abcam

ab254371

Anti-CCL4/MIP-1 beta antibody [EPR23610-40]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR23610-40
Purification technique	Affinity purification Protein A
Specificity	This antibody has cross-reactivity with CCL4L1. There is about 97% homology between CCL4/MIP-1 beta and CCL4L1 in terms of the immunogen designed from CCL4/MIP-1 beta.
Concentration	0.545 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

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	Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

Dot

Tested

Species	Human
Dilution info	1/1000
Notes	-

Expected

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

Not recommended

Species	Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Rat
Dilution info	-

Notes	-

Target data

See full target information CCL4

Function	Monokine with inflammatory and chemokinetic properties. Binds to CCR5. One of the major HIV-suppressive factors produced by CD8+ T-cells. Recombinant MIP-1-beta induces a dose-dependent inhibition of different strains of HIV-1, HIV-2, and simian immunodeficiency virus (SIV). The processed form MIP-1-beta(3-69) retains the abilities to induce down-modulation of surface expression of the chemokine receptor CCR5 and to inhibit the CCR5-mediated entry of HIV-1 in T-cells. MIP-1-beta(3-69) is also a ligand for CCR1 and CCR2 isoform B.

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	CCL4 also known as MIP-1 beta or MIP-1b has a mechanical role as a chemokine involved in immune response regulation. The protein has a mass of about 7.8 kDa. It expresses in various tissues including leukocytes where it mainly functions as a chemoattractant. MIP-1 beta helps recruit immune cells like natural killer cells and monocytes to sites of inflammation or injury. Researchers frequently measure its levels using assays like MIP-1 beta ELISA or CCL4 ELISA.
Biological function summary	CCL4 is critical in immune system modulation. It coordinates leukocyte activation and trafficking contributing to inflammation and immune surveillance. It does not function in isolation but rather interacts with other chemokines and receptors. CCL4 alongside its sibling chemokines forms a dynamic network that ensures a balanced immune response. It connects to receptors such as CCR5 playing substantial roles in its activities.
Pathways	CCL4 participates in essential signaling cascades that mediate immune responses. It is notably part of the chemokine signaling pathway which is instrumental in directing cell movement. CCL4 also engages with proteins like CCR5 in the inflammatory and immune response pathways. This interaction enhances communication between cells required for effective pathogen defense.
Associated diseases and disorders	CCL4 plays roles in immune-related conditions. It is strongly linked to inflammatory diseases such as rheumatoid arthritis and HIV infection. In rheumatoid arthritis CCL4 levels are often elevated correlating with inflammation severity. During HIV infection CCL4 interacts with proteins like CCR5 a co-receptor the virus uses to enter host cells. This involvement makes MIP-1 beta a target for studies seeking therapeutic interventions in these 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

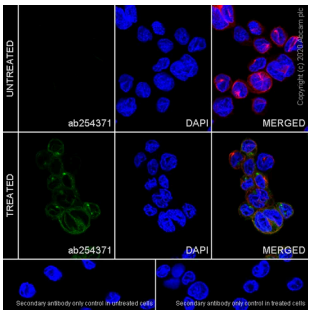
We do not recommend this combination. It is not covered by our product promise.

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:
Terms & Conditions.

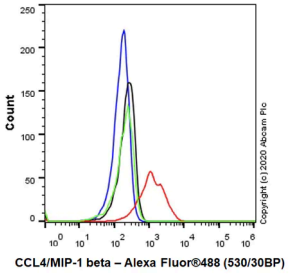
3 product images



Immunocytochemistry/ Immunofluorescence - Anti-CCL4/MIP-1 beta antibody [EPR23610-40] (ab254371)

CCL4/MIP-1 beta Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CCL4/MIP-1 beta antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized THP-1 cells labelling CCL4/MIP-1 beta with ab254371 at 1/100 (5.45 ug/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in THP-1 cells treated with phorbol 12-myristate 13-acetate (PMA, 100nM) for 16 hours, then with lipopolysaccharide (LPS, 100 ng/ml) for 4 hours and with BFA (1 ug/ml) for another 3 hours. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

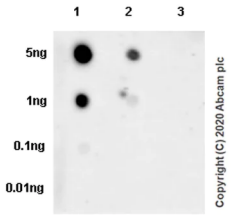


Flow Cytometry (Intracellular) - Anti-CCL4/MIP-1 beta antibody [EPR23610-40] (ab254371)

CCL4/MIP-1 beta Flow Cytometry (Intracellular) staining using rabbit Anti-CCL4/MIP-1 beta antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) (treated with 100 ng/ml lipopolysaccharide (LPS) for 4 hours and 1 ug/ml Brefeldin A (BFA) for another 3 hours) (Red) /Untreated control (Green) cells labelling CCL4/MIP-1 beta with ab254371 at 1/50 dilution (1ug)/ compared with a Rabbit monoclonal IgG (ab172730) isotype control (Black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).
A Goat anti-rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

The expression pattern is consistent with what is described in the literature (PMID:32230927).



Dot Blot - Anti-CCL4/MIP-1 beta antibody [EPR23610-40] (ab254371)

CCL4/MIP-1 beta Dot Blot staining using rabbit Anti-CCL4/MIP-1 beta antibody

Dot blot analysis of CCL4/MIP-1 beta using ab254371 at 1/1000 (0.545ug/ml) dilution followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/20,000 dilution.
Lane 1: Human CCL4/MIP-1 beta immunogen recombinant protein

Lane 2: Human CCL4L1 recombinant protein

Lane 3: Bovine serum albumin (BSA)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Exposure time: 114 seconds

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.