

SLC2A13 siRNA (m): sc-153528

BACKGROUND

SLC2A13 (solute carrier family 2 (facilitated glucose transporter), member 13) is a 648 multi-pass membrane protein that belongs to the major facilitator superfamily and the sugar transporter family. SLC2A13 is a H⁺-Myo-inositol cotransporter that can also transport related stereoisomers. Human SLC2A13 shares 90% identity with its rat homolog. The rat sequence has 12 transmembrane domains, 3 N-glycosylation sites, several motifs important for glucose transport activity, and an endoplasmic reticulum retention signal and dileucine internalization signal in the N-terminal region. SLC2A13 has been shown to specifically transport myo-inositol but not hexoses, and decreasing the pH of the extracellular medium from 7.0 to 5.0 markedly increased transport activity. The SLC2A13 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, *C. elegans*, *S. pombe*, *K. lactis*, *E. gossypii*, *M. grisea*, *N. crassa*, *A. thaliana*, and rice.

REFERENCES

1. Uldry, M., Ibberson, M., Horisberger, J.D., Chatton, J.Y., Riederer, B.M. and Thorens, B. 2001. Identification of a mammalian H⁺-Myo-inositol symporter expressed predominantly in the brain. *EMBO J.* 20: 4467-4477.
2. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611036. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Gauci, S., Helbig, A.O., Slijper, M., Krijgsveld, J., Heck, A.J. and Mohammed, S. 2009. Lys-N and trypsin cover complementary parts of the phosphoproteome in a refined SCX-based approach. *Anal. Chem.* 81: 4493-4501.
4. Di Daniel, E., Mok, M.H., Mead, E., Mutinelli, C., Zambello, E., Caberlotto, L.L., Pell, T.J., Langmead, C.J., Shah, A.J., Duddy, G., Kew, J.N. and Maycox, P.R. 2009. Evaluation of expression and function of the H⁺/Myo-inositol transporter HMIT. *BMC Cell Biol.* 10: 54.
5. Satake, W., Nakabayashi, Y., Mizuta, I., Hirota, Y., Ito, C., Kubo, M., Kawaguchi, T., Tsunoda, T., Watanabe, M., Takeda, A., Tomiyama, H., Nakashima, K., Hasegawa, K., Obata, F., Yoshikawa, T., Kawakami, H., et al. 2009. Genome-wide association study identifies common variants at four loci as genetic risk factors for Parkinson's disease. *Nat. Genet.* 41: 1303-1307.
6. Bankovic, J., Stojsic, J., Jovanovic, D., Andjelkovic, T., Milinkovic, V., Ruzdijic, S. and Tanic, N. 2010. Identification of genes associated with non-small-cell lung cancer promotion and progression. *Lung Cancer* 67: 151-159.

CHROMOSOMAL LOCATION

Genetic locus: Slc2a13 (mouse) mapping to 15 E3.

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.

PRODUCT

SLC2A13 siRNA (m) 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 SLC2A13 shRNA Plasmid (m): sc-153528-SH and SLC2A13 shRNA (m) Lentiviral Particles: sc-153528-V as alternate gene silencing products.

For independent verification of SLC2A13 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-153528A, sc-153528B and sc-153528C.

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

SLC2A13 siRNA (m) is recommended for the inhibition of SLC2A13 expression in mouse 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SLC2A13 gene expression knockdown using RT-PCR Primer: SLC2A13 (m)-PR: sc-153528-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.