abcam

ab25124

Anti-MCP1 antibody

Anti-MCP1 antibody (ab25124) is a rabbit polyclonal antibody detecting MCP1 in **Western Blot, Flow Cytometry, IHC-P, Neut**. Suitable for **Mouse, Rat**.

- Over 160 publications
- Trusted since 2005

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Polyclonal
Immunogen	Recombinant Fragment Protein within Rat Ccl2 aa 1-100. The exact immunogen used to generate this antibody is proprietary information. Database link P14844
Purification technique	Affinity purification Protein A
Specificity	This antibody has high background in WB and IHC applications. For better signal and higher reproducibility please use recombinant multiclonal antibody ab315478.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Expected

Species	Mouse

Dilution info	-
Notes	Used at a dilution of 1/100 for 30 min on rat primary mixed cortical cells (see Abreview for further information). ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Rat
Dilution info	-
Notes	Used at a dilution of 1/100 for 30 min on rat primary mixed cortical cells (see Abreview for further information). ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Mouse
Dilution info	-
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

IHC-P

Expected

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

FuncS (Neut/Block)

Expected

Species	Mouse, Rat

Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Ccl2

Function	Acts as a ligand for C-C chemokine receptor CCR2 (By similarity). Signals through binding and activation of CCR2 and induces a strong chemotactic response and mobilization of intracellular calcium ions (By similarity). Exhibits a chemotactic activity for monocytes and basophils but not neutrophils or eosinophils (By similarity). Plays an important role in mediating peripheral nerve injury-induced neuropathic pain (By similarity). Increases NMDA-mediated synaptic transmission in both dopamine D1 and D2 receptor-containing neurons, which may be caused by MAPK/ERK-dependent phosphorylation of GRIN2B/NMDAR2B (By similarity).

Storage

Shipped at conditions	Blue Ice
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

What is this antibody validated in?
Anti-MCP1 antibody (ab25124) is a rabbit polyclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P), Neutralising in Mouse, Rat samples.

Trusted by the scientific community
Anti-MCP1 (ab25124) was first used in a scientific publication in 2005 and has been cited over 160 times in peer-reviewed journals.

Reviewed by scientists

Anti-MCP1 (ab25124) has over 5 independent reviews from customers.

Supplementary info

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

Activity summary	MCP-1 also known as CCL2 is a chemokine involved in the recruitment of monocytes to sites of injury and inflammation. This protein consists of 76 amino acids and has a molecular weight of about 11 kDa. MCP-1 is expressed in a wide range of cell types including endothelial cells fibroblasts and monocytes. It acts by binding to the chemokine receptor CCR2 stimulating intracellular signaling pathways that mediate cell migration.
Biological function summary	The role of MCP-1 is significant in guiding immune cells to areas requiring immune response. It does not form part of a complex but operates as a singular entity to affect immune signaling. MCP-1 influences the behavior of monocytes and macrophages by inducing chemotaxis and activating their effector functions. Through this mechanism it aids in the inflammatory response and tissue repair.
Pathways	MCP-1 participates in the inflammatory pathways by cooperating with key proteins like CCR2. It facilitates the JAK-STAT signaling pathway which is vital for transmitting extracellular information into cellular responses. The interaction of MCP-1 with CCR2 influences the activation of downstream proteins like STAT3 enabling various immune responses. MCP-1 thereby plays a central role in modulating inflammation-related pathways.
Associated diseases and disorders	MCP-1 has a connection to inflammatory bowel disease and atherosclerosis. In such conditions elevated levels of MCP-1 can exacerbate inflammatory responses by recruiting monocytes to dysfunctional sites worsening tissue damage. Through its interaction with CCR2 MCP-1 becomes a pivotal factor in chronic inflammation. Targeting this MCP-1/CCR2 axis can provide therapeutic opportunities for modulating disease progression in these inflammatory 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

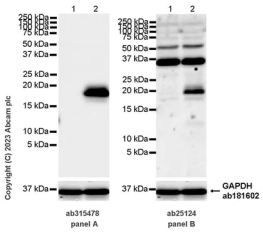
We do not recommend this combination. It is not covered by our product promise.

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.

2 product images



Western blot - Anti-MCP1 antibody (ab25124)

MCP1 Western blot staining using rabbit Anti-MCP1 antibody

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

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 28955950).

Panel A is applied with Anti-MCP1 antibody [RM1100] (ab315478) at 1/1000 dilution and panel B is applied with Anti-MCP1 antibody (ab25124) at 1/1000 dilution.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

Exposure time: 26 seconds (panel A);180 seconds (panel B).

All lanes:
Western blot - Anti-MCP1 antibody [RM1100] (ab315478) at 1/1000 dilution

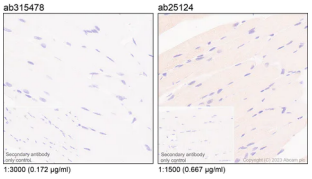
Lane 1:
Untreated RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate at 20 µg

Lane 2:
RAW 264.7 treated with 100ng/ml Lipopolysaccharides (LPS) for 7 hours, then 1µg/ml Brefeldin A was added for additional 3 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: 20 kDa, 36 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MCP1 antibody (ab25124)

MCP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse skeletal muscle using rabbit Anti-MCP1 antibody

Immunohistochemical analysis of paraffin-embedded Mouse skeletal muscle tissue labeling MCP1 with ab315478 at 1/3000 (0.172 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Negative control: ab315478 showed no staining on mouse skeletal muscle (ab), while ab25124 showed non-specific staining on the mouse skeletal muscle.
The image on the left is applied with Anti-MCP1 antibody [RM1100] (ab315478) at 1/3000 dilution and the image on the right is applied with Anti-MCP1 antibody (ab25124) at 1/1500 dilution.
The section was incubated with ab315478 or ab25124 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

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