SANTA CRUZ BIOTECHNOLOGY, INC.

MCP-1–4/eotaxin (B-2): sc-377082

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. MCP-2 stimulates both eosinophils and basophils, while eotaxin serves as a potent chemo-attractant for eosinophils. MCP-3 has been shown to have the broadest range of influence, activating monocytes, dendritic cells, lymphocytes, NK cells, eosinophils, basophils and neutrophils. MCP-4 signals through CCR-2 and -3 and is a potent chemoattractant for monocytes, eosinophils and basophils induced in allergic and nonallergic inflammation.

CHROMOSOMAL LOCATION

Genetic locus: CCL2/CCL8/CCL7/CCL13/CCL11 (human) mapping to 17q12.

SOURCE

MCP-1–4/eotaxin (B-2) is a mouse monoclonal antibody raised against amino acids 1-99 representing full length MCP-1 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-1–4/eotaxin (B-2) is available conjugated to agarose (sc-377082 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377082 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377082 PE), fluorescein (sc-377082 FITC), Alexa Fluor® 488 (sc-377082 AF488), Alexa Fluor® 546 (sc-377082 AF546), Alexa Fluor® 594 (sc-377082 AF594) or Alexa Fluor® 647 (sc-377082 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377082 AF680) or Alexa Fluor® 790 (sc-377082 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

MCP-1–4/eotaxin (B-2) is recommended for detection of MCP-1, MCP-2, MCP-3, MCP-4 and eotaxin 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).

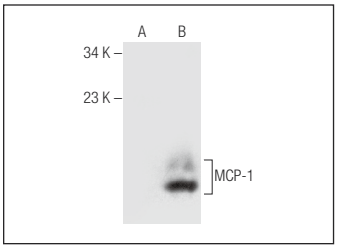
Molecular Weight of MCP-1–4/eotaxin: 12 kDa.

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

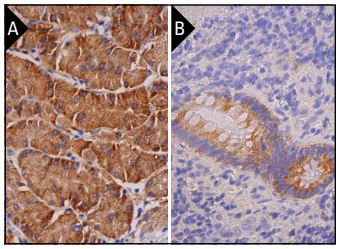
RECOMMENDED SUPPORT REAGENTS

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-1–4/eotaxin (B-2): sc-377082. 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.



MCP-1–4/eotaxin (B-2): sc-377082. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic and membrane staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Song, L., et al. 2014. Inhibition of 12/15 lipoxygenase by baicalein reduces myocardial ischemia/reperfusion injury via modulation of multiple signaling pathways. Apoptosis 19: 567-580.
2. Song, M., et al. 2017. Aluminum trichloride inhibits the rat osteoblasts mineralization *in vitro*. Biol. Trace Elem. Res. 175: 186-193.
3. Lopes, N., et al. 2018. Lymphotoxin α fine-tunes T cell clonal deletion by regulating thymic entry of antigen-presenting cells. Nat. Commun. 9: 1262.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.