



IL-21 siRNA (h): sc-39662

BACKGROUND

Interleukins are a group of cytokines produced by a wide variety of cells. Interleukin 21 (IL-21) is a small secreted interleukin molecule that has potent effects on lymphoid cells. Specifically, IL-21 stimulates B cell proliferation in an anti-CD40-dependent manner, and also activates anti-CD3-regulated stimulation of the proliferation of naive (CD45RA-positive) cytotoxic T cells. IL-21 is regulated by the T-helper cell subset-specific action of Tbet, which represses its expression, and NFATc2, which promotes its expression. IL-21 is most closely related to IL-2 and IL-15, and it plays an important role in the proliferation and maturation of natural killer (NK) cell populations from bone marrow, though this role differs between species. Human IL-21 enhances NK cell proliferation, but murine IL-21 inhibits NK cell proliferation.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: IL21 (human) mapping to 4q27.

PRODUCT

IL-21 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-21 shRNA Plasmid (h): sc-39662-SH and IL-21 shRNA (h) Lentiviral Particles: sc-39662-V as alternate gene silencing products.

For independent verification of IL-21 (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-39662A, sc-39662B and sc-39662C.

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-21 siRNA (h) is recommended for the inhibition of IL-21 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor IL-21 gene expression knockdown using RT-PCR Primer: IL-21 (h)-PR: sc-39662-PR (20 μ l, 467 bp). 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.