abcam

ab229900

Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody [EPR22529-19]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR22529-19
Purification technique	Affinity purification Protein A
Concentration	0.551 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Not recommended

Species	Mouse, Human, Recombinant full length protein - Mouse, Recombinant full length protein - Human
Dilution info	-

Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Recombinant full length protein - Mouse, Recombinant full length protein - Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Recombinant full length protein - Mouse
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000

Notes	-

Species	Recombinant full length protein - Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Recombinant full length protein - Mouse, Recombinant full length protein - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/12500
Notes	-

Expected

Species	Mouse

Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Recombinant full length protein - Mouse, Recombinant full length protein - Human
Dilution info	-
Notes	-

Target data

See full target information CCL3

Function	Monokine with inflammatory and chemokinetic properties. Binds to CCR1, CCR4 and CCR5. One of the major HIV-suppressive factors produced by CD8+ T-cells. Recombinant MIP-1-alpha induces a dose-dependent inhibition of different strains of HIV-1, HIV-2, and simian immunodeficiency virus (SIV).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	MIP-1 alpha also known as CCL3 or CCL3L1 is a chemokine with important roles in immune regulation. It has a molecular mass of approximately 7.8 kDa. This protein is expressed mainly in immune cells like macrophages T cells and natural killer (NK) cells. The expression of MIP-1 alpha occurs in response to inflammatory signals and it acts to recruit other immune cells to the site of infection or injury. Its function is essential for orchestrating the cellular movements during immune surveillance and defensive responses.
Biological function summary	The MIP-1 alpha functions as a chemotactic cytokine. It binds to receptors like CCR1 and CCR5 on the surface of target cells resulting in activation and migration toward areas of inflammation. MIP-1 alpha does not form a complex with other proteins; however its interactions with its receptors are vital for signal transduction. It also promotes the production of additional inflammatory cytokines contributing to amplifying immune responses. The chemotactic properties of MIP-1 alpha make it an important player in the body's defense against pathogens.
Pathways	MIP-1 alpha is involved in important immune pathways like the NF-kB signaling pathway. This pathway plays a significant role in immune cell activation and the inflammatory response. MIP-1 alpha interacts with other chemokines like CCL4 (MIP-1 beta) which shares similar functions and binds to CCR5. The coordinated activities of these chemokines enhance the recruitment and activation of various leukocyte populations facilitating an effective immune response.
Associated diseases and disorders	MIP-1 alpha exhibits a connection to inflammatory diseases such as rheumatoid arthritis and HIV infection. In rheumatoid arthritis MIP-1 alpha contributes to joint inflammation and damage by attracting immune cells to synovial joints. In the context of HIV it interacts with the CCR5 receptor affecting viral entry into CD4+ T cells. The inhibition of MIP-1 alpha and its interaction with CCR5 provides a therapeutic strategy in controlling HIV progression. These associations highlight the chemokine's impact on both autoimmune disorders and infectious diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

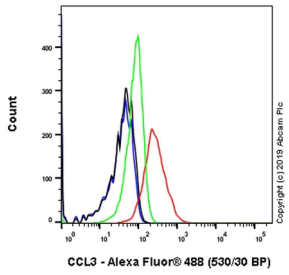
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
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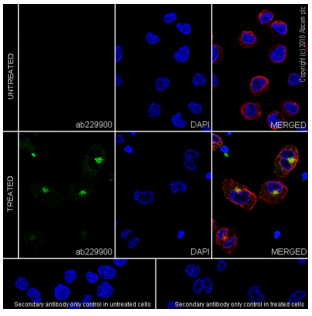
7 product images



Flow Cytometry (Intracellular) - Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody [EPR22529-19] (ab229900)

MIP-1 alpha/CCL3 + CCL3L1 Flow Cytometry (Intracellular) staining using rabbit Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody

Intracellular flow cytometric analysis of4% paraformaldehyde-fixed, 90% methanol-permeabilized THP-1 (human monocytic leukemia cell line) (untreated, green) / (treated with Phorbol-12-myristate-13-acetate (100ng/ml) for 56h, followed by adding Lipopolysaccharide (1ug/ml) for a further 16h, red) cells labeling Macrophage Inflammatory Protein 1 alpha / CCL3 with ab229900 at 1/500 dilution compared with a Rabbit monoclonal IgG Isotype control details (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG Fc (Alexa Fluorï¿½ 488) preadsorbed (ab150097), at 1/5000 dilution was used as the secondary antibody.



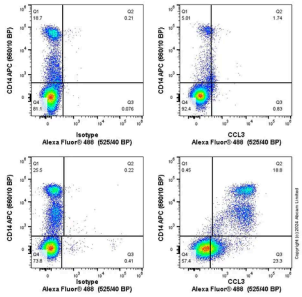
Immunocytochemistry/ Immunofluorescence - Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody [EPR22529-19] (ab229900)

MIP-1 alpha/CCL3 + CCL3L1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized THP-1 (human monocytic leukemia cell line) cells labeling Macrophage Inflammatory Protein 1 alpha / CCL3 with ab229900 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining in THP-1 treated with Phorbol-12-myristate-13-acetate (100ng/ml) for 56 h, followed by adding Lipopolysaccharide (1ug/ml) for a further 16 h. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

Treated: Cells treated with Phorbol-12-myristate-13-acetate (100ng/ml) for 56 h, followed by adding Lipopolysaccharide
(1ug/ml) for a further 16 h.



