

MCP-1 (S8): sc-52877



The Power to Question

BACKGROUND

Eotaxin and the monocyte chemotactic proteins, MCP-1–5, form a subfamily of the C-C (or β) 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 α and IFN- γ . *In vitro* studies have shown that the MCP isoforms exhibit their chemotactic effects on different subpopulations of lymphocytes. MCP-1 is a potent basophil activator but does not affect eosinophils. MCP-1 levels are increased during infection and inflammation, which are both characterized by leukocyte infiltration. Two MCP-1 receptors, which differ in their carboxy-termini, have been identified.

REFERENCES

1. Charo, I.F., et al. 1994. Molecular cloning and functional expression of two monocyte chemoattractant protein-1 receptors reveals alternative splicing of the carboxyl-terminal tails. *Proc. Natl. Acad. Sci. USA* 91: 2752-2756.
2. Taub, D.D., et al. 1995. Monocyte chemotactic protein-1 (MCP-1), -2 and -3 are chemotactic for human T lymphocytes. *J. Clin. Invest.* 95: 1370-1376.
3. 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.
4. Combadiere, C., et al. 1995. Monocyte chemoattractant protein-3 is a functional ligand for C-C chemokine receptors 1 and 2B. *J. Biol. Chem.* 270: 29671-29675.
5. Proost, P., et al. 1996. Human monocyte chemotactic proteins-2 and -3: structural and functional comparison with MCP-1. *J. Leukoc. Biol.* 59: 67-74.
6. 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.
7. 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.

CHROMOSOMAL LOCATION

Genetic locus: CCL2 (human) mapping to 17q12.

SOURCE

MCP-1 (S8) is a mouse monoclonal antibody raised against recombinant full length MCP-1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG γ_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

MCP-1 (S8) is recommended for detection of MCP-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with human IL-8 and other human cytokines tested (IL-1f, serum amyloid A and EGF).

Suitable for use as control antibody for MCP-1 siRNA (h): sc-43913, MCP-1 shRNA Plasmid (h): sc-43913-SH and MCP-1 shRNA (h) Lentiviral Particles: sc-43913-V.

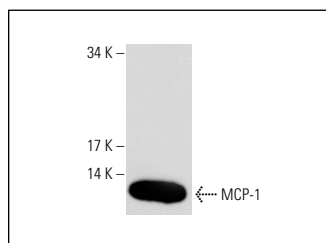
Molecular Weight of MCP-1: 12 kDa.

Positive Controls: human PBL whole cell lysate.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



MCP-1 (S8): sc-52877. Western blot analysis of MCP-1 expression in human PBL whole cell lysate.

SELECT PRODUCT CITATIONS

1. Mao, H., et al. 2018. Zedoarondiol attenuates endothelial cells injury induced by oxidized low-density lipoprotein via Nrf2 activation. *Cell. Physiol. Biochem.* 48: 1468-1479.
2. Pflüger-Müller, B., et al. 2020. The endocannabinoid anandamide has an anti-inflammatory effect on CCL2 expression in vascular smooth muscle cells. *Basic Res. Cardiol.* 115: 34.

RESEARCH USE

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



See **MCP-1-4/eotaxin (B-2): sc-377082** for MCP-1-4/eotaxin antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488, 546, 594, 647, 680 and 790.