a 295 amino acid cytoplasmic protein that belongs to the sulfotransferase 1 family. SULT1D1 is a sulfotransferase with broad substrate specificity that utilizes 3'-phospho-5'-adenylyl sulfate (PAPS) as a sulfonate donor to catalyze the sulfate conjugation of catecholamines, such as dopamine, prostaglandins, leukotriene E4, drugs and xenobiotic compounds. SULT1D1 has sulfotransferase activity towards p-nitrophenol, 2-naphthylamine and minoxidil. Sulfonation increases the water solubility of most compounds, and therefore their renal excretion, but it can also result in bioactivation to form active metabolites. The gene that encodes SULT1D1 maps to mouse chromosome 5 E1.

REFERENCES

1. Liu, M.C., Sakakibara, Y. and Liu, C.C. 1999. Bacterial expression, purification, and characterization of a novel mouse sulfotransferase that catalyzes the sulfation of eicosanoids. *Biochem. Biophys. Res. Commun.* 254: 65-69.
2. Tsoi, C., Falany, C.N., Morgenstern, R. and Swedmark, S. 2001. Identification of a new subfamily of sulphotransferases: cloning and characterization of canine SULT1D1. *Biochem. J.* 356: 891-897.
3. Shimada, M., Terazawa, R., Kamiyama, Y., Honma, W., Nagata, K. and Yamazoe, Y. 2004. Unique properties of a renal sulfotransferase, St1d1, in dopamine metabolism. *J. Pharmacol. Exp. Ther.* 310: 808-814.
4. Freimuth, R.R., Wiepert, M., Chute, C.G., Wieben, E.D. and Weinshilboum, R.M. 2004. Human cytosolic sulfotransferase database mining: identification of seven novel genes and pseudogenes. *Pharmacogenomics J.* 4: 54-65.
5. Teramoto, T., Sakakibara, Y., Inada, K., Kurogi, K., Liu, M.C., Suiko, M., Kimura, M. and Kakuta, Y. 2008. Crystal structure of mSULT1D1, a mouse catecholamine sulfotransferase. *FEBS Lett.* 582: 3909-3914.
6. Teramoto, T., Sakakibara, Y., Liu, M.C., Suiko, M., Kimura, M. and Kakuta, Y. 2009. Structural basis for the broad range substrate specificity of a novel mouse cytosolic sulfotransferase—mSULT1D1. *Biochem. Biophys. Res. Commun.* 379: 76-80.
7. Teramoto, T., Sakakibara, Y., Liu, M.C., Suiko, M., Kimura, M. and Kakuta, Y. 2009. Snapshot of a Michaelis complex in a sulfuryl transfer reaction: Crystal structure of a mouse sulfotransferase, mSULT1D1, complexed with donor substrate and acceptor substrate. *Biochem. Biophys. Res. Commun.* 383: 83-87.
8. Wong, S., Tan, K., Carey, K.T., Fukushima, A., Tiganis, T. and Cole, T.J. 2010. Glucocorticoids stimulate hepatic and renal catecholamine inactivation by direct rapid induction of the dopamine sulfotransferase Sult1d1. *Endocrinology* 151: 185-194.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Sult1d1 (mouse) mapping to 5 E1.

PRODUCT

SULT1D1 siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SULT1D1 shRNA Plasmid (m): sc-153923-SH and SULT1D1 shRNA (m) Lentiviral Particles: sc-153923-V as alternate gene silencing products.

For independent verification of SULT1D1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-153923A, sc-153923B and sc-153923C.

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

APPLICATIONS

SULT1D1 siRNA (m) is recommended for the inhibition of SULT1D1 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 μ M in 66 μ 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 SULT1D1 gene expression knockdown using RT-PCR Primer: SULT1D1 (m)-PR: sc-153923-PR (20 μ 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.