

# MCP-1 (ECE.2): sc-52701

## 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-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 CC 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.

## CHROMOSOMAL LOCATION

Genetic locus: Ccl2 (mouse) mapping to 11 B5.

## SOURCE

MCP-1 (ECE.2) is a rat monoclonal antibody raised against MCP-1 of mouse origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

MCP-1 (ECE.2) is recommended for detection of murine MCP-1 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

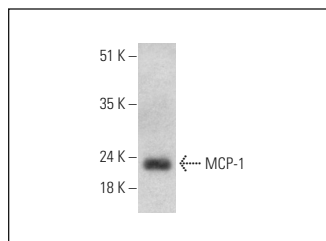
Suitable for use as control antibody for MCP-1 siRNA (m): sc-43914, MCP-1 shRNA Plasmid (m): sc-43914-SH and MCP-1 shRNA (m) Lentiviral Particles: sc-43914-V.

Molecular Weight of MCP-1: 12 kDa.

## STORAGE

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

## DATA



MCP-1 (ECE.2): sc-52701. Western blot analysis of mouse recombinant MCP-1.

## SELECT PRODUCT CITATIONS

1. Moran, C.S., et al. 2013. Everolimus limits aortic aneurysm in the apolipoprotein E-deficient mouse by downregulating C-C chemokine receptor 2 positive monocytes. *Arterioscler. Thromb. Vasc. Biol.* 33: 814-821.
2. Jun, X., et al. 2018. PM2.5 promotes abdominal aortic aneurysm formation in Angiotensin II-infused apoe<sup>-/-</sup> mice. *Biomed. Pharmacother.* 104: 550-557.
3. Sun, G., et al. 2019. *Flemingia philippinensis* flavonoids relieve bone erosion and inflammatory mediators in CIA mice by downregulating NF $\kappa$ B and MAPK pathways. *Mediators Inflamm.* 2019: 5790291.
4. Stahl, E.C., et al. 2020. Inflammation and ectopic fat deposition in the aging murine liver is influenced by CCR2. *Am. J. Pathol.* 190: 372-387.
5. Álvarez-Cilleros, D., et al. 2020. Cocoa diet modulates gut microbiota composition and improves intestinal health in Zucker diabetic rats. *Food Res. Int.* 132: 109058.
6. Álvarez Cilleros, D., et al. 2020. (-)-epicatechin and the colonic metabolite 2,3-dihydroxybenzoic acid protect against high glucose and lipopolysaccharide-induced inflammation in renal proximal tubular cells through NOX-4/p38 signalling. *Food Funct.* 11: 8811-8824.
7. Álvarez-Cilleros, D., et al. 2020. Preventive effect of cocoa flavanols against glucotoxicity-induced vascular inflammation in the arteries of diabetic rats and on the inflammatory process in TNF- $\alpha$ -stimulated endothelial cells. *Food Chem. Toxicol.* 146: 111824.
8. Zeng, L., et al. 2020. Saponin from *Periploca forrestii* Schltr mitigates oxazolone-induced atopic dermatitis via modulating macrophage activation. *Mediators Inflamm.* 2020: 4346367.
9. Chen, C., et al. 2021. Legumain promotes tubular ferroptosis by facilitating chaperone-mediated autophagy of GPX4 in AKI. *Cell Death Dis.* 12: 65.

## RESEARCH USE

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