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SIAE siRNA (m): sc-153458

BACKGROUND

SIAE (sialic acid acetyltransferase) is a 523 amino acid secreted protein that is widely expressed with high expression in the testis, prostate and colon. Sialic acids are acidic 9-carbon sugars typically found at the nonreducing end of sugar chains. They are frequently modified by 9-O-acetylation, and this modification is removed by sialic acid acetyltransferases. The SIAE protein catalyzes the removal of O-acetyl ester groups from position 9 of the parent sialic acid, N-acetylneuraminic acid. Defects in SIAE are a cause of autoimmune disease type 6 (AIS6). Individuals manifesting susceptibility to AIS6 can suffer from juvenile idiopathic arthritis, rheumatoid arthritis, multiple sclerosis, Sjogren syndrome, systemic lupus erythematosus, type 1 diabetes, ulcerative colitis and Crohn disease. Existing as two alternatively spliced isoforms, the SIAE gene is conserved in chimpanzee, canine, bovine, mouse and zebrafish, and maps to human chromosome 11q24.2.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Siae (mouse) mapping to 9 A4.

PROTOCOLS

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

PRODUCT

SIAE 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SIAE shRNA Plasmid (m): sc-153458-SH and SIAE shRNA (m) Lentiviral Particles: sc-153458-V as alternate gene silencing products.

For independent verification of SIAE (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-153458A, sc-153458B and sc-153458C.

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

SIAE siRNA (m) is recommended for the inhibition of SIAE 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 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 SIAE gene expression knockdown using RT-PCR Primer: SIAE (m)-PR: sc-153458-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.