SANTA CRUZ BIOTECHNOLOGY, INC.

SLC35A2 siRNA (m): sc-76508

BACKGROUND

SLC35A2 (solute carrier family 35 (UDP-galactose transporter), member A2), also known as UGALT, UGT or UGTL, is a 396 amino acid multi-pass membrane protein that localizes to the Golgi apparatus and belongs to the nucleotide sugar transporter family. Expressed as two alternatively spliced isoforms, designated UGT1 and UGT2, SLC35A2 functions to transport nucleotide sugars from the cytosol to Golgi vesicles. The gene encoding SLC35A2 maps to human chromosome X, which contains nearly 153 million base pairs and houses over 1,000 genes. In conjunction with chromosome Y, chromosome X is responsible for sex determination, as an X and a Y chromosome lead to normal male development, while two copies of an X chromosome lead to normal female development. There are a number of conditions related to an abnormal number and combination of sex chromosomes, some of which include Turner's syndrome, color blindness, hemophilia and Duchenne muscular dystrophy.

REFERENCES

1. Hara, T., et al. 1993. The UDP-galactose translocator gene is mapped to band Xp11.23-p11.22 containing the Wiskott-Aldrich syndrome locus. Somat. Cell Mol. Genet. 19: 571-575.
2. Miura, N., et al. 1996. Human UDP-galactose translocator: molecular cloning of a complementary DNA that complements the genetic defect of a mutant cell line deficient in UDP-galactose translocator. J. Biochem. 120: 236-241.
3. Ishida, N., et al. 1996. Molecular cloning and characterization of a novel isoform of the human UDP-galactose transporter, and of related complementary DNAs belonging to the nucleotide-sugar transporter gene family. J. Biochem. 120: 1074-1078.
4. Yoshioka, S., et al. 1997. Expression of the human UDP-galactose transporter in the Golgi membranes of murine Had-1 cells that lack the endogenous transporter. J. Biochem. 122: 691-695.
5. Kumamoto, K., et al. 2001. Increased expression of UDP-galactose transporter messenger RNA in human colon cancer tissues and its implication in synthesis of Thomsen-Friedenreich antigen and sialyl Lewis A/X determinants. Cancer Res. 61: 4620-4627.

CHROMOSOMAL LOCATION

Genetic locus: Slc35a2 (mouse) mapping to X A1.1.

PRODUCT

SLC35A2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLC35A2 shRNA Plasmid (m): sc-76508-SH and SLC35A2 shRNA (m) Lentiviral Particles: sc-76508-V as alternate gene silencing products.

For independent verification of SLC35A2 (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-76508A, sc-76508B and sc-76508C.

RESEARCH USE

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

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

SLC35A2 siRNA (m) is recommended for the inhibition of SLC35A2 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 µM in 60 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 SLC35A2 gene expression knockdown using RT-PCR Primer: SLC35A2 (m)-PR: sc-76508-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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