abcam

ab308461

Anti-IP10 antibody [EPR27520-63]

Recombinant | RabMAb | KO Validated | 20ul selling size

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	EPR27520-63
Purification technique	Affinity purification Protein A
Concentration	0.533 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	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information CXCL10

Function	Pro-inflammatory cytokine that is involved in a wide variety of processes such as chemotaxis, differentiation, and activation of peripheral immune cells, regulation of cell growth, apoptosis and modulation of angiostatic effects (PubMed:11157474, PubMed:22652417, PubMed:7540647). Plays thereby an important role during viral infections by stimulating the activation and migration of immune cells to the infected sites (By similarity). Mechanistically, binding of CXCL10 to the CXCR3 receptor activates G protein-mediated signaling and results in downstream activation of phospholipase C-dependent pathway, an increase in intracellular calcium production and actin reorganization (PubMed:12750173, PubMed:19151743). In turn, recruitment of activated Th1 lymphocytes occurs at sites of inflammation (PubMed:12663757, PubMed:12750173). Activation of the CXCL10/CXCR3 axis also plays an important role in neurons in response to brain injury for activating microglia, the resident macrophage population of the central nervous system, and directing them to the lesion site. This recruitment is an essential element for neuronal reorganization (By similarity).

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	IP10 also known as CXCL10 is a small cytokine belonging to the CXC chemokine family. It has a molecular mass of approximately 8.7 kDa. IP10 is secreted by several cell types such as monocytes endothelial cells and fibroblasts in response to interferon-gamma (IFN-γ). This protein is involved in immune responses and exhibits various roles especially in chemoattracting cells. Researchers often measure IP10 concentrations using ELISA kits such as the IP-10 ELISA to study its expression levels in different biological contexts.
Biological function summary	IP10 plays a role in modulating the activities of immune cells. It attracts T cells eosinophils monocytes and natural killer (NK) cells by binding to the CXCR3 receptor. IP10 is not part of a larger complex but interacts with other cytokines to influence cell migration and the immune response. High levels of IP10 can reflect strong immune activation which is why it is often measured in inflammatory conditions using standard assays like the IP-10 ELISA kits.
Pathways	The role of IP10 lies within the Th1-type immune response pathway. In this pathway IP10 works alongside other chemokines to recruit and activate immune cells to sites of inflammation or infection. It synergizes with IFN-γ to propagate immune signals. IP10 is also linked with the CXCR3 receptor which plays a critical role in these pathways providing a connection to other proteins such as CXCL9 and CXCL11 which have similar functions in cell-mediated immunity.
Associated diseases and disorders	IP10 is associated with conditions like multiple sclerosis and rheumatoid arthritis. Elevated IP10 levels often correlate with disease activity in these disorders making it a potential biomarker for disease progression. The protein interacts with other inflammatory mediators such as TNF-α in regulating immune activity within these disease contexts. IP10's involvement in recruiting immune cells contributes to the pathogenic inflammation observed in these 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.

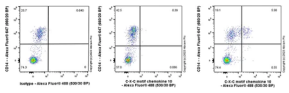
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

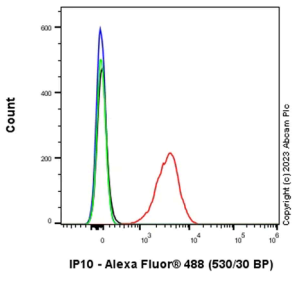
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5 product images



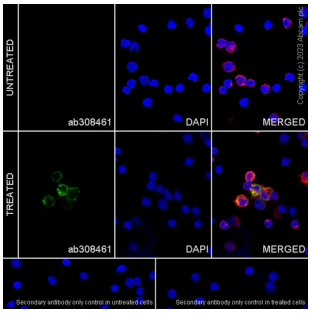
Flow Cytometry (Intracellular) - Anti-IP10 antibody [EPR27520-63] (ab308461)

Flow cytometric analysis of 2% paraformaldehyde fixed 0.1% Tween-20 permeabilized Isotype control (Left) / Untreated human PBMC (Middle) / Human PBMC (human peripheral blood mononuclear cell) treated with 10ng/ml IFN-r for 1h then treated with 300ng/ml BFA for 3h (Right) cells labeling IP10 with ab308461 at 1/500 dilution (0.1 ug)/ Middle and Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody. Cells were stained with anti-CD14 conjugated to 647. Fixed with 2% PFA for 10 min followed by intracellularly staining with rabbit IgG or ab308461.



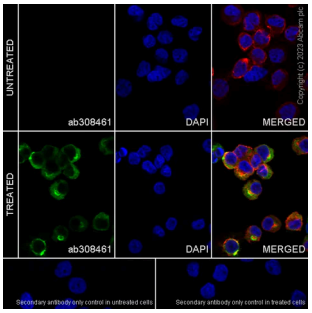
Flow Cytometry (Intracellular) - Anti-IP10 antibody [EPR27520-63] (ab308461)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized THP-1 (human monocytic leukemia monocyte) treated with INF-γ (200 ng/mL) and lipopolysaccharides (LPS, 50 ng/mL) for 24 h, with addition of brefeldin A (1 ug/mL) for the last 21 h (Red) / Untreated THP-1 cell (Green) cells labelling IP10 with ab308461 at 1/5000 dilution (0.01 ug)/Red and Green (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, ab150081) at 1/5000 dilution was used as the secondary antibody.



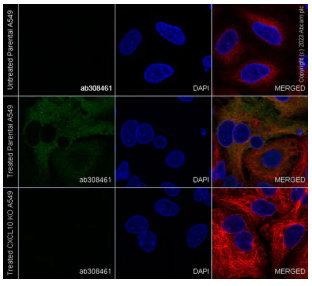
Immunocytochemistry/ Immunofluorescence - Anti-IP10 antibody [EPR27520-63] (ab308461)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Human PBMC (human peripheral blood mononuclear cell) cells labeling IP10 with ab308461 at 1/100 (5.33 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/mL dilution (Green). Confocal image showing cytoplasmic staining in subsets of human PBMC treated with INF-γ (10 ng/mL) for 1 h, then with Brefeldin A (300 ng/mL) for 3 h. The image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/mL dilution.



Immunocytochemistry/ Immunofluorescence - Anti-IP10 antibody [EPR27520-63] (ab308461)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized THP-1 (human monocytic leukemia monocyte) cells labeling IP10 with ab308461 at 1/100 (5.33 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/mL dilution (Green). Confocal image showing cytoplasmic staining in THP-1 cells treated with INF-γ (200 ng/mL) and lipopolysaccharides (LPS, 50 ng/mL) for 24 h, with addition of brefeldin A (1 ug/mL) for the last 21 h. The image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/mL dilution.



Immunocytochemistry/ Immunofluorescence - Anti-IP10 antibody [EPR27520-63] (ab308461)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized CXCL10 KO A549 (human lung carcinoma epithelial cell) cells labeling IP10 with ab308461 at 1/100 (5.33 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/mL dilution (Green). Confocal image showing cytoplasmic staining in parental A549 cells treated with INF-γ (100 ng/mL) and TNF-α (10 ng/mL) for 32 h, with the addition of brefeldin A (5 ug/mL) for the last 6 h, and no staining in CXCL10 knockout A549 cells with the same condition. The image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/mL dilution.

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