

Dectin-2 siRNA (h): sc-63278

BACKGROUND

Together, Dectin-1 and Dectin-2 make up the unique subfamily of dendritic cell-associated C-type lectins. Dectin-2 is expressed on antigen-presenting cells, where it interacts with its putative ligands on T cells. That interaction may deliver co-stimulatory signals in naive T cells. Dectin-2 expression is upregulated during monocyte activation and maturation at inflammatory lesions. Broadband UV-B upregulates Dectin-2 expression in Langerhans cells by activating the Dectin-2 gene promoter, suggesting that this protein plays a crucial role in the mediation of UV-induced immunosuppression. In cattle, Dectin-2 expressed by dendritic cells may also play a role in the recognition of invading antigens in lymph nodes. Dectin-2 functions as a pattern recognition receptor for fungi that activates signaling through FcγR to induce innate immune responses.

REFERENCES

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3. Aragane, Y., et al. 2003. Involvement of Dectin-2 in ultraviolet radiation-induced tolerance. *J. Immunol.* 171: 3801-3807.
4. Kanazawa, N., et al. 2004. Molecular cloning of human Dectin-2. *J. Invest. Dermatol.* 122: 1522-1524.
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7. Taylor, P.R., et al. 2005. Dectin-2 is predominantly myeloid restricted and exhibits unique activation-δ expression on maturing inflammatory monocytes elicited *in vivo*. *Eur. J. Immunol.* 35: 2163-2174.
8. Bonkobara, M., et al. 2006. Identification and gene expression of bovine C-type lectin Dectin-2. *Vet. Immunol. Immunopathol.* 110: 179-186.
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CHROMOSOMAL LOCATION

Genetic locus: CLEC6A (human) mapping to 12p13.31.

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.

PRODUCT

Dectin-2 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 μM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Dectin-2 shRNA Plasmid (h): sc-63278-SH and Dectin-2 shRNA (h) Lentiviral Particles: sc-63278-V as alternate gene silencing products.

For independent verification of Dectin-2 (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-63278A, sc-63278B and sc-63278C.

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

Dectin-2 siRNA (h) is recommended for the inhibition of Dectin-2 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 Dectin-2 gene expression knockdown using RT-PCR Primer: Dectin-2 (h)-PR: sc-63278-PR (20 μl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.