SANTA CRUZ BIOTECHNOLOGY, INC.

CLEC-L1 siRNA (h): sc-96106

BACKGROUND

The C-type lectin/C-type lectin-like domain (CTL/CTLD) superfamily consists of a variety of proteins that share a common protein fold and have diverse functions, including cell-cell signaling, cell adhesion, glycoprotein turnover and immune responses. CLEC-L1 (C-type lectin-like domain family 1), also known as DCAL-1 (dendritic cell-associated lectin 1), is a 167 amino acid single-pass type II membrane protein that contains one C-type lectin domain and plays a role in cell-to-cell immune interactions. Highly expressed in dendritic cells and B-cells, CLEC-L1 is also found in tonsil, lymph node and spleen, with low levels found in peripheral blood, colon and spleen. CLEC-L1 acts as a costimulatory molecule that increases IL-4 production and is encoded by a gene that maps to human chromosome 12p13.31.

REFERENCES

1. Drickamer, K. 1999. C-type lectin-like domains. Curr. Opin. Struct. Biol. 9: 585-590.
2. Arce, I., et al. 2001. Molecular and genomic characterization of human DLEC, a novel member of the C-type lectin receptor gene family preferentially expressed on monocyte-derived dendritic cells. Eur. J. Immunol. 31: 2733-2740.
3. Ryan, E.J., et al. 2002. Dendritic cell-associated lectin-1: a novel dendritic cell-associated, C-type lectin-like molecule enhances T cell secretion of IL-4. J. Immunol. 169: 5638-5648.
4. Ebner, S., et al. 2003. Evolutionary analysis reveals collective properties and specificity in the C-type lectin and lectin-like domain superfamily. Proteins 53: 44-55.
5. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607467. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. McMahon, S.A., et al. 2005. The C-type lectin fold as an evolutionary solution for massive sequence variation. Nat. Struct. Mol. Biol. 12: 886-892.
7. Gijzen, K., et al. 2006. C-type lectins on dendritic cells and their interaction with pathogen-derived and endogenous glycoconjugates. Curr. Protein Pept. Sci. 7: 283-294.

CHROMOSOMAL LOCATION

Genetic locus: CLECL1 (human) mapping to 12p13.31.

PRODUCT

CLEC-L1 siRNA (h) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CLEC-L1 shRNA Plasmid (h): sc-96106-SH and CLEC-L1 shRNA (h) Lentiviral Particles: sc-96106-V as alternate gene silencing products.

PROTOCOLS

See our web site at www.scbt.com or our catalog 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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

CLEC-L1 siRNA (h) is recommended for the inhibition of CLEC-L1 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 µM in 66 µl. 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 CLEC-L1 gene expression knockdown using RT-PCR Primer: CLEC-L1 (h)-PR: sc-96106-PR (20 µl). 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.