SANTA CRUZ BIOTECHNOLOGY, INC.

# CLEC-12A siRNA (m): sc-142376

## 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-12A (C-type lectin domain family 12, member A), also known as CLL1, MICL, CLL-1 or DCAL-2, is a 275 amino acid single-pass type II membrane protein that contains one C-type lectin domain and belongs to the CTL/CTLD superfamily. Existing as multiple alternatively spliced isoforms that are expressed in neutrophils, eosinophils, monocytes and dendritic cells, CLEC-12A functions as a cell surface receptor that acts as a negative regulator of granulocyte and monocyte function and, via this activity, modulates signaling cascades. CLEC-12A is highly subject to post-translational glycosylation at its N-terminus and may also exist as a homodimer.

## REFERENCES


1. Drickamer, K. 1999. C-type lectin-like domains. Curr. Opin. Struct. Biol. 9: 585-590.
2. 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.
3. Bakker, A.B., et al. 2004. C-type lectin-like molecule-1: a novel myeloid cell surface marker associated with acute myeloid leukemia. Cancer Res. 64: 8443-8450.
4. Marshall, A.S., et al. 2004. Identification and characterization of a novel human myeloid inhibitory C-type lectin-like receptor (MICL) that is predominantly expressed on granulocytes and monocytes. J. Biol. Chem. 279: 14792-14802.
5. Chen, C.H., et al. 2006. Dendritic-cell-associated C-type lectin 2 (DCAL-2) alters dendritic-cell maturation and cytokine production. Blood 107: 1459-1467.


## CHROMOSOMAL LOCATION

Genetic locus: Clec12a (mouse) mapping to 6 F3.

## PRODUCT

CLEC-12A 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CLEC-12A shRNA Plasmid (m): sc-142376-SH and CLEC-12A shRNA (m) Lentiviral Particles: sc-142376-V as alternate gene silencing products.

For independent verification of CLEC-12A (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-142376A, sc-142376B and sc-142376C.

## 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 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-12A siRNA (m) is recommended for the inhibition of CLEC-12A 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 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-12A gene expression knockdown using RT-PCR Primer: CLEC-12A (m)-PR: sc-142376-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.