SANTA CRUZ BIOTECHNOLOGY, INC.

MCP-4 (D-2): sc-271124

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-4 signals through CCR-2 and -3 and is a potent chemoattractant for monocytes, eosinophils and basophils induced in allergic and nonallergic inflammation.

REFERENCES

1. 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.
2. 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.
3. 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.
4. Kuna, P., et al. 1996. Chemokines in seasonal allergic rhinitis. J. Allergy Clin. Immunol. 97: 104-112.

CHROMOSOMAL LOCATION

Genetic locus: CCL13 (human) mapping to 17q12.

SOURCE

MCP-4 (D-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 69-102 near the C-terminus of MCP-4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MCP-4 (D-2) is available conjugated to agarose (sc-271124 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271124 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271124 PE), fluorescein (sc-271124 FITC), Alexa Fluor® 488 (sc-271124 AF488), Alexa Fluor® 546 (sc-271124 AF546), Alexa Fluor® 594 (sc-271124 AF594) or Alexa Fluor® 647 (sc-271124 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271124 AF680) or Alexa Fluor® 790 (sc-271124 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271124 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

MCP-4 (D-2) is recommended for detection of MCP-4 of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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-4 siRNA (h): sc-72122, MCP-4 shRNA Plasmid (h): sc-72122-SH and MCP-4 shRNA (h) Lentiviral Particles: sc-72122-V.

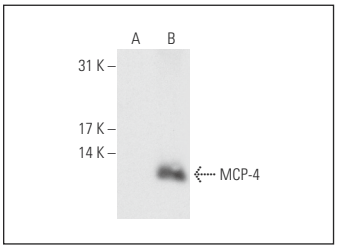
Molecular Weight of MCP-4: 7 kDa.

Positive Controls: MCP-4 (h): 293T Lysate: sc-110922.

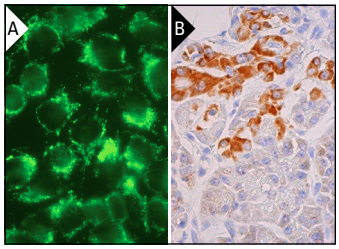
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



MCP-4 (D-2): sc-271124. Western blot analysis of MCP-4 expression in non-transfected: sc-117752 (**A**) and human MCP-4 transfected: sc-110922 (**B**) 293T whole cell lysates.



MCP-4 (D-2): sc-271124. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of subset of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Fang, C., et al. 2023. MCP-4 and Eotaxin-3 are novel biomarkers for chronic obstructive pulmonary disease. Can. Respir. J. 2023: 8659293.

RESEARCH USE

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