SANTA CRUZ BIOTECHNOLOGY, INC.

SLC26A2 siRNA (h): sc-91907

BACKGROUND

The SLC26 family is comprised of sulfate/anion transporters that are well conserved in both their genomic and protein structures, yet have markedly different tissue expression patterns. Members of the SLC26 family can mediate the electroneutral exchange of Cl^- for HCO_3^- across the plasma membrane of mammalian cells. SLC26A2 (solute carrier family 26, member 2), also known as DTD, EDM4, DTDST, MST153, D5S1708 or MSTP157, is a 739 amino acid diastrophic dysplasia sulfate transporter belonging to the SLC26A/SulP transporter family. Ubiquitously expressed, SLC26A2 may play a role in endochondral bone formation. SLC26A2 is a transmembrane glycoprotein implicated in the pathogenesis of several human chondrodysplasias and is critical for sulfation of proteoglycans and matrix organization in cartilage.

REFERENCES

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2. Rossi, A. and Superti-Furga, A. 2001. Mutations in the diastrophic dysplasia sulfate transporter (DTDST) gene (SLC26A2): 22 novel mutations, mutation review, associated skeletal phenotypes, and diagnostic relevance. Hum. Mutat. 17: 159-171.
3. Karniski, L.P. 2004. Functional expression and cellular distribution of diastrophic dysplasia sulfate transporter (DTDST) gene mutations in HEK cells. Hum. Mol. Genet. 13: 2165-2171.
4. Dawson, P.A. and Markovich, D. 2005. Pathogenetics of the human SLC26 transporters. Curr. Med. Chem. 12: 385-396.
5. Hansen, M., et al. 2007. Sequence analysis of the equine SLC26A2 gene locus on chromosome 14q15→q21. Cytogenet. Genome Res. 118: 55-62.
6. Lee, S.A., et al. 2007. Isolation, characterization and molecular screening of canine SLC26A2 (sulphate transporter) in German Shepherd dogs with hip dysplasia. J. Genet. 86: 285-288.

CHROMOSOMAL LOCATION

Genetic locus: SLC26A2 (human) mapping to 5q32.

PRODUCT

SLC26A2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLC26A2 shRNA Plasmid (h): sc-91907-SH and SLC26A2 shRNA (h) Lentiviral Particles: sc-91907-V as alternate gene silencing products.

For independent verification of SLC26A2 (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-91907A, sc-91907B and sc-91907C.

PROTOCOLS

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

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

SLC26A2 siRNA (h) is recommended for the inhibition of SLC26A2 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 µM in 66 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 SLC26A2 gene expression knockdown using RT-PCR Primer: SLC26A2 (h)-PR: sc-91907-PR (20 µl, 595 bp). 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.