abcam

ab224188

Anti-Macrophage Inflammatory Protein 3 alpha antibody [EPR22376-58]

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	EPR22376-58
Purification technique	Affinity purification Protein A
Concentration	0.673 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/2000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/600
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information CCL20

Function

Acts as a ligand for C-C chemokine receptor CCR6. Signals through binding and activation of CCR6 and induces a strong chemotactic response and mobilization of intracellular calcium ions (PubMed:11035086, PubMed:11352563, PubMed:20068036). The ligand-receptor pair CCL20-CCR6 is responsible for the chemotaxis of dendritic cells (DC), effector/memory T-cells and B-cells and plays an important role at skin and mucosal surfaces under homeostatic and inflammatory conditions, as well as in pathology, including cancer and various autoimmune diseases (PubMed:21376174). CCL20 acts as a chemotactic factor that attracts lymphocytes and, slightly, neutrophils, but not monocytes (PubMed:11352563, PubMed:9038201). Involved in the recruitment of both the pro-inflammatory IL17 producing helper T-cells (Th17) and the regulatory T-cells (Treg) to sites of inflammation. Required for optimal migration of thymic natural regulatory T cells (nTregs) and DN1 early thymocyte progenitor cells (By similarity). C-terminal processed forms have been shown to be equally chemotactically active for leukocytes (PubMed:11035086). Positively regulates sperm motility and chemotaxis via its binding to CCR6 which triggers Ca2+ mobilization in the sperm which is important for its motility (PubMed:23765988, PubMed:25122636). Inhibits proliferation of myeloid progenitors in colony formation assays (PubMed:9129037). May be involved in formation and function of the mucosal lymphoid tissues by attracting lymphocytes and dendritic cells towards epithelial cells (By similarity). Possesses antibacterial activity towards E.coli ATCC 25922 and S.aureus ATCC 29213 (PubMed:12149255).

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	Macrophage Inflammatory Protein 3 alpha (MIP-3 alpha) also known as CCL20 is a chemokine with a molecular mass of approximately 9 kDa. It plays a role in immune response by mediating chemotaxis of lymphocytes and dendritic cells. MIP-3 alpha is mainly expressed in liver lung and lymphoid organs including the lymph nodes and appendix. Its expression can be induced during inflammation in response to signaling molecules like tumor necrosis factor-alpha (TNF-alpha) and interleukin-1 beta (IL-1β).
Biological function summary	MIP-3 alpha contributes to the immune system by recruiting immune cells to sites of inflammation or injury. It is not part of a larger protein complex. Its main function is binding to the CCR6 receptor on target cells. This interaction mediates the migration and activation of the immune cells critical for initiating the immune response by increasing cell surface adhesion and motility. By drawing immune cells MIP-3 alpha significantly influences the body's capacity to fight infections and regulate inflammatory processes.

Pathways	MIP-3 alpha is integral to the inflammatory response and chemokine signaling pathways. It is involved in the immune system's adaptive response through its interaction with CCR6. This pathway overlaps with other chemokines such as MIP-1 and MIP-2 which also aid in immune cell recruitment. Furthermore MIP-3 alpha's engagement in these pathways facilitates intercellular communication during immune responses pivotal for maintaining homeostasis and immune surveillance.
Associated diseases and disorders	MIP-3 alpha has associations with inflammatory diseases like rheumatoid arthritis and inflammatory bowel disease. During these conditions elevated levels of MIP-3 alpha contribute to the recruitment of inflammatory cells which exacerbate symptoms. MIP-3 alpha also connects with other proteins such as TNF-alpha in these disease contexts enhancing inflammation and progression of these disorders. Targeting MIP-3 alpha and its associated pathways may provide therapeutic opportunities for alleviating these chronic inflammatory conditions.

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

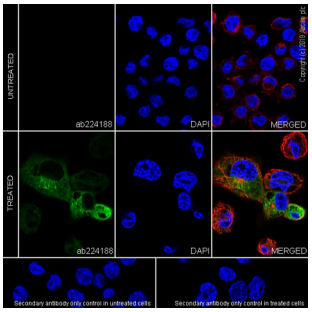
We do not recommend this combination. It is not covered by our product promise.

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.

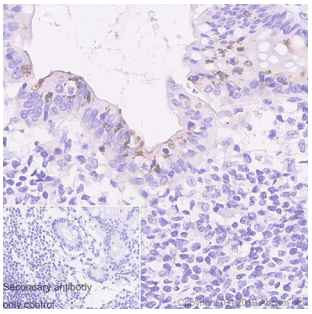
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-Macrophage Inflammatory Protein 3 alpha antibody [EPR22376-58] (ab224188)

Macrophage Inflammatory Protein 3 alpha Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Macrophage Inflammatory Protein 3 alpha antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized THP-1 (human monocytic leukemia monocyte) cells labelling Macrophage Inflammatory Protein 3 alpha with ab224188 at 1/100 dilution, followed by ab224188 anti-Macrophage Inflammatory Protein 3 alpha ab150077 AlexaFluor®488 Goat anti-Rabbit secondary antibody at 1/1000 dilution (Green). Confocal image showing increased cytoplasmic staining in THP-1 cells treated with Phorbol-12-myristate-13-acetate (PMA, 100ng/ml) for 56 h, then together with lipopolysaccharide (1ug/ml) and Brefeldin A (300ng/ml) for another 16 h is observed. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab224188 anti-Macrophage Inflammatory Protein 3 alpha ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution.

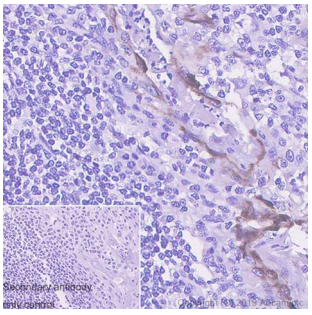


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Macrophage Inflammatory Protein 3 alpha antibody [EPR22376-58] (ab224188)

Macrophage Inflammatory Protein 3 alpha Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Macrophage Inflammatory Protein 3 alpha antibody

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling Macrophage Inflammatory Protein 3 alpha with ab224188 at 1/2000 dilution followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Positive staining on the follicle-associated epithelium in the human colon (PMID:14997037). Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

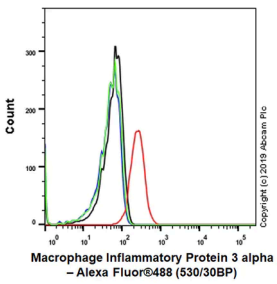


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Macrophage Inflammatory Protein 3 alpha antibody [EPR22376-58] (ab224188)

Macrophage Inflammatory Protein 3 alpha Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Macrophage Inflammatory Protein 3 alpha antibody

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling Macrophage Inflammatory Protein 3 alpha with ab224188 at 1/2000 dilution followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Positive staining on the epithelial like cells on the human tonsil (PMID: 15307135). Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).



Flow Cytometry (Intracellular) - Anti-Macrophage Inflammatory Protein 3 alpha antibody [EPR22376-58] (ab224188)

Macrophage Inflammatory Protein 3 alpha Flow Cytometry (Intracellular) staining using rabbit Anti-Macrophage Inflammatory Protein 3 alpha antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 0.1% Tween-20 permeabilized THP-1 (Human monocytic leukemia monocyte) treated with 100ng/ml PMA for 56h, then together with 1ug/ml lipopolysaccharide and 300ng/ml Brefeldin A for another 16h (Red) / Untreated control (Green) cells labelling Macrophage Inflammatory Protein 3 alpha with ab224188 at 1/600 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730, Black) isotype control 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 was used as the secondary antibody.

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