

# UGTREL1 siRNA (h): sc-94212

## BACKGROUND

UGTREL1 (UDP-galactose transporter related protein 1), also known as SLC35B1 (solute carrier family 35 member B1), is a 325 amino acid multi-pass membrane protein that belongs to the SLC35B subfamily of the nucleotide-Sugar Transporter (NST) family. Members of the NST family are transmembrane proteins that mediate the translocation of nucleotide-sugars from the cytosol to the interior lumen of the endoplasmic reticulum (ER) and the Golgi apparatus via an antiport mechanism, exchanging nucleoside monophosphates for nucleotide-sugars. This activity of NSTs is important for providing an available source of nucleotide-sugars for glycoconjugate synthesis. Localizing to the endoplasmic reticulum membrane, UGTREL1 functions as a sugar transporter and shows significant similarity to the yeast UDP-N-acetylglucosamine transporter.

## REFERENCES

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3. Aoki, K., Ishida, N. and Kawakita, M. 2001. Substrate recognition by UDP-galactose and CMP-sialic acid transporters. Different sets of transmembrane helices are utilized for the specific recognition of UDP-galactose and CMP-sialic acid. *J. Biol. Chem.* 276: 21555-21561.
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7. Kobayashi, T., Sleeman, J.E., Coughtrie, M.W. and Burchell, B. 2006. Molecular and functional characterization of microsomal UDP-glucuronic acid uptake by members of the nucleotide sugar transporter (NST) family. *Biochem. J.* 400: 281-289.
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## PROTOCOLS

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

## CHROMOSOMAL LOCATION

Genetic locus: SLC35B1 (human) mapping to 17q21.33.

## PRODUCT

UGTREL1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see UGTREL1 shRNA Plasmid (h): sc-94212-SH and UGTREL1 shRNA (h) Lentiviral Particles: sc-94212-V as alternate gene silencing products.

For independent verification of UGTREL1 (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-94212A, sc-94212B and sc-94212C.

## 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

UGTREL1 siRNA (h) is recommended for the inhibition of UGTREL1 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  $\mu$ 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 UGTREL1 gene expression knockdown using RT-PCR Primer: UGTREL1 (h)-PR: sc-94212-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.