abcam

ab119843

Anti-CD64 antibody [10.1]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing FCGR1A protein. The exact immunogen used to generate this antibody is proprietary information. Database link P12314
Clone number	10.1
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	ab119843 is purified from cell culture supernatant by protein-A affinity chromatography. Purity is > 95% by SDS-PAGE.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1-5 µg/mL
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target data

See full target information FCGR1A

Function	High affinity receptor for the Fc region of immunoglobulins gamma. Functions in both innate and adaptive immune responses. Mediates IgG effector functions on monocytes triggering antibody-dependent cellular cytotoxicity (ADCC) of virus-infected cells.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-80°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	CD64 also known as Fc gamma receptor 1a (FCGR1A) is a high-affinity receptor for the Fc region of immunoglobulin G (IgG). This receptor weighs approximately 72 kDa and is expressed on the surface of immune cells such as macrophages monocytes and activated neutrophils. CD64 protein plays an important role in immune responses by binding to antibodies and mediating processes such as phagocytosis and antibody-dependent cellular cytotoxicity (ADCC). Researchers often use anti-CD64 antibodies and CD64 markers to study its expression in various cellular contexts especially in flow cytometry.
Biological function summary	CD64 expression involves the binding of IgG which serves as a pivotal mechanism to facilitate phagocytosis and clearance of opsonized pathogens. CD64 does not operate solely; it is part of a larger receptor family that includes other Fc gamma receptors like CD16 and CD32. The regulation of CD64 differs from its relatives due to its higher affinity for IgG. This attribute enables CD64 to play a more significant role in triggering immune responses especially during infections and inflammatory processes.
Pathways	CD64 participates in the immune response pathway and is critical in the regulation of inflammatory responses. Key proteins interacting with CD64 in these pathways include the aforementioned CD16 and CD32 forming a network that ensures efficient immune system activation. The interaction with IgG and subsequent

signal transduction underpin the receptor's functionality in these pathways harmonizing innate and adaptive immune responses.

Associated diseases and disorders

CD64 expression correlates strongly with autoimmune disorders and inflammatory conditions. The receptor's role in orchestrating immune cell activation makes it relevant in diseases such as rheumatoid arthritis and sepsis. In rheumatoid arthritis CD64 interacts with immune complexes intensifying inflammation through enhancement of phagocytic activity. In sepsis increased CD64 marker expression on neutrophils can serve as a diagnostic indicator. Related proteins like CD16 and CD32 also participate in these disorders by modulating immune complex handling and cellular activation.

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

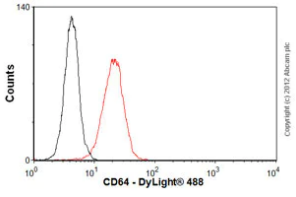
We do not recommend this combination. It is not covered by our product promise.

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.

3 product images



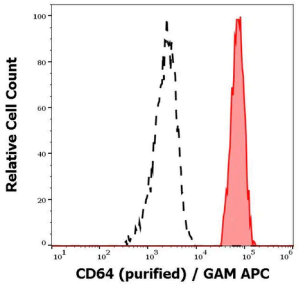
Flow Cytometry - Anti-CD64 antibody [10.1] (ab119843)

CD64 Flow Cytometry staining using mouse Anti-CD64 antibody

Overlay histogram showing THP1 cells stained with ab119843 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab119843, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488

goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive result in 80% methanol (5 min) fixed THP1 cells used under the same conditions.

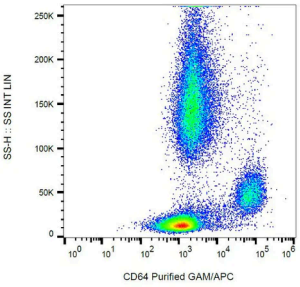
Please note that Abcam do not have any data for use of this antibody on non-fixed cells. We welcome any customer feedback.



Flow Cytometry - Anti-CD64 antibody [10.1] (ab119843)

CD64 Flow Cytometry staining using mouse Anti-CD64 antibody

Flow Cytometry analysis of human peripheral whole blood labeling CD64 positive monocytes with ab119843 at 4 µg/mL (red-filled).
Negative control: CD64 negative lymphocytes (black-dashed).



Flow Cytometry - Anti-CD64 antibody [10.1] (ab119843)

CD64 Flow Cytometry staining using mouse Anti-CD64 antibody

Surface staining of CD64 in human peripheral blood with anti-CD64 (10.1) purified , GAM-APC.

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