SANTA CRUZ BIOTECHNOLOGY, INC.

MCP-1 (R-17): sc-1785

SANTA CRUZ BIOTECHNOLOGY

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, TNFα 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 (mouse) mapping to 11 B5.

SOURCE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1785 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MCP-1 (R-17) is recommended for detection of MCP-1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 (m): sc-43914, MCP-1 siRNA (r): sc-45994, MCP-1 shRNA Plasmid (m): sc-43914-SH, MCP-1 shRNA Plasmid (r): sc-45994-SH, MCP-1 shRNA (m) Lentiviral Particles: sc-43914-V and MCP-1 shRNA (r) Lentiviral Particles: sc-45994-V.

Molecular Weight of MCP-1: 12 kDa.

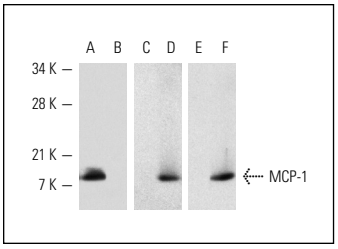
STORAGE

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

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**).

SELECT PRODUCT CITATIONS

1. Reyes-Reyna, S.M., et al. 2000. Chemokine production by rat myocytes exposed to IFN-γ. Clin. Immunol. 94: 105-113.
2. Amoureux, S., et al. 2011. Vascular BDNF expression and oxidative stress during aging and the development of chronic hypertension. Fundam. Clin. Pharmacol. 26: 227-234.
3. Toblli, J.E., et al. 2011. Long-term treatment with nebivolol attenuates renal damage in Zucker diabetic fatty rats. J. Hypertens. 29: 1613-1623.
4. Wilson, N.M., et al. 2011. CXCR4 signaling mediates morphine-induced tactile hyperalgesia. Brain Behav. Immun. 25: 565-573.
5. Soetikno, V., et al. 2011. Curcumin ameliorates macrophage infiltration by inhibiting NFκB activation and proinflammatory cytokines in streptozotocin induced-diabetic nephropathy. Nutr. Metab. 8: 35.
6. Chakrabarti, S.K., et al. 2011. Evidence for activation of inflammatory lipoxygenase pathways in visceral adipose tissue of obese Zucker rats. Am. J. Physiol. Endocrinol. Metab. 300: E175-E187.
7. Sanchez-Niño, M.D., et al. 2012. Beyond proteinuria: VDR activation reduces renal inflammation in experimental diabetic nephropathy. Am. J. Physiol. Renal Physiol. 302: 647-657.
8. Giannarelli, C., et al. 2012. Synergistic effect of liver X receptor activation and simvastatin on plaque regression and stabilization: an magnetic resonance imaging study in a model of advanced atherosclerosis. Eur. Heart J. 33: 264-273.