



# CLEC-5A siRNA (h): sc-89348

## 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-5A (C-type lectin domain family 5 member A), also known as MDL-1 (Myeloid DAP12-associating lectin) or CLECSF5, is a 188 amino acid single-pass type II membrane protein that contains one C-type lectin domain and belongs to the C-type lectin superfamily. Expressed in peripheral blood monocytes, CLEC-5A is thought to be involved in the proinflammatory activation of myeloid cells, specifically by mediating DAP12 signaling in a calcium-dependent manner. The signaling cascade in which CLEC-5A is involved is associated with dengue hemorrhagic fever and dengue shock syndrome, suggesting a role for CLEC-5A in dengue viral host infection. Multiple isoforms of CLEC-5A exist due to alternative splicing events.

## REFERENCES

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- Gingras, M.C., et al. 2002. TREM-1, MDL-1, and DAP12 expression is associated with a mature stage of myeloid development. *Mol. Immunol.* 38: 817-824.
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- Aoki, N., et al. 2004. Differential regulation of DAP12 and molecules associated with DAP12 during host responses to mycobacterial infection. *Infect. Immun.* 72: 2477-2483.
- Chen, S.T., et al. 2008. CLEC5A is critical for dengue-virus-induced lethal disease. *Nature* 453: 672-676.

## CHROMOSOMAL LOCATION

Genetic locus: CLEC5A (human) mapping to 7q34.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

CLEC-5A 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CLEC-5A shRNA Plasmid (h): sc-89348-SH and CLEC-5A shRNA (h) Lentiviral Particles: sc-89348-V as alternate gene silencing products.

For independent verification of CLEC-5A (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-89348A, sc-89348B and sc-89348C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

CLEC-5A siRNA (h) is recommended for the inhibition of CLEC-5A 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  $\mu$ M in 66  $\mu$ 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 CLEC-5A gene expression knockdown using RT-PCR Primer: CLEC-5A (h)-PR: sc-89348-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.