

# CD35 siRNA (h): sc-29994

## BACKGROUND

CD35, also called complement receptor 1 (CR1), functions as the receptor for complement components C3b and C4b, and it mediates the phagocytosis by neutrophils and monocytes of particles coated with C3b or C4b. CD35 is expressed on granulocytes, monocytes, B cells, some NK cells and erythrocytes. CD35 is implicated in systemic lupus erythematosus (SLE), a chronic systemic autoimmune disease characterized by the production of a broad spectrum of autoantibodies against nuclear, cytoplasmic, and cell surface antigens and an overload of the immune complex. There is an increased proteolytic cleavage of leukocyte cell surface CD35 in SLE patients. Sequence analysis suggests that Crry may be the mouse genetic homolog of the CD35 antigen encoded by the human gene CR1.

## REFERENCES

1. Klickstein, L.B., et al. 1987. Human C3b/C4b receptor (CR1). Demonstration of long homologous repeating domains that are composed of the short consensus repeats characteristics of C3/C4 binding proteins. *J. Exp. Med.* 165: 1095-1112.
2. Klickstein, L.B., et al. 1988. Identification of distinct C3b and C4b recognition sites in the human C3b/C4b receptor (CR1, CD35) by deletion mutagenesis. *J. Exp. Med.* 168: 1699-1717.
3. Ahearn, J.M., et al. 1989. Structure and function of the complement receptors, CR1 (CD35) and CR2 (CD21). *Adv. Immunol.* 46: 183-219.
4. Wong, W.W., et al. 1989. Structure of the human CR1 gene. Molecular basis of the structural and quantitative polymorphisms and identification of a new CR1-like allele. *J. Exp. Med.* 169: 847-863.
5. Fearon, D.T., et al. 1990. Complement receptor type 1 (C3b/C4b receptor; CD35) and complement receptor type 2 (C3d/Epstein-Barr virus receptor; CD21). *Curr. Top. Microbiol. Immunol.* 153: 83-98.
6. Kalli, K.R., et al. 1991. Mapping of the C3b-binding site of CR1 and construction of a (CR1)<sub>2</sub>-F(ab')<sub>2</sub> chimeric complement inhibitor. *J. Exp. Med.* 174: 1451-1460.
7. Krych, M., et al. 1991. Sites within the complement C3b/C4b receptor important for the specificity of ligand binding. *Proc. Natl. Acad. Sci. USA* 88: 4354-4357.

## CHROMOSOMAL LOCATION

Genetic locus: CR1 (human) mapping to 1q32.2.

## PRODUCT

CD35 siRNA (h) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD35 shRNA Plasmid (h): sc-29994-SH and CD35 shRNA (h) Lentiviral Particles: sc-29994-V as alternate gene silencing products.

For independent verification of CD35 (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-29994A, sc-29994B and sc-29994C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

CD35 siRNA (h) is recommended for the inhibition of CD35 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  $\mu$ M in 66  $\mu$ l. 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

CD35 (E-11): sc-7308 is recommended as a control antibody for monitoring of CD35 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-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 CD35 gene expression knockdown using RT-PCR Primer: CD35 (h)-PR: sc-29994-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.