SANTA CRUZ BIOTECHNOLOGY, INC.

GCNT7 siRNA (m): sc-145366

BACKGROUND

Belonging to the glycosyltransferase 14 family, GCNT7, also known as β-1,3-galactosyl-O-glycosyl-glycoprotein β-1,6-N-acetylglucosaminyltransferase 7, is a 430 amino acid glycosyltransferase that is localized to the Golgi apparatus. Other members of this family include GCNT1, GCNT2, GCNT3, GCNT4 and GCNT6. GCNT1 has been shown to play an important regulatory role in the biosynthesis of mucin-type O-glycans, which serve as ligands in cell adhesion. Specifically, GCNT1 expression in leukocytes regulates the synthesis of core 2 O-glycans that carry sialyl-Lewis x (sLe^x) oligosaccharides, which confer high affinity binding to Selectin proteins. Since downregulation of Selectin ligand expression has been shown to inhibit tissue infiltration, glycosyltransferase 14 family members represent potential drug targets for the treatment of inflammatory disorders and other pathologies involving Selectins.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Gcnt7 (mouse) mapping to 2 H3.

PRODUCT

GCNT7 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GCNT7 shRNA Plasmid (m): sc-145366-SH and GCNT7 shRNA (m) Lentiviral Particles: sc-145366-V as alternate gene silencing products.

For independent verification of GCNT7 (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-145366A, sc-145366B and sc-145366C.

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

GCNT7 siRNA (m) is recommended for the inhibition of GCNT7 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 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 GCNT7 gene expression knockdown using RT-PCR Primer: GCNT7 (m)-PR: sc-145366-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.