



Genethonin-1 siRNA (h): sc-88962

BACKGROUND

Genethonin-1, also known as STBD1 (starch binding domain 1) or GENX-3414, is a 358 amino acid single-pass type III membrane protein that contains one CBM20 (carbohydrate binding type-20) domain. A hydrophobic protein, Genethonin-1 is highly expressed in cardiac and skeletal muscle and is found at moderate levels in placenta and liver. Genethonin-1 is thought to function in carbohydrate binding. The gene encoding Genethonin-1 maps to human chromosome 4, which represents approximately 6% of the human genome, contains nearly 900 genes and is associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

REFERENCES

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4. Bouju, S., et al. 1998. Molecular cloning and functional expression of a novel human gene encoding two 41-43 kDa skeletal muscle internal membrane proteins. *Biochem. J.* 335: 549-556.
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7. Dobson, C.M., et al. 2002. Identification of the gene responsible for the cblA complementation group of vitamin B12-responsive methylmalonic acidemia based on analysis of prokaryotic gene arrangements. *Proc. Natl. Acad. Sci. USA* 99: 15554-15559.
8. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 607406. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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CHROMOSOMAL LOCATION

Genetic locus: STBD1 (human) mapping to 4q21.1.

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.

PRODUCT

Genethonin-1 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 Genethonin-1 shRNA Plasmid (h): sc-88962-SH and Genethonin-1 shRNA (h) Lentiviral Particles: sc-88962-V as alternate gene silencing products.

For independent verification of Genethonin-1 (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-88962A, sc-88962B and sc-88962C.

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

Genethonin-1 siRNA (h) is recommended for the inhibition of Genethonin-1 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 Genethonin-1 gene expression knockdown using RT-PCR Primer: Genethonin-1 (h)-PR: sc-88962-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.