SANTA CRUZ BIOTECHNOLOGY, INC.

L-ficolin siRNA (h): sc-105603

BACKGROUND

L-ficolin, also called ficolin-2, ficolin-B (in mouse and rat), collagen/Fibrinogen domain-containing protein 2, serum lectin p35, EBP-37 or hucolin, is a 313 amino acid member of the ficolin lectin family. L-ficolin is a secreted innate immunity pattern recognition molecule expressed in liver and plasma that forms a disulfide-linked homopolymer. This extensive N-terminal disulfide bridge formation can lead to a functional dodecamer polypeptide. L-ficolin binds to DNA ligands expressed by late apoptotic and necrotic cells to increase attachment and engulfment. Variation in L-ficolin concentrations amongst individuals is associated with polymorphisms in the promoter and structural portion of the FCN2 gene. In patients with Behçet's disease (BD) there exists a significant difference in allele frequency for FCN2 gene single nucleotide polymorphisms (SNPs) within the -557 and -64 promoter sites within HLA-B51 positive and HLA-B51 negative subgroups.

REFERENCES

1. Lynch, N.J., et al. 2004. L-ficolin specifically binds to lipoteichoic acid, a cell wall constituent of Gram-positive bacteria, and activates the lectin pathway of complement. J. Immunol. 172: 1198-1202.
2. Ma, Y.G., et al. 2004. Human mannose-binding lectin and L-ficolin function as specific pattern recognition proteins in the lectin activation pathway of complement. J. Biol. Chem. 279: 25307-25312.
3. Krarup, A., et al. 2004. L-ficolin is a pattern recognition molecule specific for acetyl groups. J. Biol. Chem. 279: 47513-47519.
4. Aoyagi, Y., et al. 2005. Role of L-ficolin/mannose-binding lectin-associated serine protease complexes in the opsonophagocytosis of type III group B streptococci. J. Immunol. 174: 418-425.
5. Kuraya, M., et al. 2005. Specific binding of L-ficolin and H-ficolin to apoptotic cells leads to complement activation. Immunobiology 209: 689-697.
6. Krarup, A., et al. 2005. Effect of capsulation of opportunistic pathogenic bacteria on binding of the pattern recognition molecules mannan-binding lectin, L-ficolin, and H-ficolin. Infect. Immun. 73: 1052-1060.

CHROMOSOMAL LOCATION

Genetic locus: FCN2 (human) mapping to 9q34.3.

PRODUCT

L-ficolin siRNA (h) is a pool of 2 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 L-ficolin shRNA Plasmid (h): sc-105603-SH and L-ficolin shRNA (h) Lentiviral Particles: sc-105603-V as alternate gene silencing products.

For independent verification of L-ficolin (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-105603A and sc-105603B.

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

L-ficolin siRNA (h) is recommended for the inhibition of L-ficolin 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.

GENE EXPRESSION MONITORING

L-ficolin (FCN219): sc-130297 is recommended as a control antibody for monitoring of L-ficolin gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor L-ficolin gene expression knockdown using RT-PCR Primer: L-ficolin (h)-PR: sc-105603-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.