SANTA CRUZ BIOTECHNOLOGY, INC.

CHST6 siRNA (h): sc-60378

BACKGROUND

Carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 6 (CHST6) is a 365 amino-acid protein which catalyzes the transfer of sulfate to position 6 of non-reducing N-acetylglucosamine (GlcNAc) residues of keratan. CHST6 mediates the sulfation of keratan in the cornea, which is important in maintaining corneal transparency. Mutations in the CHST6 gene cause macular corneal dystrophy (MCD) types I and II, which are autosomal recessive diseases characterized by corneal opacities. Sulfated keratan sulfate (KS) is practically absent in the serum and cornea in individuals with MCD type I, but is present in individuals with MDC type II. There is usually a homozygous missense mutation present in individuals with MCD type I, whereas individuals with MCD type II display a large deletion and replacement in the upstream region of CHST6.

REFERENCES

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4. El-Ashry, M.F., Abd El-Aziz, M.M., Shalaby, O., Wilkins, S., Poopalasundaram, S., Cheetham, M., Tuft, S.J., Hardcastle, A.J., Bhattacharya, S.S. and Ebenezer, N.D. 2005. Novel CHST6 nonsense and missense mutations responsible for macular corneal dystrophy. Am. J. Ophthalmol. 139: 192-193.
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CHROMOSOMAL LOCATION

Genetic locus: CHST6 (human) mapping to 16q23.1.

PRODUCT

CHST6 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 CHST6 shRNA Plasmid (h): sc-60378-SH and CHST6 shRNA (h) Lentiviral Particles: sc-60378-V as alternate gene silencing products.

For independent verification of CHST6 (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-60378A, sc-60378B and sc-60378C.

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

CHST6 siRNA (h) is recommended for the inhibition of CHST6 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 CHST6 gene expression knockdown using RT-PCR Primer: CHST6 (h)-PR: sc-60378-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.