SIGMA-ALDRICH®

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Product Information

Monoclonal Anti-Monocyte Chemotactic Protein-2 antibody produced in mouse
clone 35509.11, purified immunoglobulin, lyophilized powder

Product Number M8413

Synonym: Anti-MCP-2

Product Description

Monoclonal Anti-Monocyte Chemotactic Protein-2 (mouse IgG1 isotype) is purified from a mouse hybridoma elicited from an immunized mouse. Recombinant human MCP-2, expressed in *E. coli*, was used as immunogen. The antibody is purified by Protein A affinity chromatography.

MCP-2 and MCP-3 are members of the C-C, or β chemokine class. Other chemokines in this group include C10, Eotaxin, HCC-1, I-309, JE, MCP-1, MIP-1α, MIP-1β and RANTES. These chemokines act primarily as chemoattractants and activate monocytes, dendritic cells, T lymphocytes, natural killer cells, B lymphocytes, basophils and eosinophils. MCP-2 and MCP-3 were originally identified as monocyte chemotactic proteins produced by human MG-63 osteosarcoma cells. MCP-2 and MCP-3 are ~9 kDa polypeptides of 76 amino acids. MCP-2 shares 62% amino acid sequence homology with MCP-1, MCP-3 shares 71% homology with MCP-1, and MCP-2 shares 58% homology with MCP-3.

Reagent

Supplied as a lyophilized powder from 0.2 μm filtered phosphate buffered saline containing 5% trehalose.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices

Storage/Stability

Prior to reconstitution, store at −20 °C. Reconstituted product may be stored 2−8 °C for a maximum of one month. For prolonged storage, freeze in working aliquots at −20 °C. Avoid repeated freezing and thawing.

Reconstitution and Use

To one vial of lyophilized powder, add 1 ml of 0.2 μm filtered PBS to produce a 500 μg/ml stock solution. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Product Profile

Neutralization: the antibody was tested for its ability to neutralize the chemotactic activity of rhMCP-2.

The ND_{50} of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of the bioactivity of rhMCP-2 that is present at a concentration just high enough to elicit a maximum response.

An ND50 of 1-4 μg/ml was determined in the presence of 0.25 μg/ml rhCCL8, using the hCCR5 transfected BaF/3 cell chemotaxis assay.

ELISA: Using plates coated with 100 μL/well of Monoclonal Anti- MCP-2 as the capture antibody at 2 μg/ml, in combination with 100 μL/well of a suitable detection antibody, an ELISA for sample volumes of 100 μL can be obtained.
The antibody shows < 0.1% cross-reactivity with rhHCC-1 and rmMIP-1α.

Immunoblotting: 1-2 μg/ml antibody detects 25-50 ng/lane of recombinant, human MCP-2 under reducing and non-reducing conditions.

Endotoxin: <0.1 EU/μg (LAL method)

Reference

1. Matsushima, K., et al., *J. Exp. Med*., 169, 1485 (1989).

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