

CD43 siRNA (h): sc-29999

BACKGROUND

Over 100 cell surface markers have been identified through the use of monoclonal antibodies. Many of these markers have proven useful in identifying a specific subpopulation of cells within a mixed colony. Accordingly, these molecules have been assigned a "cluster of differentiation" (CD) designation. CD43 is the major O-glycosylated cell-surface associated sialoglycoprotein found on the cell membranes of leukocytes. It is a member of the surface mucin family which plays a central role in cellular adhesion tumor progression. Also called leukosialin, CD43 is best known as a marker for identifying normal and neoplastic T cells and a subset of neoplastic B cells within tissues. CD43 is thought to function as a negative regulator of cellular adhesion.

REFERENCES

1. Holter, W., et al. 1991. Phenotypical and functional characterization of leukocytes—the CD-system. *Wien. Klin. Wochenschr.* 103: 247-262.
2. Kim, Y.B., et al. 1994. CD11/CD18 panel report for swine CD workshop. *Vet. Immunol. Immunopathol.* 43: 289-291.
3. Manjunath, N., et al. 1995. Negative regulation of T-cell adhesion and activation by CD43. *Nature* 377: 535-538.
4. Sanchez-Mateos, P., et al. 1995. Regulatory role of CD43 leukosialin in integrin-mediated T-cell adhesion to endothelial and extracellular matrix ligands and is polar redistribution to a cellular uropod. *Blood* 86: 2228-2239.
5. Baekstrom, D., et al. 1995. Expression of the leukocyte-associated sialoglycoprotein CD43 by a colon carcinoma cell line. *J. Biol. Chem.* 270: 13688-13692.
6. Lynch, E.F., et al. 1995. CD43 and CD5 antibodies define four normal and neoplastic B-cell subsets: a three-color flow cytometric study. *Cytometry* 22: 223-231.

CHROMOSOMAL LOCATION

Genetic locus: SPN (human) mapping to 16p11.2.

PRODUCT

CD43 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 CD43 shRNA Plasmid (h): sc-29999-SH and CD43 shRNA (h) Lentiviral Particles: sc-29999-V as alternate gene silencing products.

For independent verification of CD43 (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-29999A, sc-29999B and sc-29999C.

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.

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

CD43 shRNA (h) Lentiviral Particles is recommended for the inhibition of CD43 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

CD43 (DF-T1): sc-6256 is recommended as a control antibody for monitoring of CD43 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 CD43 gene expression knockdown using RT-PCR Primer: CD43 (h)-PR: sc-29999-PR (20 μ l, 492 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.