

# MCP-5 siRNA (m): sc-43916

## BACKGROUND

Eotaxin and the monocyte chemotactic proteins, MCP-1–5, form a subfamily of the C-C (or  $\beta$ ) chemokines, which are characterized by a set of conserved adjacent cysteines. MCPs are produced by a variety of cells, including T lymphocytes, subsequent to their activation with cytokines such as IL-1, TNF $\alpha$  and IFN- $\gamma$ . *In vitro* studies have shown that the MCP isoforms exhibit their chemotactic effects on different subpopulations of lymphocytes. MCP-5 is thought to be important in the early stages of lung allergic inflammation.

## REFERENCES

1. Combadiere, C., et al. 1995. MCP-3 is a functional ligand for C-C chemokine receptors 1 and 2B. *J. Biol. Chem.* 270: 29671-29675.
2. Weber, M., et al. 1995. Monocyte chemotactic protein MCP-2 activates human basophil and eosinophil leukocytes similar to MCP-3. *J. Immunol.* 154: 4166-4172.
3. Proost, P., et al. 1996. Human MCP-2 and -3: structural and functional comparison with MCP-1. *J. Leukoc. Biol.* 59: 67-74.
4. Dubois, P.M., et al. 1996. Early signal transduction by the receptor to the chemokine monocyte chemotactic protein-1 in a murine T cell hybrid. *J. Immunol.* 156: 1356-1361.
5. Beall, C.J., et al. 1996. Site-directed mutagenesis of monocyte chemoattractant protein-1 identifies two regions of the polypeptide essential for biological activity. *Biochem. J.* 313: 633-640.
6. Kuna, P., et al. 1996. Chemokines in seasonal allergic rhinitis. *J. Allergy Clin. Immunol.* 97: 104-112.
7. Garcia-Zepeda, E.A., et al. 1996. Human monocyte chemoattractant protein (MCP)-4 is a novel C-C chemokine with activities on monocytes, eosinophils, and basophils induced in allergic and nonallergic inflammation that signals through the C-C chemokine receptors (CCR)-2 and -3. *J. Immunol.* 157: 5613-5626.
8. Jia, G.Q., et al. 1996. Distinct expression and function of the novel mouse chemokine monocyte chemotactic protein-5 in lung allergic inflammation. *J. Exp. Med.* 184: 1939-1951.

## CHROMOSOMAL LOCATION

Genetic locus: Ccl12 (mouse) mapping to 11 C.

## PRODUCT

MCP-5 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MCP-5 shRNA Plasmid (m): sc-43916-SH and MCP-5 shRNA (m) Lentiviral Particles: sc-43916-V as alternate gene silencing products.

For independent verification of MCP-5 (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-43916A, sc-43916B and sc-43916C.

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

## APPLICATIONS

MCP-5 siRNA (m) is recommended for the inhibition of MCP-5 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  $\mu$ M in 66  $\mu$ 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

MCP-5 (16Q07): sc-74220 is recommended as a control antibody for monitoring of MCP-5 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 MCP-5 gene expression knockdown using RT-PCR Primer: MCP-5 (m)-PR: sc-43916-PR (20  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.