

ZIP7 siRNA (h): sc-76962

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. ZIP7, also known as SLC39A7 (solute carrier family 39 (zinc transporter), member 7), KE4, HKE4, RING5 or H2-KE4, is a 469 amino acid multi-pass membrane protein that belongs to the ZIP transporter family. Expressed at high levels in kidney, placenta, pancreas and lung, ZIP7 functions as a zinc transporter that facilitates the movement of zinc, both from the extracellular environment and from intracellular storage compartments, to the cytosol. The gene encoding ZIP7 maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SLC39A7 (human) mapping to 6p21.32.

PROTOCOLS

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

PRODUCT

ZIP7 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 ZIP7 shRNA Plasmid (h): sc-76962-SH and ZIP7 shRNA (h) Lentiviral Particles: sc-76962-V as alternate gene silencing products.

For independent verification of ZIP7 (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-76962A, sc-76962B and sc-76962C.

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

ZIP7 siRNA (h) is recommended for the inhibition of ZIP7 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 ZIP7 gene expression knockdown using RT-PCR Primer: ZIP7 (h)-PR: sc-76962-PR (20 μ l, 556 bp). 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.