SANTA CRUZ BIOTECHNOLOGY, INC.

HEC-GlcNAc6ST siRNA (m): sc-60777

BACKGROUND

The GlcNAc-6-sulfotransferases are a family of Golgi-resident proteins that regulate glycan function. HEC-GlcNAc6ST is greatly limited in its expression at the protein level. Detection of protein expression is observed in HEVs (high endothelial venules) in lymph nodes and HEV-like vessels in instances of lymphoid neogenesis. The other members of the GlcNAc6ST family differ from HEC-GlcNAc6ST in that they are presumed to have a wider tissue distribution based on Northern analysis. HEC-GlcNAc6ST is not expressed in the HEVs of PPs (Peyer's patches), and as an HEV-localized sulfotransferase, it is essential for the elaboration of functional ligands within lymph nodes, as well as the generation of the MECA-79 defined luminal ligands.

REFERENCES

1. van Zante, A., et al. 2003. Lymphocyte-HEV interactions in lymph nodes of a sulfotransferase-deficient mouse. J. Exp. Med. 198: 1289-1300.
2. Bistrup, A., et al. 2004. Detection of a sulfotransferase (HEC-GlcNAc6ST) in high endothelial venules of lymph nodes and in high endothelial venule-like vessels within ectopic lymphoid aggregates: relationship to the MECA-79 epitope. Am. J. Pathol. 164: 1635-1644.
3. Gauguet, J.M., et al. 2004. Core 2 branching β1,6-N-acetylglucosaminyltransferase and high endothelial cell N-acetylglucosamine-6-sulfotransferase exert differential control over B and T lymphocyte homing to peripheral lymph nodes. Blood 104: 4104-4112.
4. Nishimura, M., et al. 2004. Effects of NO-1886 (Ibrolipim), a lipoprotein lipase-promoting agent, on gene induction of cytochrome P450s, carboxylesterases and sulfotransferases in primary cultures of human hepatocytes. Drug Metab. Pharmacokinet. 19: 422-429.
5. Pablos, J.L., et al. 2005. A HEV-restricted sulfotransferase is expressed in rheumatoid arthritis synovium and is induced by lymphotoxin-α/β and TNFα in cultured endothelial cells. BMC Immunol. 6: 6.
6. Rosen, S.D., et al. 2005. Therapeutic targeting of endothelial ligands for L-selectin (PNAd) in a sheep model of asthma. Am. J. Pathol. 166: 935-944.

CHROMOSOMAL LOCATION

Genetic locus: Chst4 (mouse) mapping to 8 D3.

PRODUCT

HEC-GlcNAc6ST 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 HEC-GlcNAc6ST shRNA Plasmid (m): sc-60777-SH and HEC-GlcNAc6ST shRNA (m) Lentiviral Particles: sc-60777-V as alternate gene silencing products.

For independent verification of HEC-GlcNAc6ST (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-60777A, sc-60777B and sc-60777C.

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

HEC-GlcNAc6ST siRNA (m) is recommended for the inhibition of HEC-GlcNAc6ST 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 HEC-GlcNAc6ST gene expression knockdown using RT-PCR Primer: HEC-GlcNAc6ST (m)-PR: sc-60777-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.