

DCL-1 siRNA (h): sc-94620

BACKGROUND

DCL-1, also known as CD302, CLEC13A (C-type lectin domain family 13 member A) or C-type lectin BIMLEC, is a 232 amino acid single-pass type I membrane protein involved in endocytosis, phagocytosis and cell adhesion and migration. A C-type lectin receptor, DCL-1 is widely expressed with highest levels found in peripheral blood, myeloid and B lymphoid cell lines, liver, ovary and lung. DCL-1 undergoes alternative splicing to produce three isoforms designated DCL-1 isoform 1, isoform 2 (also known as fusion protein variant V34-2) and isoform 3 (also designated fusion protein variant V33-2). DCL-1 isoforms 2 and 3 are produced in malignant lymphoma cells, known as Hodgkin and Reed-Sternberg (HRS) cells. DCL-1 contains one C-type lectin domain and is encoded by a gene that maps to human chromosome 2q24.2. A number of genetic diseases are linked to genes on chromosome 2 including Harlequin ichthyosis, sitosterolemia and Alström syndrome.

REFERENCES

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2. Patel, S.B., et al. 1998. Mapping a gene involved in regulating dietary cholesterol absorption. The sitosterolemia locus is found at chromosome 2p21. *J. Clin. Invest.* 102: 1041-1044.
3. Zumsteg, U., et al. 2000. Alstrom syndrome: confirmation of linkage to chromosome 2p12-13 and phenotypic heterogeneity in three affected sibs. *J. Med. Genet.* 37: E8.
4. Kato, M., et al. 2003. Hodgkin's lymphoma cell lines express a fusion protein encoded by intergenically spliced mRNA for the multilectin receptor DEC-205 (CD205) and a novel C-type lectin receptor DCL-1. *J. Biol. Chem.* 278: 34035-34041.
5. Kelsell, D.P., et al. 2005. Mutations in ABCA12 underlie the severe congenital skin disease harlequin ichthyosis. *Am. J. Hum. Genet.* 76: 794-803.
6. Kato, M., et al. 2007. The novel endocytic and phagocytic C-type lectin receptor DCL-1/CD302 on macrophages is colocalized with F-Actin, suggesting a role in cell adhesion and migration. *J. Immunol.* 179: 6052-6063.

CHROMOSOMAL LOCATION

Genetic locus: CD302 (human) mapping to 2q24.2.

PRODUCT

DCL-1 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 DCL-1 shRNA Plasmid (h): sc-94620-SH and DCL-1 shRNA (h) Lentiviral Particles: sc-94620-V as alternate gene silencing products.

For independent verification of DCL-1 (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-94620A, sc-94620B and sc-94620C.

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

DCL-1 siRNA (h) is recommended for the inhibition of DCL-1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor DCL-1 gene expression knockdown using RT-PCR Primer: DCL-1 (h)-PR: sc-94620-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.