abcam

ab6640

Anti-F4/80 antibody [CI:A3-1] - Macrophage Marker

Anti-F4/80 antibody [CI:A3-1] - Macrophage Marker (ab6640) is a rat monoclonal antibody detecting F4/80 in **Flow Cytometry, ICC/IF**. Suitable for **Mouse**.

- Over 1090 publications
- Trusted since 2002

Lab Essentials

Key facts

Isotype	IgG2b
Host species	Rat
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Adgre1 protein. The exact immunogen used to generate this antibody is proprietary information. Database link Q61549
Clone number	CI:A3-1
Purification technique	Affinity purification Protein G
Specificity	Anti-F4/80 antibody (ab6640) recognises the mouse F4/80 antigen, a 160kD glycoprotein expressed by murine macrophages.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant.

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	1/10 - 1/50
Notes	ab18536 - Rat monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

ICC/IF

Tested

Species	Mouse
Dilution info	5-10 µg/mL
Notes	We recommend ab150165 Goat Anti-Rat IgG H&L (Alexa Fluor® 488) secondary antibody.

Target data

See full target information Adgre1

Function	Orphan receptor involved in cell adhesion and probably in cell-cell interactions specifically involving cells of the immune system. May play a role in regulatory T-cells (Treg) development.

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

Anti-F4/80 antibody [CI:A3-1] - Macrophage Marker (ab6640) is a rat monoclonal antibody and is validated for use in Flow Cyt (Intra) and ICC/IF.

Anti-F4/80 antibody [CI:A3-1] - Macrophage Marker (ab6640) was first used in a scientific publication in 2003 and has been cited over 1093 times in peer reviewed journals. It's performance in IHC in human, mouse and rat samples is trusted by the scientific community.

Abcam's high quality validation processes ensure Anti-F4/80 antibody [CI:A3-1] - Macrophage Marker (ab6640) has high sensitivity and specificity.

Anti-F4/80 antibody [CI:A3-1] - Macrophage Marker (ab6640) has 68 independent reviews from customers.

Anti-F4/80 antibody [CI:A3-1] - Macrophage Marker (ab6640) specifically detects F4/80 (UniProt ID: Q14246; Molecular weight: 96kDa) and is sold in 100 µg selling sizes.

Antibody clone CI:A3-1 is also available pre-conjugated to a variety of labels for your convenience - APC, FITC, PE (ab158, ab15155, ab15156).

F4/80 is a key marker for macrophages, playing a significant role in immune response modulation and inflammation and is linked to various inflammatory diseases. Clone CI:A3 is top cited in the market and a well known immunophenotyping marker in mouse macrophages.

Supplementary info

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

Activity summary	F4/80 also known as fibroblast-specific protein (FSP1) and by its monoclonal antibody designation BM8 is an established murine macrophage marker. It is a glycoprotein with a molecular weight of approximately 160 kDa. F4/80 is predominantly expressed on the surface of tissue-resident macrophages in mice where it serves as an essential component of the immune system. These macrophages are present across various organs and tissues such as liver (Kupffer cells) lung (alveolar macrophages) spleen and the peritoneal cavity where its expression can be detected using techniques like f4/80 immunofluorescence and f4/80 staining.
Biological function summary	The protein functions in the immune response by promoting phagocytosis and the clearance of apoptotic cells. It contributes to mediating anti-inflammatory responses and is associated with the regulation of cellular immune responses. Although not part of a larger protein complex F4/80 plays a critical role in the differentiation and maturation of macrophages. It is often used as a reliable f4/80 marker in immunohistochemistry (IHC) to identify and study macrophages within tissues.
Pathways	The function of F4/80 influences the Toll-like receptor (TLR) signaling pathway and cytokine production regulatory pathways. These pathways contribute to the innate immune response by recognizing microbial pathogens and activating

	inflammatory responses. F4/80 interacts with other proteins such as CD11b which is also involved in these immune responses aligning their functions to regulate the activity of macrophages and coordinate with other immune cells.
Associated diseases and disorders	F4/80's involvement in inflammation extends to its role in conditions like atherosclerosis and rheumatoid arthritis. In atherosclerosis the interaction between F4/80 and other proteins like CD36 leads to macrophage accumulation and plaque formation in blood vessels. In rheumatoid arthritis F4/80 expression on specific macrophages contributes to joint inflammation by mediating the secretion of pro-inflammatory cytokines. Both of these conditions highlight the significance of F4/80 in the pathogenesis and progression of diseases characterized by immune dysregulation.

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

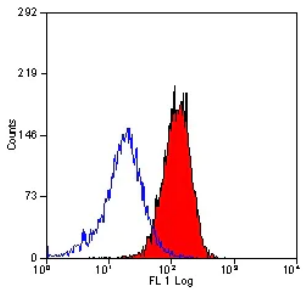
We do not recommend this combination. It is not covered by our product promise.

