SANTA CRUZ BIOTECHNOLOGY, INC.

IL-9R siRNA (m): sc-40050

BACKGROUND

Interleukin-9 (IL-9) functions to support the growth of helper T cells, megakaryoblastic leukemia cells, fetal thymocytes, erythroid and myeloid precursors and mast cells. The murine IL-9 receptor has been identified as a protein expressed on a T cell clone. Both the murine and human IL-9 receptor cDNAs have been isolated by expression cloning from the murine T cell clone TS1 and the human megakaryoblastic leukemia cell line MO7E, respectively. In addition, the cloning and analysis of the complete human IL-9 receptor genomic DNA has been reported. In this latter study, the IL-9R gene was shown to consist of ten exons expressed over approximately 13.7 kb of DNA.

REFERENCES

1. Uyttenhove, C., et al. 1988. Functional and structural characterization of P40, a mouse glycoprotein with T-cell growth factor activity. Proc. Natl. Acad. Sci. USA 85: 6934-6938.
2. Yang, Y.C., et al. 1989. Expression cloning of a cDNA encoding a novel human hematopoietic growth factor: human homologue of murine T-cell growth factor P40. Blood 74: 1880-1884.
3. Donahue, R.E., et al. 1990. Human P40 T-cell growth factor (interleukin-9) supports erythroid colony formation. Blood 75: 2271-2275.
4. Druez, C., et al. 1990. Functional and biochemical characterization of mouse P40/IL-9 receptors. J. Immunol. 145: 2494-2499.
5. Renauld, J.C., et al. 1992. Expression cloning of the murine and human interleukin-9 receptor cDNAs. Proc. Natl. Acad. Sci. USA 89: 5690-5694.
6. Chang, M.S., et al. 1994. Isolation and characterization of the human interleukin-9 receptor gene. Blood 83: 3199-3205.

CHROMOSOMAL LOCATION

Genetic locus: Il9r (mouse) mapping to 11 A4.

PRODUCT

IL-9R 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 IL-9R shRNA Plasmid (m): sc-40050-SH and IL-9R shRNA (m) Lentiviral Particles: sc-40050-V as alternate gene silencing products.

For independent verification of IL-9R (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-40050A, sc-40050B and sc-40050C.

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

IL-9R siRNA (m) is recommended for the inhibition of IL-9R 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

IL-9R (F-3): sc-515622 is recommended as a control antibody for monitoring of IL-9R 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-9R gene expression knockdown using RT-PCR Primer: IL-9R (m)-PR: sc-40050-PR (20 µl, 519 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.