



SLC39A12 siRNA (h): sc-90521

BACKGROUND

SLC39A12 (solute carrier family 39 (zinc transporter), member 12), also known as ZIP12 (Zrt- and Irt-like protein 12) or LZT-Hs8 (LIV-1 subfamily of ZIP zinc transporter 8), is a 691 amino acid multi-pass membrane protein that belongs to the LIV-1 subfamily of the ZIP family (or SLC39 family) of metal transporters. In humans, there are at least fifteen members of the ZIP family, all of which exhibit unique tissue-specific expression and are involved in zinc transport and metabolism. Members of the LIV-1 subfamily share similarity with the estrogen-regulated protein LIV-1 and contain a distinct motif with conserved glutamic acid and proline residues. Expressed in brain and eye tissues, SLC39A12 is believed to function as a zinc transporter, facilitating zinc influx into the cytosol. In addition, SLC39A12 may play a role in the onset of schizophrenia. Due to alternative splicing events, four SLC39A12 isoforms are produced.

REFERENCES

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2. Taylor, K.M. and Nicholson, R.I. 2003. The LZT proteins; the LIV-1 subfamily of zinc transporters. *Biochim. Biophys. Acta* 1611: 16-30.
3. Dufner-Beattie, J., et al. 2003. Structure, function, and regulation of a subfamily of mouse zinc transporter genes. *J. Biol. Chem.* 278: 50142-50150.
4. Liuzzi, J.P. and Cousins, R.J. 2004. Mammalian zinc transporters. *Annu. Rev. Nutr.* 24: 151-172.
5. Kambe, T., et al. 2004. Overview of mammalian zinc transporters. *Cell. Mol. Life Sci.* 61: 49-68.
6. Ford, D. 2004. Intestinal and placental zinc transport pathways. *Proc. Nutr. Soc.* 63: 21-29.
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CHROMOSOMAL LOCATION

Genetic locus: SLC39A12 (human) mapping to 10p12.33.

PRODUCT

SLC39A12 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 SLC39A12 shRNA Plasmid (h): sc-90521-SH and SLC39A12 shRNA (h) Lentiviral Particles: sc-90521-V as alternate gene silencing products.

For independent verification of SLC39A12 (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-90521A, sc-90521B and sc-90521C.

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

SLC39A12 siRNA (h) is recommended for the inhibition of SLC39A12 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SLC39A12 gene expression knockdown using RT-PCR Primer: SLC39A12 (h)-PR: sc-90521-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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