abcam

ab201340

Anti-CD68 antibody [C68/684]

Anti-CD68 antibody [C68/684] (ab201340) is a mouse monoclonal antibody detecting CD68 in **Western Blot, Flow Cytometry, IHC-P, ICC/IF**. Suitable for **Human**.

- Over 100 publications

Lab Essentials

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human CD68. Database link P34810
Clone number	C68/684
Purification technique	Affinity purification Protein A/G
Specificity	ab201340 recognizes a glycoprotein of 110kDa, which is identified as CD68.
Light chain type	kappa
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	ab201340 is purified from Bioreactor Concentrate by Protein A/G column chromatography.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1-2 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Predicted

Species	Monkey
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	-

Predicted

Species	Monkey
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	Perform heat mediated antigen retrieval with 10 mM Tris with 1 mM EDTA buffer pH 9.0 for 45 minutes at 95°C followed by cooling at RT for 20 minutes. Incubate with primary for 30 minutes at RT.

Predicted

Species	Monkey
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	-

Predicted

Species	Monkey
Dilution info	-
Notes	-

Target data

See full target information CD68

Function	Could play a role in phagocytic activities of tissue macrophages, both in intracellular lysosomal metabolism and extracellular cell-cell and cell-pathogen interactions. Binds to tissue- and organ-specific lectins or selectins, allowing homing of macrophage subsets to particular sites. Rapid recirculation of CD68 from endosomes and lysosomes to the plasma membrane may allow macrophages to crawl over selectin-bearing substrates or other cells.

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-CD68 antibody [C68/684] (ab201340) is a House Mouse Monoclonal antibody and is validated for use in Flow Cyt, ICC/IF, IHC-P, WB in human samples.

Anti-CD68 antibody [C68/684] (ab201340) has been cited over 105 times in peer reviewed journals and is trusted by the scientific community.

Abcams high quality validation processes ensure Anti-CD68 antibody [C68/684] (ab201340) has high sensitivity and specificity.

Anti-CD68 antibody [C68/684] (ab201340) specifically detects CD68 (UniProt ID: P34810; Molecular weight: 35kDa) and is sold in 100 uL selling sizes.

Conjugation-ready, carrier free format available for antibody clone C68/684 - ab21398.

CD68 is a marker primarily associated with macrophages, playing a crucial role in phagocytosis, antigen presentation, and immune response regulation. CD68 is a biomarker in chronic inflammatory conditions including rheumatoid arthritis and inflammatory bowel disease

ab201340 stains macrophages in a wide variety of Human tissues, including Kupffer cells and macrophages in the red pulp of the spleen, in lamina propria of the gut, in lung alveoli, and in bone marrow. It reacts with myeloid precursors and peripheral blood granulocytes. It also reacts with plasmacytoid T cells, which are supposed to be of monocyte/macrophage origin. It shows strong granular cytoplasmic staining of chronic and acute myeloid leukemia and also reacts with rare cases of true histiocytic neoplasia. Lymphomas are negative or show few granules.

Supplementary info

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

Activity summary	CD68 is a glycoprotein that functions as a scavenger receptor. It plays an important role in the regulation of cellular debris and apoptotic cell clearance. Researchers often refer to it as KP1 or macrosialin in the literature. CD68 with a molecular weight of approximately 110 kDa is highly expressed in macrophages and monocytes. The mucin-like structure of CD68 allows it to be heavily glycosylated which aids in its function. Researchers detect CD68 in tissues through methods like immunohistochemistry (IHC) immunofluorescence and CD68 staining and it is widely used as a macrophage marker in research.
Biological function summary	CD68 facilitates functions associated with the innate immune response. It serves as an important part of macrophages which contribute to immune surveillance

	and tissue homeostasis. Though it primarily operates on its own in some contexts CD68 might assist in forming complexes with other receptors to modulate phagocytic activity. This target is significant in atherosclerotic plaque stability as macrophages engulf lipids and cell debris through processes facilitated by CD68.
Pathways	CD68 is involved in pathways connected to inflammation and phagocytosis. The CD68 protein works closely with other scavenger receptors like CD36 to mediate uptake of oxidized low-density lipoproteins (oxLDL) in the lipid metabolism pathway. Additionally CD68 engagement can influence the toll-like receptor (TLR) signaling pathways thereby linking innate immunity and inflammatory responses critical for host defense and disease progression.
Associated diseases and disorders	CD68 is associated with atherosclerosis and multiple sclerosis. In atherosclerosis its role becomes evident as it accumulates in macrophages within the plaques making it a marker of disease severity. In multiple sclerosis CD68 expression in macrophages and microglia indicates active demyelination and inflammation. It also relates to proteins such as CD36 in atherosclerosis where both mediate the uptake of modified LDL contributing to foam cell formation in plaques.

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

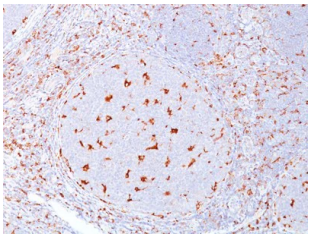
We do not recommend this combination. It is not covered by our product promise.

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.

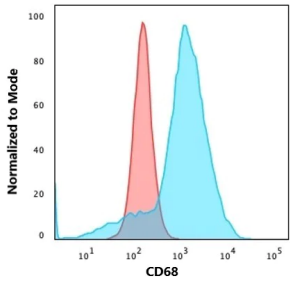
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD68 antibody [C68/684] (ab201340)

CD68 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CD68 antibody

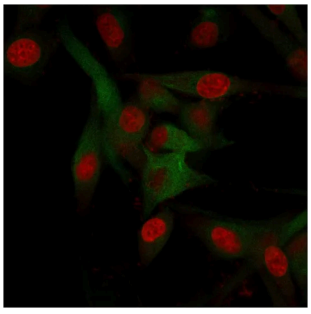
Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human tonsil tissue labeling CD68 with ab201340 at 1 µg/ml.



Flow Cytometry - Anti-CD68 antibody [C68/684] (ab201340)

CD68 Flow Cytometry staining using mouse Anti-CD68 antibody

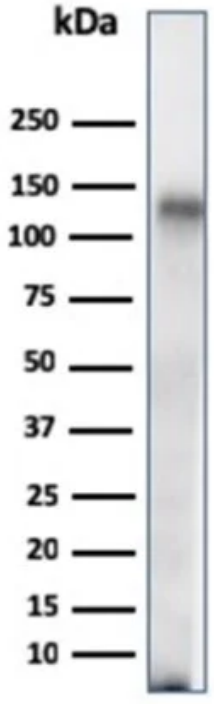
Flow Cytometry analysis of U-87 MG (human glioblastoma-astrocytoma epithelial cell line) cells labeling CD68 with ab201340. Goat Anti-Mouse IgG was used as the secondary antibody (blue); Isotype Control (red).



Immunocytochemistry/ Immunofluorescence - Anti-CD68 antibody [C68/684] (ab201340)

CD68 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-CD68 antibody

Immunocytochemistry/immunofluorescence analysis of U-87 MG (human glioblastoma-astrocytoma epithelial cell line) cells labelling CD68 with ab201340. Goat Anti-Mouse IgG was used as the secondary antibody (green). Nuclear DNA stained red.



Western blot - Anti-CD68 antibody [C68/684] (ab201340)

All lanes:
Western blot - Anti-CD68 antibody [C68/684] (ab201340)

All lanes:
Human spleen tissue lysate

Predicted band size: 37 kDa

Observed band size: 110 kDa

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