Mouse CCL3/MIP-1α Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-450-NA

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CCL3/MIP-1α in ELISAs and Western blots. In sandwich ELISAs, less than 0.03% cross-reactivity with recombinant human (rh) CCL3, recombinant mouse (rm) CCL9/10, and rmCCL4 and less than 0.4% cross-reactivity with rhCCL7.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse CCL3/MIP-1α Ala24-Ala92 Accession # Q5QNW0
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

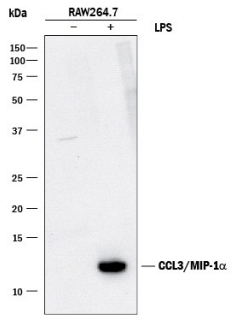
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Mouse CCL3/MIP-1α Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Mouse CCL3/MIP-1α Antibody (Catalog # AF-450-NA)
ELISA Detection	0.1-0.4 µg/mL	Mouse CCL3/MIP-1α Biotinylated Antibody (Catalog # BAF450)
Standard		Recombinant Mouse CCL3/MIP-1α (Catalog # 450-MA)
Neutralization	Measured by its ability to neutralize CCL3/MIP-1α-induced chemotaxis in the BaF3 mouse pro-B cell line transfected with human CCR5. The Neutralization Dose (ND_{50}) is typically 0.05-0.2 µg/mL in the presence of 10 ng/mL Recombinant Mouse CCL3/MIP-1α Isoform LD78a.	

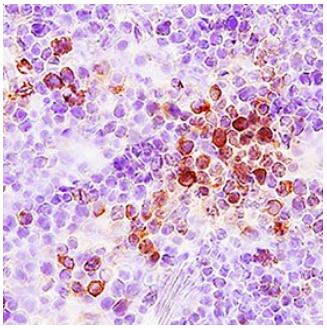
DATA

Western Blot



Detection of Mouse CCL3/MIP-1α by Western Blot. Western blot shows lysates of RAW 264.7 mouse monocyte/macrophage cell line untreated (-) or treated (+) with 10 µg/mL LPS for 4 hours. PVDF membrane was probed with 1 µg/mL of Goat Anti-Mouse CCL3/MIP-1α Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-450-NA) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for CCL3/MIP-1α at approximately 12 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



CCL3/MIP-1α in Mouse Thymus. CCL3/MIP-1α was detected in perfusion fixed frozen sections of mouse thymus using Goat Anti-Mouse CCL3/MIP-1α Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-450-NA) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

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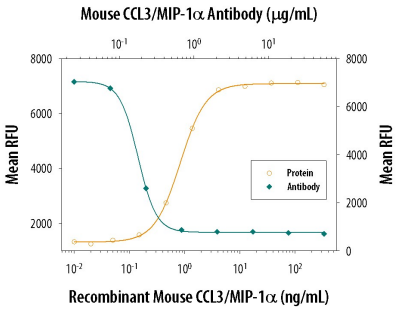
Neutralization



Chemotaxis Induced by CCL3/MIP-1α and Neutralization by Mouse CCL3/MIP-1α Antibody. Recombinant Mouse CCL3/MIP-1α (Catalog # 450-MA) chemoattracts the BaF3 mouse pro-B cell line transfected with human CCR5 in a dose-dependent manner (orange line). The amount of cells that migrated through to the lower chemotaxis chamber was measured by Resazurin (Catalog # AR002). Chemotaxis elicited by Recombinant Mouse CCL3/MIP-1α (10 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Mouse CCL3/MIP-1α Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-450-NA). The ND_{50} is typically 0.05-0.2 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

The macrophage inflammatory proteins 1α and 1β, two closely related but distinct proteins, were originally co-purified from medium conditioned by a LPS-stimulated murine macrophage cell line. Mature mouse MIP-1α shares approximately 77% and 70% amino acid identity with human MIP-1α and mouse MIP-1β, respectively. MIP-1 proteins are expressed primarily in T cells, B cells, and monocytes after antigen or mitogen stimulation. The MIP-1 proteins are members of the β (C-C) subfamily of chemokines.

Both MIP-1α and MIP-1β are monocyte chemoattractants *in vitro*. Additionally, the MIP-1 proteins have been reported to have chemoattractant and adhesive effects on lymphocytes, with MIP-1α and MIP-1β preferentially attracting $CD8^+$ and $CD4^+$ T cells, respectively. MIP-1α has also been shown to attract B cells as well as eosinophils. MIP-1 proteins have been reported to have multiple effects on hematopoietic precursor cells and MIP-1α has been identified as a stem cell inhibitory factor that can inhibit the proliferation of hematopoietic stem cells *in vitro* as well as *in vivo*. In the same assays, MIP-1β was reported to be much less active. The functional receptor for MIP-1α has been identified as CCR1 and CCR5.

References:

1. Menten, P. *et al.* (2002) Cytokine Growth Factor Rev. **13**:455.

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