SANTA CRUZ BIOTECHNOLOGY, INC.

β-1,4-Gal-T7 siRNA (h): sc-91927

BACKGROUND

β-1,4-galactosyltransferases (β-1,4-Gal-T) are type II membrane-bound glycoproteins that are substrate-specific and function to transfer galactose in a β-1,4 linkage to an acceptor sugar. There are seven members of the β-1,4-Gal-T family, all of which are directed to the Golgi apparatus through a hydrophobic sequence at the N-terminus. β-1,4-Gal-T7, also known as B4GALT7 or XGALT1, is a 327 amino acid single-pass type II membrane protein that is expressed at high levels in heart, pancreas and liver. β-1,4-Gal-T7 uses manganese to catalyze the UDP-dependent biosynthesis of glycosphingolipids. The gene encoding β-1,4-Gal-T7 is mutated in Ehlers-Danlos syndrome progeroid type (EDSP), a variant form of Ehlers-Danlos syndrome characterized by progeroid facies, mild mental retardation, short stature, skin hyperextensibility, moderate skin fragility and joint hypermobility principally in digits.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: B4GALT7 (human) mapping to 5q35.3.

PRODUCT

β-1,4-Gal-T7 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 β-1,4-Gal-T7 shRNA Plasmid (h): sc-91927-SH and β-1,4-Gal-T7 shRNA (h) Lentiviral Particles: sc-91927-V as alternate gene silencing products.

For independent verification of β-1,4-Gal-T7 (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-91927A, sc-91927B and sc-91927C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

β-1,4-Gal-T7 siRNA (h) is recommended for the inhibition of β-1,4-Gal-T7 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 β-1,4-Gal-T7 gene expression knockdown using RT-PCR Primer: β-1,4-Gal-T7 (h)-PR: sc-91927-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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