SANTA CRUZ BIOTECHNOLOGY, INC.

SLC26A6 siRNA (h): sc-106553

BACKGROUND

SLC26A6 (solute carrier family 26, member 6), also known as Pendrin-like protein 1, is a member of a family of sulfate/anion transporter genes. 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. Isoforms of SLC26A6 mediate anion transport and have functional PDZ interaction domains. The gene encoding SLC26A6 undergoes alternative splicing to produce three different isoforms. The human SLC26A6 gene maps to chromosome 3p21.31 and encodes a predicted 738 amino acid transmembrane protein, which is most abundantly expressed in the kidney and pancreas. Pancreatic ductal cell lines Capan-1 and Capan-2 express SLC26A6, which is localized to the apical surface of pancreatic ductal cells.

REFERENCES

1. Wang, Z., Petrovic, S., Mann, E. and Soleimani, M.2002. Identification of an apical Cl^- for HCO_3^- exchanger in the small intestine. Am. J. Physiol. Gastrointest. Liver Physiol. 282: G573-579.
2. Lohi, H., Kujala, M., Kerkela, E., Saarialho-Kere, U., Kestila, M. and Kere, J. 2000. Mapping of five new putative anion transporter genes in human and characterization of SLC26A6, a candidate gene for pancreatic anion exchanger. Genomics 70: 102-112.
3. Lohi, H., Lamprecht, G., Markovich, D., Heil, A., Kujala, M., Seidler, U. and Kere, J. 2003. Isoforms of SLC26A6 mediate anion transport and have functional PDZ interaction domains. Am. J. Physiol. Cell. Physiol. 284: C769-779.
4. Waldegger, S., Moschen, I., Ramirez, A., Smith, R.J., Ayadi, H., Lang, F. and Kubisch, C. 2001. Cloning and characterization of SLC26A6, a novel member of the solute carrier 26 gene family. Genomics 72: 43-50.

CHROMOSOMAL LOCATION

Genetic locus: SLC26A6 (human) mapping to 3p21.31.

PRODUCT

SLC26A6 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 SLC26A6 shRNA Plasmid (h): sc-106553-SH and SLC26A6 shRNA (h) Lentiviral Particles: sc-106553-V as alternate gene silencing products.

For independent verification of SLC26A6 (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-106553A, sc-106553B and sc-106553C.

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

SLC26A6 siRNA (h) is recommended for the inhibition of SLC26A6 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

SLC26A6 (F-5): sc-515230 is recommended as a control antibody for monitoring of SLC26A6 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 SLC26A6 gene expression knockdown using RT-PCR Primer: SLC26A6 (h)-PR: sc-106553-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

ZRESEARCH USE

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