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.

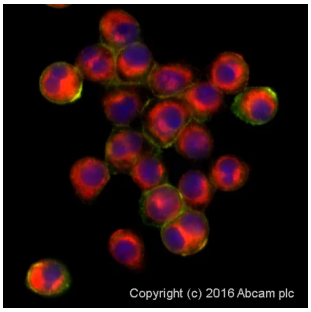
5 product images



Flow Cytometry - Anti-F4/80 antibody [CI:A3-1] - Macrophage Marker (ab6640)

F4/80 Flow Cytometry staining of J774 cells using rat Anti-F4/80 antibody

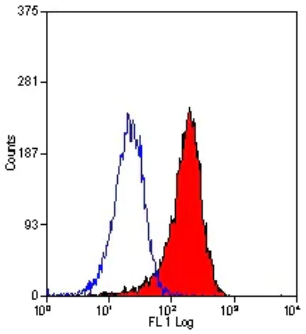
Flow cytometry analysis of peritoneal macrophages labelling F4/80 (red) with ab6640 at a dilution of 1/10. The blue line shows J774 cells stained with Rat anti mouse isotype control.



Immunocytochemistry/ Immunofluorescence - Anti-F4/80 antibody [CI:A3-1] - Macrophage Marker (ab6640)

F4/80 Immunocytochemistry/ Immunofluorescence staining of Raw 264.7 cells using rat Anti-F4/80 antibody

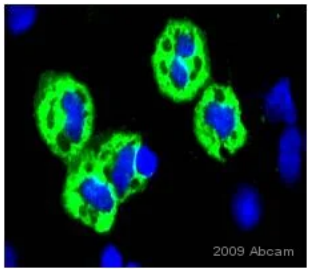
ab6640 stained Raw 264.7 cells. The cells were 100% methanol fixed for 5 minutes at room temperatureand then incubated in 1%BSA / 10% normal Goat serum / 0.3M glycine in 0.1% PBS-Tween for 1hour at room temperature to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab6640 at 5µg/ml) overnight at +4°C. The secondary antibody (pseudo-colored green) was ab150165 Goat Anti-Rat IgG H&L (Alexa Fluor® 488) preadsorbed used at a 1/1000 dilution for 1 hour at room temperature. Alexa Fluor® 594 WGA was used to label plasma membranes (pseudo-colored red) at a 1/200 dilution for 1hour at room temperature. DAPI was used to stain the cell nuclei (pseudo-colored blue) at a concentration of 1.43µM for 1hour at room temperature.



Flow Cytometry - Anti-F4/80 antibody [CI:A3-1] - Macrophage Marker (ab6640)

F4/80 Flow Cytometry staining of J774 cells using rat Anti-F4/80 antibody

Flow cytometry analysis of J774 cells labelling F4/80 (red) with ab6640 at a dilution of 1/50 followed by goat anti rat IgG FITC secondary antibody at 1/100 dilution. The blue line shows J774 cells stained with Rat anti mouse isotype control.

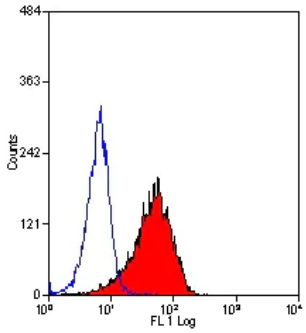


This image is courtesy of an anonymous customer review

Immunocytochemistry/ Immunofluorescence - Anti-F4/80 antibody [CI:A3-1] - Macrophage Marker (ab6640)

F4/80 Immunocytochemistry/ Immunofluorescence staining of mouse bone marrow cells using rat Anti-F4/80 antibody

ab6640 staining F4/80 in mouse bone marrow cells by immunocytochemistry/ immunofluorescence. Cells were formaldehyde fixed and permeabilized in 0.2% Triton X-100 prior to blocking in 2% BSA for 30 minutes at 20°C. The primary antibody was diluted at 1/200 and incubated with the sample for 9 hour at 4°C. Alexa fluor® 488 goat polyclonal to rat Ig diluted 1/200 was used as the secondary antibody.



Flow Cytometry - Anti-F4/80 antibody [CI:A3-1] - Macrophage Marker (ab6640)

F4/80 Flow Cytometry staining of J774 cells using rat Anti-F4/80 antibody

Flow cytometry analysis of J774 cells labelling F4/80 (red) with ab6640 at a dilution of 1/10 followed by streptavidin FITC secondary at 1/100 dilution. The blue line shows J774 cells stained with Rat anti mouse isotype control.

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