

SLC17A4 siRNA (h): sc-95575

BACKGROUND

SLC17A4 (solute carrier family 17 member 4), is a 497 amino acid multi-pass membrane protein that belongs to the sodium/anion cotransporter family of the major facilitator superfamily. Expressed in liver, small intestine, pancreas and colon, SLC17A4 is believed to be involved in active transport of phosphate into cells through a sodium/phosphate co-transport (NPT) system. SLC17A4 shares 54% sequence identity with SLC17A2 (also known as NPT3), 43.5% sequence identity with SLC17A3 (also known as NPT4) and 48% sequence identity with NPT1 (also known as SLC17A1). Due to alternative splicing events, two SLC17A2 isoforms exist.

REFERENCES

1. Shibui, A., Tsunoda, T., Seki, N., Suzuki, Y., Sugane, K. and Sugano, S. 1999. Isolation and chromosomal mapping of a novel human gene showing homology to Na⁺/PO₄ cotransporter. *J. Hum. Genet.* 44: 190-192.
2. Ponsuksili, S., Wimmers, K., Yerle, M. and Schellander, K. 2001. Mapping of 93 porcine ESTs preferentially expressed in liver. *Mamm. Genome* 12: 869-872.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604216. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Elmariah, S. and Gunn, R.B. 2003. Kinetic evidence that the Na-PO₄ cotransporter is the molecular mechanism for Na/Li exchange in human red blood cells. *Am. J. Physiol., Cell Physiol.* 285: C446-C456.
5. Reimer, R.J. and Edwards, R.H. 2004. Organic anion transport is the primary function of the SLC17/type I phosphate transporter family. *Pflugers Arch.* 447: 629-635.

CHROMOSOMAL LOCATION

Genetic locus: SLC17A4 (human) mapping to 6p22.2.

PRODUCT

SLC17A4 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLC17A4 shRNA Plasmid (h): sc-95575-SH and SLC17A4 shRNA (h) Lentiviral Particles: sc-95575-V as alternate gene silencing products.

For independent verification of SLC17A4 (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-95575A, sc-95575B and sc-95575C.

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 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

SLC17A4 siRNA (h) is recommended for the inhibition of SLC17A4 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 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.

GENE EXPRESSION MONITORING

SLC17A4 (NQ-C19): sc-135562 is recommended as a control antibody for monitoring of SLC17A4 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 SLC17A4 gene expression knockdown using RT-PCR Primer: SLC17A4 (h)-PR: sc-95575-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.