



MIP-3 α siRNA (m): sc-60000

BACKGROUND

Chemokines are members of a superfamily of small inducible, secreted, pro-inflammatory cytokines. Members of the chemokine family exhibit 20 to 50% homology in their predicted amino acid sequences and are divided into four subfamilies. In C-C (or β) subfamily, the first two cysteines are adjacent. C-C chemokines are chemoattractants and activators for monocytes and T cells. C-C subfamily members include macrophage inflammatory protein (MIP)-1 α , MIP-1 β , MIP-2, MIP-3 α , MIP-3 β , MIP-4, HCC-1, MIP-5 (or HCC-2), RANTES, MCP-1/2/3 (and the murine homologs JE and MARC), I-309, murine C10 and TCA3. MIP-3 α is expressed in several tissues and cell lines. MIP-3 β expression is restricted to lymph nodes, thymus and appendix.

REFERENCES

1. Zipfel, P.F., et al. 1989. Mitogenic activation of human T cells induces two closely related genes which share structural similarities with a new family of secreted factors. *J. Immunol.* 142: 1582-1590.
2. Widmer, U., et al. 1993. Genomic cloning and promoter analysis of macrophage inflammatory protein MIP-2, MIP-1 α and MIP-1 β , members of the chemokine superfamily of proinflammatory cytokines. *J. Immunol.* 150: 4996-5012.
3. Schall, T.J., et al. 1993. Human macrophage inflammatory protein α (MIP-1 α) and MIP-1 β chemokines attract distinct populations of lymphocytes. *J. Exp. Med.* 177: 1821-1826.
4. Uguccione, M., et al. 1995. Actions of the chemotactic cytokines MCP-1, MCP-2, MCP-3, RANTES, MIP-1 α and MIP-1 β on human monocytes. *Eur. J. Immunol.* 25: 64-68.
5. Cocchi, F., et al. 1995. Identification of RANTES, MIP-1 α and MIP-1 β as the major HIV-suppressive factors produced by CD8⁺ T cells. *Science* 270: 1811-1815.
6. Cook, D.N. 1996. The role of MIP-1 α in inflammation and hematopoiesis. *J. Leukoc. Biol.* 59: 61-66.
7. Taub, D.D., et al. 1996. β chemokines costimulate lymphocyte cytotoxicity, proliferation and lymphokine production. *J. Leukoc. Biol.* 59: 81-89.

CHROMOSOMAL LOCATION

Genetic locus: Ccl20 (mouse) mapping to 1 C5.

PRODUCT

MIP-3 α 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MIP-3 α shRNA Plasmid (m): sc-60000-SH and MIP-3 α shRNA (m) Lentiviral Particles: sc-60000-V as alternate gene silencing products.

For independent verification of MIP-3 α (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-60000A, sc-60000B and sc-60000C.

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

MIP-3 α siRNA (m) is recommended for the inhibition of MIP-3 α 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 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 MIP-3 α gene expression knockdown using RT-PCR Primer: MIP-3 α (m)-PR: sc-60000-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Lee, S.G., et al. 2024. Cathepsin D promotes polarization of tumor-associated macrophages and metastasis through TGFBI-CCL20 signaling. *Exp. Mol. Med.* 56: 383-394.

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.