SANTA CRUZ BIOTECHNOLOGY, INC.

SLC39A11 siRNA (m): sc-153555

BACKGROUND

Zinc is an essential cofactor that is involved in cell growth and development, as well as in protein, nucleic acid and lipid metabolism. The transport of zinc across the cell membrane is crucial for correct enzyme and overall cell function. SLC39A11 (solute carrier family 39 (metal ion transporter), member 11), also known as ZIP11 (Zrt- and Irt-like protein 11), is a 342 amino acid multi-pass membrane protein belonging to the ZIP transporter family. Expressed as multiple alternatively spliced isoforms, SLC39A11 acts as a zinc-influx transporter and is encoded by a gene located on human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes, some of which are involved in tumor suppression and in the pathogenesis of Li-Fraumeni syndrome, early onset breast cancer and a predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

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7. Palmero, E.I., Achatz, M.I., Ashton-Prolla, P., Olivier, M. and Hainaut, P. 2010. Tumor protein 53 mutations and inherited cancer: beyond Li-Fraumeni syndrome. Curr. Opin. Oncol. 22: 64-69.

CHROMOSOMAL LOCATION

Genetic locus: Slc39a11 (mouse) mapping to 11 E2.

PRODUCT

SLC39A11 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLC39A11 shRNA Plasmid (m): sc-153555-SH and SLC39A11 shRNA (m) Lentiviral Particles: sc-153555-V as alternate gene silencing products.

For independent verification of SLC39A11 (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-153555A, sc-153555B and sc-153555C.

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

SLC39A11 siRNA (m) is recommended for the inhibition of SLC39A11 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 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 SLC39A11 gene expression knockdown using RT-PCR Primer: SLC39A11 (m)-PR: sc-153555-PR (20 µl). 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.

PROTOCOLS

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