

CD33 siRNA (m): sc-42783

BACKGROUND

CD33 is a type I transmembrane glycoprotein that is found on granulocyte and macrophage precursors in the bone marrow, but is absent from pluripotent stem cells. CD33 is also expressed on monocytes in peripheral blood. It is used as a marker to distinguish myelogenous leukemia cells from lymphoid or erythroid leukemias. CD33 may function as a sialic acid-dependent cell adhesion molecule.

REFERENCES

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3. Andrews, R.G., et al. 1989. Precursors of colony-forming cells in humans can be distinguished from colony-forming cells by expression of the CD33 and CD34 antigens and light scatter properties. *J. Exp. Med.* 169: 1721-1731.
4. Handgretinger, R., et al. 1993. Expression of an early myelopoietic antigen (CD33) of a subset of human umbilical cord blood-derived natural killer cells. *Immunol. Lett.* 37: 223-228.
5. Pierelli, L., et al. 1993. Further investigations on the expression of HLA-DR, CD33 and CD13 surface antigens in purified bone marrow and peripheral blood CD34⁺ haematopoietic progenitor cells. *Br. J. Haematol.* 84: 24-30.
6. Freeman, S.D., et al. 1995. Characterization of CD33 as a new member of the sialoadhesin family of cellular interaction molecules. *Blood* 85: 2005-2012.
7. Kelm, S., et al. 1996. The sialoadhesins: a family of sialic-acid-dependent cellular recognition molecules within the immunoglobulin superfamily. *Glycoconj. J.* 13: 913-926.
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CHROMOSOMAL LOCATION

Genetic locus: Cd33 (mouse) mapping to 7 B4.

PRODUCT

CD33 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD33 shRNA Plasmid (m): sc-42783-SH and CD33 shRNA (m) Lentiviral Particles: sc-42783-V as alternate gene silencing products.

For independent verification of CD33 (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-42783A, sc-42783B and sc-42783C.

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

CD33 siRNA (m) is recommended for the inhibition of CD33 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 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

CD33 (6C5/2): sc-53199 is recommended as a control antibody for monitoring of CD33 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 CD33 gene expression knockdown using RT-PCR Primer: CD33 (m)-PR: sc-42783-PR (20 μ 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 for detailed protocols and support products.