SANTA CRUZ BIOTECHNOLOGY, INC.

LSECtin siRNA (m): sc-72110

BACKGROUND

Liver and lymph node sinusoidal endothelial C-type lectin (LSECtin), also designated C-type lectin superfamily 4 member G (CLEC4G), is a member of the family of proteins which comprise CD23, DC-SIGN, and DC-SIGNR. LSECtin is a type II transmembrane glycoprotein that may function as a lectin receptor *in vivo*. The LSECtin protein binds mannose, glcNAC, L-fucose in a Ca^{2+}-dependent manner, but does not bind galactose or high mannose glycans. It also functions as an attachment factor for viral pathogens, possibly working together with DC-SIGNR to concentrate viral pathogens in lymph nodes and liver. The LSECtin gene is within the same cluster as CD23, DC-SIGN and DC-SIGNR and maps to chromosome 19p13.2.

REFERENCES

1. Liu, W., et al. 2004. Characterization of a novel C-type lectin-like gene, LSECtin: demonstration of carbohydrate binding and expression in sinusoidal endothelial cells of liver and lymph node. J. Biol. Chem. 279: 18748-18758.
2. Gramberg, T., et al. 2005. LSECtin interacts with filovirus glycoproteins and the spike protein of SARS coronavirus. Virology 340: 224-236.
3. Koppel, E.A., et al. 2005. Distinct functions of DC-SIGN and its homologues L-SIGN (DC-SIGNR) and mSIGNR1 in pathogen recognition and immune regulation. Cell. Microbiol. 7: 157-165.
4. Dakappagari, N., et al. 2006. Internalizing antibodies to the C-type lectins, L-SIGN and DC-SIGN, inhibit viral glycoprotein binding and deliver antigen to human dendritic cells for the induction of T cell responses. J. Immunol. 176: 426-440.
5. Lo, A.W., et al. 2006. How the SARS coronavirus causes disease: host or organism? J. Pathol. 208: 142-151.
6. Kuhn, J.H., et al. 2006. Conserved receptor-binding domains of Lake Victoria marburgvirus and Zaire ebolavirus bind a common receptor. J. Biol. Chem. 281: 15951-15958.

CHROMOSOMAL LOCATION

Genetic locus: Clec4g (mouse) mapping to 8 A1.1.

PRODUCT

LSECtin 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 LSECtin shRNA Plasmid (m): sc-72110-SH and LSECtin shRNA (m) Lentiviral Particles: sc-72110-V as alternate gene silencing products.

For independent verification of LSECtin (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-72110A, sc-72110B and sc-72110C.

PROTOCOLS

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

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

LSECtin siRNA (m) is recommended for the inhibition of LSECtin 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 LSECtin gene expression knockdown using RT-PCR Primer: LSECtin (m)-PR: sc-72110-PR (20 µl, 526 bp). 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.