

SLC26A8 siRNA (m): sc-153526

BACKGROUND

SLC26A8 (solute carrier family 26, member 8) is a 970 amino acid multi-pass membrane protein that contains 14 putative transmembrane regions with cytoplasmic N- and C-termini. SLC26A8 shares 26% identity with pendrin, 28% identity with DRA, and interacts with RACGAP1. SLC26A8 acts as a DIDS-sensitive anion exchanger mediating chloride, sulfate and oxalate transport. It has been suggested that SLC26A8 fulfills critical anion exchange functions in male germ line during meiosis and hence may play a role in spermatogenesis. SLC26A8 may also be involved in a new regulatory pathway linking sulfate transport to RhoGTPase signaling in male germ cells. As a critical component of the sperm annulus, SLC26A8 is essential for correct sperm tail differentiation and motility and hence male fertility. Existing as four alternatively spliced isoforms, the SLC26A8 gene is conserved in chimpanzee, dog, cow, mouse, rat and chicken, and maps to human chromosome 6p21.31. The SLC26A8 gene contains 20 exons and spans about 80 kb.

REFERENCES

1. Toure, A., Morin, L., Pineau, C., Becq, F., Dorseuil, O. and Gacon, G. 2001. Tat1, a novel sulfate transporter specifically expressed in human male germ cells and potentially linked to rhogtpase signaling. *J. Biol. Chem.* 276: 20309-20315.
2. Vincourt, J.B., Jullien, D., Kossida, S., Amalric, F. and Girard, J.P. 2002. Molecular cloning of SLC26A7, a novel member of the SLC26 sulfate/anion transporter family, from high endothelial venules and kidney. *Genomics* 79: 249-256.
3. Lohi, H., Kujala, M., Makela, S., Lehtonen, E., Kestila, M., Saarialho-Kere, U., Markovich, D. and Kere, J. 2002. Functional characterization of three novel tissue-specific anion exchangers SLC26A7, -A8, and -A9. *J. Biol. Chem.* 277: 14246-14254.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608480. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Mäkelä, S., Eklund, R., Lähdetie, J., Mikkola, M., Hovatta, O. and Kere, J. 2005. Mutational analysis of the human SLC26A8 gene: exclusion as a candidate for male infertility due to primary spermatogenic failure. *Mol. Hum. Reprod.* 11: 129-132.
6. Toure, A., Lhuillier, P., Gossen, J.A., Kuil, C.W., Lhôte, D., Jegou, B., Escalier, D. and Gacon, G. 2007. The testis anion transporter 1 (Slc26a8) is required for sperm terminal differentiation and male fertility in the mouse. *Hum. Mol. Genet.* 16: 1783-1793.
7. Lhuillier, P., Rode, B., Escalier, D., Lorès, P., Dirami, T., Bienvenu, T., Gacon, G., Dulouist, E. and Toure, A. 2009. Absence of annulus in human asthenozoospermia: case report. *Hum. Reprod.* 24: 1296-1303.

CHROMOSOMAL LOCATION

Genetic locus: Slc26a8 (mouse) mapping to 17 A3.3.

PROTOCOLS

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

PRODUCT

SLC26A8 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 SLC26A8 shRNA Plasmid (m): sc-153526-SH and SLC26A8 shRNA (m) Lentiviral Particles: sc-153526-V as alternate gene silencing products.

For independent verification of SLC26A8 (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-153526A, sc-153526B and sc-153526C.

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

SLC26A8 siRNA (m) is recommended for the inhibition of SLC26A8 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 SLC26A8 gene expression knockdown using RT-PCR Primer: SLC26A8 (m)-PR: sc-153526-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.