SANTA CRUZ BIOTECHNOLOGY, INC.

SLC26A3 siRNA (h): sc-45543

BACKGROUND

The SLC26 family comprises sulfate/anion transporter genes. SLC26 family members are well conserved in their genomic (number and size of exons) and protein (amino acid length among species) 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. Family members include SLC26A3 (also designated downregulated in adenoma), Pendrin (SLC26A4), Prestin (SLC26A5) and SLC26A6. SLC26A3 is a chloride/bicarbonate exchanger which is involved in absorption in the colon. SLC26A3 interacts with PDZK1 and helps mediate electrolyte and fluid absorption. Defects in SLC26A3 are the cause of congenital chloride diarrhea.

REFERENCES

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2. Hoglund, P., Sormaala, M., Haila, S., Socha, J., Rajaram, U., Scheurlen, W., Sinaasappel, M., de Jonge, H., Holmberg, C., Yoshikawa, H. and Kere, J. 2001. Identification of seven novel mutations including the first two genomic rearrangements in SLC26A3 mutated in congenital chloride diarrhea. Hum. Mutat. 18: 233-242.
3. Makela, S., Kere, J., Holmberg, C. and Hoglund, P. 2002. SLC26A3 mutations in congenital chloride diarrhea. Hum. Mutat. 20: 425-438.
4. Chernova, M.N., Jiang, L., Shmukler, B.E., Schweinfest, C.W., Blanco, P., Freedman, S.D., Stewart, A.K. and Alper, S.L. 2003. Acute regulation of the SLC26A3 congenital chloride diarrhea anion exchanger (DRA) expressed in *Xenopus* oocytes. J. Physiol. 549: 3-19.

CHROMOSOMAL LOCATION

Genetic locus: SLC26A3 (human) mapping to 7q31.1.

PRODUCT

SLC26A3 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 SLC26A3 shRNA Plasmid (h): sc-45543-SH and SLC26A3 shRNA (h) Lentiviral Particles: sc-45543-V as alternate gene silencing products.

For independent verification of SLC26A3 (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-45543A, sc-45543B and sc-45543C.

RESEARCH USE

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

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

SLC26A3 siRNA (h) is recommended for the inhibition of SLC26A3 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.

GENE EXPRESSION MONITORING

SLC26A3 (H-8): sc-376187 is recommended as a control antibody for monitoring of SLC26A3 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SLC26A3 gene expression knockdown using RT-PCR Primer: SLC26A3 (h)-PR: sc-45543-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.