abcam

ab56297

Anti-Macrophage antibody [RM0029-11H3]

Key facts

Isotype	IgG2a
Host species	Rat
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Macrophage protein. The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	RM0029-11H3
Purification technique	Affinity purification Protein G
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	2 µg for 10^6 Cells
Notes	ab18450 - Rat monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

IHC-P

Tested

Species	Mouse
Dilution info	10 µg/mL
Notes	Perform enzymatic antigen retrieval before commencing with IHC staining protocol.

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information Macrophage

Storage

Shipped at conditions	Blue Ice
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

Supplementary info

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

Activity summary	Macrophages also known as histiocytes are immune cells involved in many functions in the body. They have a mass that varies depending on their stage of

	activation and location. These cells are primarily expressed in tissues and organs such as the liver spleen lungs lymph nodes and bone marrow. They belong to the mononuclear phagocyte system and are key players in antigen presentation and phagocytosis. These cells can be visualized using macrophage immunohistochemistry (IHC) techniques and imaged with macrophage flow cytometry. Macrophage staining and macrophage immunofluorescence staining allow researchers to assess their presence and state.
Biological function summary	These versatile cells maintain homeostasis and play roles in tissue repair and inflammation. They are part of protective mechanisms of body engaging in destruction of pathogens and mediation of immune responses. Macrophages can release cytokines chemokines and other molecules that influence immune cell proliferation and differentiation. In mouse models macrophage markers like BM8 help to identify their populations and quantify their roles in various experiments.
Pathways	These immune cells participate in both the innate and adaptive immune responses. They influence the NF-kB and MAPK pathways both of which play significant roles in stress and inflammatory responses. Macrophages interact with proteins like Toll-like receptors (TLRs) to activate downstream signaling that leads to altered gene expression necessary for immune response. They serve as critical components in pathways that facilitate communication between different cell types in immune system.
Associated diseases and disorders	Macrophages have strong links with chronic inflammation and autoimmune diseases such as rheumatoid arthritis. They contribute to the pathogenesis of these conditions by secreting pro-inflammatory cytokines and other mediators. A connection exists between macrophages and the dysfunction of various proteins involved in inflammatory diseases such as TNF-alpha and interleukin-1. Alterations in macrophage activation and signaling could exacerbate disease progression highlighting their importance in therapeutic strategies aimed at modulating immune responses.

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

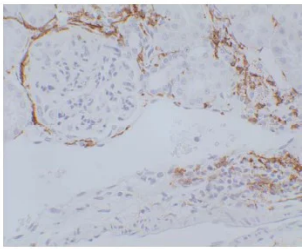
We do not recommend this combination. It is not covered by our product promise.

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.

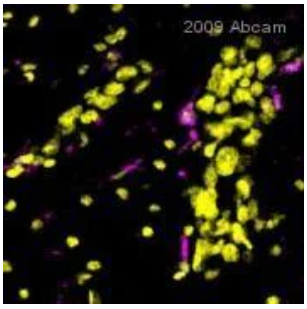
5 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Macrophage antibody [RM0029-11H3] (ab56297)

Macrophage Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rat Anti-Macrophage antibody

Bouin’ s solution fixed and paraffin embedded mouse kidney section from anti-GBM model was subjected to immunohistochemistry staining (ABC) of Macrophage using ab56297.

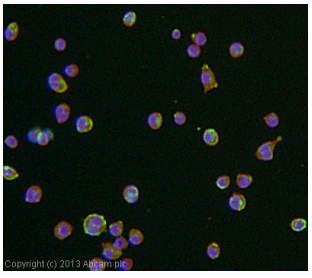


This image is courtesy of an anonymous customer review

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Macrophage antibody [RM0029-11H3] (ab56297)

Macrophage Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rat Anti-Macrophage antibody

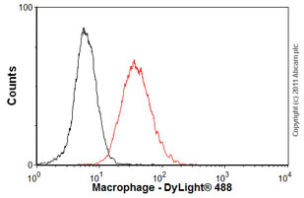
ab56297 staining macrophage in mouse brain tumour tissue sections by (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and blocked with 0.5% TNB blocking reagent for 30 minutes at 25°C. Samples were incubated with primary antibody at 1/100 dilution for 18 hours at 4 C. A goat anti-rat IgG H&L (HRP) (ab7097) was used at 1/500 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Macrophage antibody [RM0029-11H3] (ab56297)

Macrophage Immunocytochemistry/ Immunofluorescence staining using rat Anti-Macrophage antibody

ICC/IF image of ab56297 stained RAW246.7 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab56297, 10µg/ml) overnight at +4°C. The secondary antibody (green) was ab96887, DyLight® 488 goat anti-rat IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM



Flow Cytometry - Anti-Macrophage antibody [RM0029-11H3] (ab56297)

Macrophage Flow Cytometry staining using rat Anti-Macrophage antibody

Overlay histogram showing RAW 264.7 cells stained with ab56297 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab56297, 2µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rat IgG (H+L) (ab98386) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rat IgG2a, kappa monoclonal [aRTK2758] (ab18450, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in RAW 264.7 cells fixed with 80% methanol/permeabilized in 0.1% PBS-Tween used under the same conditions.

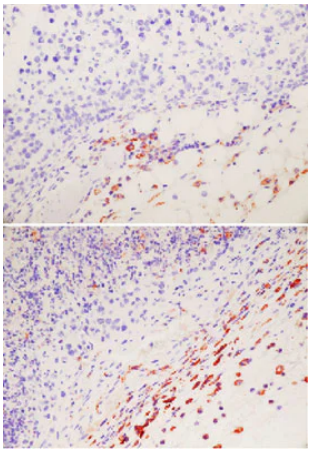


Image from Wang B et al., BMC Immunol. 2011 Aug 4;12:43. Fig 1.; doi:10.1186/1471-2172-12-43; 4 August 2011, BMC Immunology 2011, 12:43

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Macrophage antibody [RM0029-11H3] (ab56297)

Immunohistochemical analysis of murine tumour tissue, staining Macrophage with ab56297. Antigen retrieval was performed under high pressure in 10 mM EDTA buffer (pH 8.0) before incubation with primary antibody.

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