SANTA CRUZ BIOTECHNOLOGY, INC.

SLC26A7 siRNA (h): sc-72023

BACKGROUND

SLC26A7 (solute carrier family 26, member 7) is a 656 amino acid multi-pass membrane protein that belongs to the SLC26 family of sulfate/anion transporter proteins. Members of this family are structurally well conserved, yet they have markedly different tissue expression patterns. SLC26 family members can mediate the electroneutral exchange of Cl^- for HCO_3^- across the plasma membrane of mammalian cells. SLC26A7 shares 30% identity with SLC26A2. SLC26A7 is predicted to contain 12 transmembrane regions with internal N- and C-termini. Playing a major role in gastric acid secretion, SLC26A7 is active at both alkaline and acidic pH. Expressed in the cytoplasm in recycling endosomes of medullary collecting duct cells and in acid-secreting gastric parietal cells, SLC26A7 is targeted to the basolateral membrane in hypertonicity and potassium depletion. Existing as two alternatively spliced isoforms, the SLC26A7 gene is conserved in canine, bovine, mouse, rat, chicken and *A. thaliana,* and maps to human chromosome 8q21.3.

REFERENCES

1. Vincourt, J.B., et al. 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.
2. Lohi, H., et al. 2002. Functional characterization of three novel tissue-specific anion exchangers SLC26A7, -A8 and -A9. J. Biol. Chem. 277: 14246-14254.
3. Kere, J. 2006. Overview of the SLC26 family and associated diseases. Novartis Found. Symp. 273: 2-11.
4. Soleimani, M. 2006. Expression, regulation and the role of SLC26 Cl^-/HCO_3^- exchangers in kidney and gastrointestinal tract. Novartis Found. Symp. 273: 91-102.
5. Romero, M.F., et al. 2006. Physiology of electrogenic SLC26 paralogues. Novartis Found. Symp. 273: 126-138.
6. Aronson, P.S. 2006. Role of SLC26-mediated Cl^-/base exchange in proximal tubule NaCl transport. Novartis Found. Symp. 273: 148-158.

CHROMOSOMAL LOCATION

Genetic locus: SLC26A7 (human) mapping to 8q21.3.

PRODUCT

SLC26A7 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 SLC26A7 shRNA Plasmid (h): sc-72023-SH and SLC26A7 shRNA (h) Lentiviral Particles: sc-72023-V as alternate gene silencing products.

For independent verification of SLC26A7 (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-72023A, sc-72023B and sc-72023C.

RESEARCH USE

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

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

SLC26A7 siRNA (h) is recommended for the inhibition of SLC26A7 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

SLC26A7 (14H5): sc-53960 is recommended as a control antibody for monitoring of SLC26A7 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 SLC26A7 gene expression knockdown using RT-PCR Primer: SLC26A7 (h)-PR: sc-72023-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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