

IL-19 siRNA (h): sc-39659

BACKGROUND

IL-14 (high-molecular-weight B-cell growth factor or HMW-BCGF) is a 53 kDa protein that plays a significant role in the rapid proliferation of aggressive B-cell type non-Hodgkin's lymphoma. IL-19 and IL-20 are IL-10-related cytokines. IL-19 is involved in melanoma differentiation, and IL-20 plays an essential role in epidermal function and psoriasis. Like other interleukin molecules, IL-21 is a small secreted molecule, and it has potent effects on lymphoid cells. IL-21 is most closely related to IL-2 and IL-15 and has a role in the proliferation and maturation of natural killer cell populations from bone marrow, in the proliferation of mature B-cell populations co-stimulated with anti-CD40, and in the proliferation of T cells co-stimulated with anti-CD3.

REFERENCES

1. Ford, R., et al. 1995. Identification of B-cell growth factors (interleukin-14; high molecular weight-B-cell growth factors) in effusion fluids from patients with aggressive B-cell lymphomas. *Blood* 86: 283-293.
2. Gallagher, G., et al. 2000. Cloning, expression and initial characterization of interleukin-19 (IL-19), a novel homologue of human interleukin-10 (IL-10). *Genes Immun.* 1: 442-450.
3. Parrish-Novak, J., et al. 2000. Interleukin-21 and its receptor are involved in NK cell expansion and regulation of lymphocyte function. *Nature* 408: 57-63.
4. Blumberg, H., et al. 2001. Interleukin-20: discovery, receptor identification, and role in epidermal function. *Cell* 104: 9-19.
5. Vosshenrich, C.A., et al. 2001. Cytokines: IL-21 joins the γ_c -dependent network? *Curr. Biol.* 11: R175-177.

CHROMOSOMAL LOCATION

Genetic locus: IL19 (human) mapping to 1q32.1.

PRODUCT

IL-19 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see IL-19 shRNA Plasmid (h): sc-39659-SH and IL-19 shRNA (h) Lentiviral Particles: sc-39659-V as alternate gene silencing products.

For independent verification of IL-19 (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-39659A, sc-39659B and sc-39659C.

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

APPLICATIONS

IL-19 siRNA (h) is recommended for the inhibition of IL-19 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 μ M in 66 μ 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.

GENE EXPRESSION MONITORING

IL-19 (C1): sc-517446 is recommended as a control antibody for monitoring of IL-19 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor IL-19 gene expression knockdown using RT-PCR Primer: IL-19 (h)-PR: sc-39659-PR (20 μ l). 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.