

ZnT-6 siRNA (h): sc-94723

BACKGROUND

Zinc, an essential element required for cell proliferation and differentiation, plays a role in a diverse array of cellular functions (such as neuroregulation) and acts as a cofactor for numerous enzymes and transcription factors. The zinc transporter (ZnT) family regulates the supply of zinc within cells, and its members commonly contain six membrane-spanning domains, a large histidine-rich intracellular loop and a C-terminal tail. ZnT-6 (zinc transporter 6), also known as SLC30A6 (solute carrier family 30 member 6), is a 461 amino acid gene product that localizes to the membrane of the *trans*-Golgi network. Expressed throughout the body with highest expression in brain, eye and lung, ZnT-6 functions as zinc transporter that regulates zinc homeostasis within vesicular compartments and the Golgi apparatus and may help to form Insulin crystals within pancreatic β cells. ZnT-6 is expressed as three isoforms due to alternative splicing events and its expression is upregulated in response to zinc depletion.

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CHROMOSOMAL LOCATION

Genetic locus: SLC30A6 (human) mapping to 2p22.3.

PROTOCOLS

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

PRODUCT

ZnT-6 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 ZnT-6 shRNA Plasmid (h): sc-94723-SH and ZnT-6 shRNA (h) Lentiviral Particles: sc-94723-V as alternate gene silencing products.

For independent verification of ZnT-6 (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-94723A, sc-94723B and sc-94723C.

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

ZnT-6 siRNA (h) is recommended for the inhibition of ZnT-6 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 ZnT-6 gene expression knockdown using RT-PCR Primer: ZnT-6 (h)-PR: sc-94723-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.