

SLC35A3 siRNA (h): sc-88392

BACKGROUND

SLC35A3 (solute carrier family 35 (UDP-N-acetylglucosamine (UDP-GlcNAc) transporter), member A3) is a 325 amino acid multi-pass membrane protein that belongs to the SLC35A 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 Golgi apparatus membrane, SLC35A3 functions as a monospecific UDP-GlcNAc transporter. In cattle, mutations in the gene encoding SLC35A3 can result in complex vertebral malformation (CMV), a lethal disorder that is defined by fused and misshapen vertebrae near the cervico-thoracic junction.

REFERENCES

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3. Ghebranious, N., et al. 2006. Evaluation of SLC35A3 as a candidate gene for human vertebral malformations. *Am. J. Med. Genet. A* 140: 1346-1348.
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5. Andersen, P.K., et al. 2007. Gene expression profiling, chromosome assignment and mutational analysis of the porcine Golgi-resident UDP-N-acetylglucosamine transporter SLC35A3. *Mol. Membr. Biol.* 24: 519-530.
6. Guillaume, F., et al. 2007. Refinement of two female fertility QTL using alternative phenotypes in French Holstein dairy cattle. *Anim. Genet.* 38: 72-74.
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CHROMOSOMAL LOCATION

Genetic locus: SLC35A3 (human) mapping to 1p21.2.

PROTOCOLS

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

PRODUCT

SLC35A3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLC35A3 shRNA Plasmid (h): sc-88392-SH and SLC35A3 shRNA (h) Lentiviral Particles: sc-88392-V as alternate gene silencing products.

For independent verification of SLC35A3 (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-88392A, sc-88392B and sc-88392C.

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

SLC35A3 siRNA (h) is recommended for the inhibition of SLC35A3 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 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 SLC35A3 gene expression knockdown using RT-PCR Primer: SLC35A3 (h)-PR: sc-88392-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.