SANTA CRUZ BIOTECHNOLOGY, INC.

SLC41A2 siRNA (h): sc-95853

BACKGROUND

SLC41A2 (solute carrier family 41, member 2), also known as SLC41A1-L, is a 573 amino acid multi-pass membrane protein that belongs to the SLC41A transporter family that includes SLC41A1 and SLC41A3. Expressed in lymphocytes and localizing to the cell membrane, SLC41A2 contains twelve transmembrane domains, three myristoylation sequences, numerous possible phosphorylation sites and a putative N-glycosylation site. SLC41A2 is believed to function as a plasma-membrane magnesium transporter. Magnesium, a cofactor for ATP, plays a vital role in metabolic and biochemical processes. The transport of magnesium across membranes is essential for maintaining magnesium homeostasis and is fundamental to vertebrate metabolism.

REFERENCES

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3. Goytain, A. and Quamme, G.A. 2005. Functional characterization of the mouse [corrected] solute carrier, SLC41A2. Biochem. Biophys. Res. Commun. 330: 701-705.
4. Sahni, J., Nelson, B. and Scharenberg, A.M. 2007. SLC41A2 encodes a plasma-membrane Mg^{2+} transporter. Biochem. J. 401: 505-513.
5. Kolisek, M., Launay, P., Beck, A., Sponder, G., Serafini, N., Brenkus, M., Froschauer, E.M., Martens, H., Fleig, A. and Schweigel, M. 2008. SLC41A1 is a novel mammalian Mg^{2+} carrier. J. Biol. Chem. 283: 16235-16247.

CHROMOSOMAL LOCATION

Genetic locus: SLC41A2 (human) mapping to 12q23.3.

PRODUCT

SLC41A2 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 SLC41A2 shRNA Plasmid (h): sc-95853-SH and SLC41A2 shRNA (h) Lentiviral Particles: sc-95853-V as alternate gene silencing products.

For independent verification of SLC41A2 (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-95853A, sc-95853B and sc-95853C.

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 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

SLC41A2 siRNA (h) is recommended for the inhibition of SLC41A2 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SLC41A2 gene expression knockdown using RT-PCR Primer: SLC41A2 (h)-PR: sc-95853-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.