

# CD55 siRNA (h): sc-35012

## BACKGROUND

CD55, also called decay accelerating factor (DAF), is a GPI-anchored single chain glycoprotein. CD55 may play a role in protecting cells from complement-mediated lysis by preventing the amplification steps of the complement cascade. CD55 functions to prevent the assembly of C3 convertase or to accelerate the disassembly of preformed convertase, which blocks formation of the membrane attack complex. CD55 is expressed on cells in contact with serum, including hematopoietic and many non-hematopoietic cells.

## REFERENCES

1. Seya, T., et al. 1994. Distribution of C3-step regulatory proteins of the complement system, CD35 (CR1), CD46 (MCP), and CD55 (DAF) in hematological malignancies. *Leuk. Lymphoma* 12: 395-400.
2. Nicholson-Weller, A., et al. 1994. Structure and function of decay accelerating factor CD55. *J. Lab. Clin. Med.* 123: 485-491.
3. Bjorge, L., et al. 1996. Characterization of the complement-regulatory proteins decay-accelerating factor (DAF, CD55) and membrane cofactor protein (MCP, CD46) on a human colonic adeno-carcinoma cell line. *Cancer Immunol. Immunother.* 42: 185-192.
4. Spiller, O.B., et al. 1996. Complement expression on astrocytes and astrocytoma cell lines: failure of complement regulation at the C3 level correlates with very low CD55 expression. *J. Neuroimmunol.* 71: 97-106.
5. Van Denderen, B.J., et al. 1996. Expression of functional decay-accelerating factor (CD55) in transgenic mice protects against human complement-mediated attack. *Transplantation* 61: 582-588.
6. Kuttner-Kondo, L., et al. 1996. Molecular modeling and mechanism of action of human decay-accelerating factor. *Protein Eng.* 9: 1143-1149.
7. Liszewski, M.K., et al. 1996. Control of the complement system. *Adv. Immunol.* 61: 201-283.

## CHROMOSOMAL LOCATION

Genetic locus: CD55 (human) mapping to 1q32.2.

## PRODUCT

CD55 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 CD55 shRNA Plasmid (h): sc-35012-SH and CD55 shRNA (h) Lentiviral Particles: sc-35012-V as alternate gene silencing products.

For independent verification of CD55 (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-35012A, sc-35012B and sc-35012C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ 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

CD55 siRNA (h) is recommended for the inhibition of CD55 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

CD55 (NaM16-4D3): sc-51733 is recommended as a control antibody for monitoring of CD55 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 CD55 gene expression knockdown using RT-PCR Primer: CD55 (h)-PR: sc-35012-PR (20  $\mu$ l, 476 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.