

MCP-1 (C-17): sc-1304



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.

CHROMOSOMAL LOCATION

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

SOURCE

MCP-1 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MCP-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1304 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MCP-1 (C-17) 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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: MCP-1 (h): 293 Lysate: sc-111347.

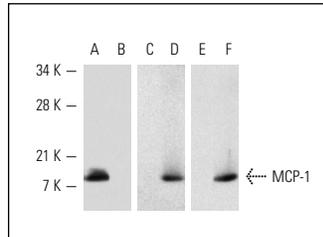
STORAGE

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

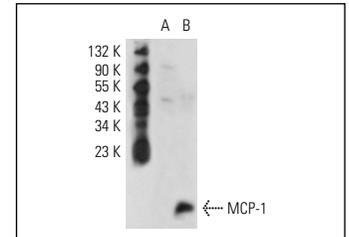
RESEARCH USE

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

DATA



Western blot analysis of human recombinant MCP-1 (A, C, E) and mouse recombinant MCP-1 (B, D, F). Antibodies tested include MCP-1 (C-17): sc-1304 (A, B), MCP-1 (M-18): sc-1784 (C, D) and MCP-1 (R-17): sc-1785 (E, F).



MCP-1 (C-17): sc-1304. Western blot analysis of MCP-1 expression in non-transfected: sc-110760 (A) and human MCP-1 transfected: sc-111347 (B) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Penido, C., et al. 2003. Role of monocyte chemotactic protein-1/CC chemokine ligand 2 on $\gamma\delta$ T lymphocyte trafficking during inflammation induced by lipopolysaccharide or *Mycobacterium bovis* bacille Calmette-Guérin. *J. Immunol.* 171: 6788-6794.
2. Vit, J.P., et al. 2006. The analgesic effect of low dose focal irradiation in a mouse model of bone cancer is associated with spinal changes in neuro-mediators of nociception. *Pain* 120: 188-201.
3. Harvey, E.J., et al. 2007. Critical role for casein kinase 2 and phosphoinositide-3-kinase in the interferon- γ -induced expression of monocyte chemoattractant protein-1 and other key genes implicated in atherosclerosis. *Arterioscler. Thromb. Vasc. Biol.* 27: 806-812.
4. Morais, C., et al. 2009. Anti-angiogenic actions of pyrrolidine dithiocarbamate, a nuclear factor κ B inhibitor. *Angiogenesis* 12: 365-379.
5. Wen, X., et al. 2010. Opposite action of peroxisome proliferator-activated receptor- γ in regulating renal inflammation: functional switch by its ligand. *J. Biol. Chem.* 285: 29981-29988.
6. Tsukahara, T. and Haniu, H. 2012. Lysophosphatidic acid stimulates MCP-1 secretion from C2C12 myoblast. *ISRN Inflamm.* 2012: 983420.
7. Sarma, N.J., et al. 2014. Hepatitis C virus-induced changes in microRNA 107 (miRNA-107) and miRNA-449a modulate CCL2 by targeting the interleukin-6 receptor complex in hepatitis. *J. Virol.* 88: 3733-3743.

MONOS
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Try **MCP-1-4/eotaxin (B-2): sc-377082** or **MCP-1 (5J): sc-32771**, our highly recommended monoclonal alternatives to MCP-1 (C-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **MCP-1-4/eotaxin (B-2): sc-377082**.