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- Expressversand

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# CD209a siRNA (m): sc-42857

## BACKGROUND

Dendritic cells (DC) are antigen-presenting immune system cells that are present on peripheral mucosal tissues and migrate to lymphoid tissues. DC-SIGN (DC-specific ICAM-3 grabbing nonintegrin) is a type II membrane protein that is exclusively expressed by DC. DC-SIGN, also designated CD209, binds to ICAM-3 to mediate the initial interaction between DC and resting T cells through the immunological synapse. The DC that are present in the initial sites of HIV-1 infection capture HIV-1 through DC-SIGN, which then facilitates the migration of DC to areas of T cell-rich secondary lymphoid organs, where it promotes efficient trans HIV-1 infection of these T cells. DC-SIGN functions to transport HIV-1 from exposed mucosal surfaces to a lymphoid compartment.

## REFERENCES

- Engering, A., et al. 2002. The dendritic cell-specific adhesion receptor DC-SIGN internalizes antigen for presentation to T cells. *J. Immunol.* 168: 2118-2126.
- Geijtenbeek, T.B., et al. 2002. Marginal zone macrophages express a murine homologue of DC-SIGN that captures blood-borne antigens *in vivo*. *Blood* 100: 2908-2916.
- Moris, A., et al. 2004. DC-SIGN promotes exogenous MHC-I-restricted HIV-1 antigen presentation. *Blood* 103: 2648-2654.
- Cormier, E.G., et al. 2004. L-SIGN (CD209L) and DC-SIGN (CD209) mediate transinfection of liver cells by hepatitis C virus. *Proc. Natl. Acad. Sci. USA* 101: 14067-14072.
- Weber, K.S., et al. 2004. Sialylation of ICAM-2 on platelets impairs adhesion of leukocytes via LFA-1 and DC-SIGN. *Inflammation* 28: 1771-1788.
- Sakuntabhai, A., et al. 2005. A variant in the CD209 promoter is associated with severity of dengue disease. *Nat. Genet.* 37: 507-513.
- de la Rosa, G., et al. 2005. Regulated recruitment of DC-SIGN to cell-cell contact regions during zymosan-induced human dendritic cell aggregation. *J. Leukoc. Biol.* 77: 699-709.
- Groot, F., et al. 2005. Lactoferrin prevents dendritic cell-mediated human immunodeficiency virus type 1 transmission by blocking the DC-SIGN—gp120 interaction. *J. Virol.* 79: 3009-3015.

## CHROMOSOMAL LOCATION

Genetic locus: Cd209a (mouse) mapping to 8 A1.1.

## PRODUCT

CD209a 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD209a shRNA Plasmid (m): sc-42857-SH and CD209a shRNA (m) Lentiviral Particles: sc-42857-V as alternate gene silencing products.

For independent verification of CD209a (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-42857A, sc-42857B and sc-42857C.

## 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

CD209a siRNA (m) is recommended for the inhibition of CD209a 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  $\mu$ 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 CD209a gene expression knockdown using RT-PCR Primer: CD209a (m)-PR: sc-42857-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

- Jung, T.W., et al. 2018. LECT2 promotes inflammation and Insulin resistance in adipocytes via P38 pathways. *J. Mol. Endocrinol.* 61: 37-45.

## 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.