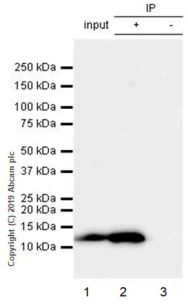
Flow Cytometry (Intracellular) - Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody [EPR22529-19] (ab229900)

MIP-1 alpha/CCL3 + CCL3L1 Flow Cytometry (Intracellular) staining of human peripheral blood mononuclear cells (PBMCs) using rabbit Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody

Flow cytometry staining of human peripheral blood mononuclear cells (PBMCs) (top) or PBMCs treated with LPS 1µg/mL and Brefeldin 1µg/mL for 18 Hours (bottom), with ab229900 (right) or Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (left). Cells were fixed and permeabilised with BD Cytofix/Cytoperm™ for 20 min. PBMCs were incubated for 30 mins on ice in 1x PBS containing 10 µg/ml human IgG and 10 % normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody ab229900 or Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (1x 10^6 in 100 µl at 0.04 µg/ml (1/12500 dilution)) for 30 mins at 22°C . The cells were simultaneously stained with CD14.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 dilution for 30 mins at 22°C

Acquisition of >30000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter. Events were gated on live cells.



Immunoprecipitation - Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody [EPR22529-19] (ab229900)

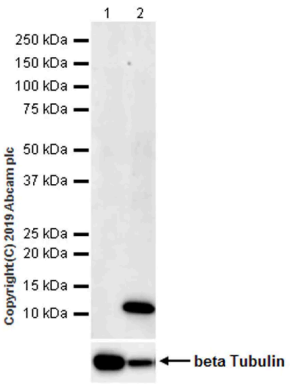
Macrophage Inflammatory Protein 1 alpha / CCL3 was immunoprecipitated from 0.35 mg of THP-1 (human monocytic leukemia cell line) (treated with Phorbol-12-myristate-13-acetate (100ng/ml) for 56h, followed by adding Lipopolysaccharide (1ug/ml) for a further 16h) whole cell lysate with ab229900 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab229900 at 1/1000 dilution.
VeriBlot for IP Detection Reagent (HRP) (ab131366), was used as secondary antibody at 1/5000 dilution.

Lane 1: THP-1 (human monocytic leukemia cell line) (treated with Phorbol-12-myristate-13-acetate (100ng/ml) for 56h, followed by adding Lipopolysaccharide (1ug/ml) for a further 16h) whole cell lysate 10 µg (Input).
Lane 2: ab229900 IP in THP-1 (treated as above) whole lysate.
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab229900 in THP-1 (treated as above) whole cell lysate.

Blocking and dilution buffer and concentration: NFDM/TBST.
Exposure time: 40 seconds.

All lanes:
Immunoprecipitation - Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody [EPR22529-19] (ab229900)

Observed band size: 12 kDa



Western blot - Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody [EPR22529-19] (ab229900)

Blocking and dilution buffer: 5% NFDM/TBST.
This blot was developed using a higher sensitivity ECL substrate.

The molecular weight observed is consistent with what has been described in the literature (PMID: 11369791)

All lanes:
Western blot - Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody [EPR22529-19] (ab229900) at 1/1000 dilution

Lane 1:
Untreated THP-1 (human monocytic leukemia cell line) whole cell lysate at 20 µg

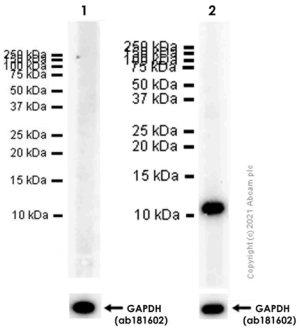
Lane 2:
THP-1 (treated with 100 ng/ml phorbol-12-myristate-13-acetate (PMA) for 56 hours, followed by adding 1 µg/ml lipopolysaccharide (LPS) for a further 16 hours) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 12 kDa

Exposure time: 3min



Western blot - Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody [EPR22529-19] (ab229900)

MIP-1 alpha/CCL3 + CCL3L1 Western blot staining using rabbit Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody

Blocking / Dilution buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody [EPR22529-19] (ab229900) at 1/1000 dilution

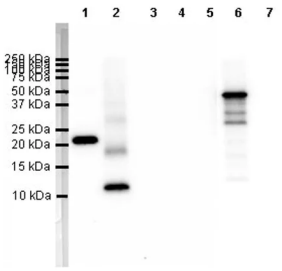
Lane 1:
Untreated RAW 264.7 (mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate at 20 µg

Lane 2:
RAW 264.7 treated with 100 ng/ml LPS for 3 hours and then 300 ng/ml Brefeldin A was added for the last 3 hours, whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 12 kDa



Western blot - Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody [EPR22529-19] (ab229900)

Exposure time:
Lane 1-5 20 seconds ; Lane 6-7 3 seconds
All lanes:
Western blot - Anti-MIP-1 alpha/CCL3 + CCL3L1 antibody [EPR22529-19] (ab229900) at 1/1000 dilution

Lane 1:
His-tagged mouse CCL3 Recombinant Protein

Lane 2:
His-tagged human CCL3 Recombinant Protein

Lane 3:
His-tagged human CCL4 Recombinant Protein

Lanes 4 - 5:
His-tagged human CCL18 Recombinant Protein

Lane 6:
GST-tagged human CCL3L1 Recombinant Protein

Lane 7:
GST-tagged human CCL4L1 Recombinant Protein

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