SANTA CRUZ BIOTECHNOLOGY, INC.

# ficolin B siRNA (m): sc-145179

## BACKGROUND

Ficolin B is the designation in mouse and rat of a protein also known as L-ficolin, ficolin-2, collagen/fibrinogen domain-containing protein 2, serum lectin p35, EBP-37 or hucolin. Ficolin B is a 313 amino acid member of the ficolin lectin family. It 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. Ficolin B binds to DNA ligands expressed by late apoptotic and necrotic cells to increase attachment and engulfment. Variation in ficolin B concentrations amongst individuals is associated with polymorphisms in the promoter and structural portion of the FCN2 gene. In patients with Behcet'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. Aoyagi, Y., et al. 2004. 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.
3. 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.
4. Krarup, A., et al. 2004. L-ficolin is a pattern recognition molecule specific for acetyl groups. J. Biol. Chem. 279: 47513-47519.
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. Herpers, B.L., et al. 2005. Coding and non-coding polymorphisms in the lectin pathway activator L-ficolin gene in 188 Dutch blood bank donors. Mol. Immunol. 43: 851-855.


## CHROMOSOMAL LOCATION

Genetic locus: Fcnb (mouse) mapping to 2 A3.

## PRODUCT

ficolin B 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 ficolin B shRNA Plasmid (m): sc-145179-SH and ficolin B shRNA (m) Lentiviral Particles: sc-145179-V as alternate gene silencing products.

For independent verification of ficolin B (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-145179A, sc-145179B and sc-145179C.

## 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

ficolin B siRNA (m) is recommended for the inhibition of ficolin B 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.

## GENE EXPRESSION MONITORING

L-ficolin (FCN219): sc-130297 is recommended as a control antibody for monitoring of ficolin B 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 ficolin B gene expression knockdown using RT-PCR Primer: ficolin B (m)-PR: sc-145179-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.