

# MIP-5 siRNA (h): sc-45786

## 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 the C-C (or  $\beta$ ) 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 $\alpha$ , MIP-1 $\beta$ , MIP-2, MIP-3 $\alpha$ , MIP-3 $\beta$ , 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-5 expression is restricted to gut and liver.

## REFERENCES

1. Wells, T.N., et al. 1997. The chemokine information source: identification and characterization of novel chemokines using the World Wide Web and expressed sequence tag databases. *J. Leukoc. Biol.* 61: 545-550.
2. Youn, B.S., et al. 1997. Molecular cloning of Leukotactin-1: a novel human  $\beta$ -chemokine, a chemoattractant for neutrophils, monocytes and lymphocytes, and a potent agonist at C-C chemokine receptors 1 and 3. *J. Immunol.* 159: 5201-5205.
3. Wang, W., et al. 1998. Molecular cloning and functional characterization of human MIP-1 $\delta$ , a new C-C chemokine related to mouse CCF-18 and C10. *J. Clin. Immunol.* 18: 214-222.
4. Youn, B.S., et al. 1998. Characterization of CK $\beta$ 8 and CK $\beta$ 8-1: two alternatively spliced forms of human  $\beta$ -chemokine, chemoattractants for neutrophils, monocytes, and lymphocytes, and potent agonists at C-C chemokine receptor 1. *Blood* 91: 3118-3126.
5. Nomiyama, H., et al. 1999. Organization of the chemokine gene cluster on human chromosome 17q11.2 containing the genes for C-C chemokine MIP-1, HCC-2, HCC-1, LEC and RANTES. *J. Interferon Cytokine Res.* 19: 227-234.6
6. Hwang, J., et al. 2004. Angiogenic activity of human C-C chemokine CCL15 *in vitro* and *in vivo*. *FEBS Lett.* 570: 47-51.

## CHROMOSOMAL LOCATION

Genetic locus: CCL15 (human) mapping to 17q12.

## PRODUCT

MIP-5 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MIP-5 shRNA Plasmid (h): sc-45786-SH and MIP-5 shRNA (h) Lentiviral Particles: sc-45786-V as alternate gene silencing products.

For independent verification of MIP-5 (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-45786A, sc-45786B and sc-45786C.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## 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  $\mu$ 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

MIP-5 siRNA (h) is recommended for the inhibition of MIP-5 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  $\mu$ 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

MIP-5 (A-12): sc-398069 is recommended as a control antibody for monitoring of MIP-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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 MIP-5 gene expression knockdown using RT-PCR Primer: MIP-5 (h)-PR: sc-45786-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.