

CD93 siRNA (h): sc-105157

BACKGROUND

The CD93 antigen is a 652 amino acid cell-surface glycoprotein expressed by monocytes, neutrophils, platelets, microglia, and endothelial cells. CD93 was originally thought to be a putative receptor for the complement component C1q, a serum glycoprotein which plays an integral role in the activation of the classical pathway in response to immune complexes. As a result, in the literature the CD93 gene product has also been referred to as C1QR1 and C1qRp as well as MXRA4 (matrix-remodeling-associated protein 4). Recent studies suggest that the CD93 antigen plays a role in intercellular adhesion and in clearance of apoptotic cells. CD93 is a heavily O-glycosylated, type I transmembrane protein consisting of an N-terminal domain with homology to C-type lectin domains, a tandem array of EGF-like domains, a single transmembrane domain and a short cytoplasmic tail.

REFERENCES

1. Malhotra, R., et al. 1993. Structure and homology of human C1q receptor (collectin receptor). *Immunology* 78: 341-348.
2. Nepomuceno, R.R., et al. 1998. C1qRP, the C1q receptor that enhances phagocytosis, is detected specifically in human cells of myeloid lineage, endothelial cells, and platelets. *J. Immunol.* 160: 1929-1935.
3. Nepomuceno, R.R., et al. 1999. C1qRP is a heavily O-glycosylated cell surface protein involved in the regulation of phagocytic activity. *J. Immunol.* 162: 3583-3589.
4. Danet, G.H., et al. 2002. C1qRp defines a new human stem cell population with hematopoietic and hepatic potential. *Proc. Natl. Acad. Sci. USA* 99: 10441-10445.

CHROMOSOMAL LOCATION

Genetic locus: CD93 (human) mapping to 20p11.21.

PRODUCT

CD93 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD93 shRNA Plasmid (h): sc-105157-SH and CD93 shRNA (h) Lentiviral Particles: sc-105157-V as alternate gene silencing products.

For independent verification of CD93 (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-105157A, sc-105157B and sc-105157C.

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

APPLICATIONS

CD93 siRNA (h) is recommended for the inhibition of CD93 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 μ M in 66 μ 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

CD93 (B-1): sc-365172 is recommended as a control antibody for monitoring of CD93 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 κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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 CD93 gene expression knockdown using RT-PCR Primer: CD93 (h)-PR: sc-105157-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Riether, C., et al. 2021. Metoclopramide treatment blocks CD93-signaling-mediated self-renewal of chronic myeloid leukemia stem cells. *Cell Rep.* 34: 108663.

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.