SANTA CRUZ BIOTECHNOLOGY, INC.

Dectin-2 siRNA (m): sc-63279

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 FcRγ to induce innate immune responses.

REFERENCES

1. Ariizumi, K., et al. 2000. Cloning of a second dendritic cell-associated C-type lectin (Dectin-2) and its alternatively spliced isoforms. J. Biol. Chem. 275: 11957-11963.
2. Bonkobara, M., et al. 2001. Epidermal Langerhans cell-targeted gene expression by a Dectin-2 promoter. J. Immunol. 167: 6893-6900.
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.
5. Bonkobara, M., et al. 2005. Ultraviolet-B radiation upregulates expression of Dectin-2 on epidermal Langerhans cells by activating the gene promoter. Photochem. Photobiol. 81: 944-948.
6. Gavino, A.C., et al. 2005. Identification and expression profiling of a human C-type lectin, structurally homologous to mouse Dectin-2. Exp. Dermatol. 14: 281-288.

CHROMOSOMAL LOCATION

Genetic locus: Clec4n (mouse) mapping to 6 F2.

PRODUCT

Dectin-2 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 Dectin-2 shRNA Plasmid (m): sc-63279-SH and Dectin-2 shRNA (m) Lentiviral Particles: sc-63279-V as alternate gene silencing products.

For independent verification of Dectin-2 (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-63279A, sc-63279B and sc-63279C.

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

Dectin-2 siRNA (m) is recommended for the inhibition of Dectin-2 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.

GENE EXPRESSION MONITORING

Dectin-2 (Z-17): sc-73898 is recommended as a control antibody for monitoring of Dectin-2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Dectin-2 gene expression knockdown using RT-PCR Primer: Dectin-2 (m)-PR: sc-63279-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.