abcam

ab89207

Anti-CD16b antibody [MM0272-5L11]

Key facts

Isotype	IgG2
Host species	Mouse
Storage buffer	Constituents: PBS
Form	Lyophilized
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human FCGR3B. The exact immunogen used to generate this antibody is proprietary information. Database link O75015
Carrier free	Yes
Clone number	MM0272-5L11
Purification technique	Affinity purification Protein G
Specificity	In recent direct ELISA testing, we found that this antibody cross-reacts ~50% with Human Fc gamma RIIIA/CD16a.
Reconstitution	reconstitute with PBS at 200µL
Purification notes	The IgG fraction of culture supernatant was purified by Protein G affinity chromatography.

Reactivity data

Flow Cyt

Expected

Species	Human
Dilution info	-
Notes	ab18414 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	1/500 - 1/1000
Notes	-

Target data

See full target information FCGR3B

Function	Receptor for the Fc region of immunoglobulins gamma. Low affinity receptor. Binds complexed or aggregated IgG and also monomeric IgG. Contrary to III-A, is not capable to mediate antibody-dependent cytotoxicity and phagocytosis. May serve as a trap for immune complexes in the peripheral circulation which does not activate neutrophils.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-80°C

Notes

Reconstituted antibody should be aliquoted and can be stored frozen at < -20°C for at least for six months without detectable loss of activity. Avoid repeated freeze-thaw cycles.

Supplementary info

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

Activity summary	CD16b also known as FCGR3B is a low-affinity receptor for the Fc region of IgG with a molecular weight of around 50-65 kDa. It is a glycosylphosphatidylinositol (GPI)-anchored protein expressed specifically on the surface of human neutrophils. CD16b plays a role in antibody-dependent cellular cytotoxicity (ADCC) by interacting with immune complexes and its expression can be detected by ELISA. This protein shares similarities with CD16a which is expressed on NK cells and macrophages but they differ in their cellular distribution and functions.
Biological function summary	CD16b functions as an important receptor in the immune response by facilitating interactions between neutrophils and opsonized pathogens. This protein does not operate in isolation but works with other components of the immune system to trigger a sequence of reactions leading to the destruction of target cells and pathogens. The engagement of CD16b initiates signal transduction pathways that activate effector functions including phagocytosis and the release of inflammatory mediators. It helps the immune system in removing pathogens efficiently.
Pathways	CD16b integrates into signaling pathways that contribute to immune defense. It is part of the Fc gamma R-mediated phagocytosis pathway which involves the collaboration with spleen tyrosine kinase (Syk) and Src family kinases. This pathway is critical in phagocytosis a process by which cells engulf and destroy pathogens. CD16b associates with other Fc gamma receptors such as CD32 to adjust and amplify the immune response allowing for targeted immune activity in detecting and eliminating infected or altered cells.
Associated diseases and disorders	CD16b connects to autoimmune and inflammatory conditions. Altered CD16b expression or function may associate with diseases like systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA). These conditions can involve dysregulation of immune complexes and Fc receptor pathways including those influenced by CD32 contributing to the pathogenic process. In these diseases CD16b might play a role in the pathogenic autoimmune response by influencing the clearance of immune complexes and modulating inflammatory processes.

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

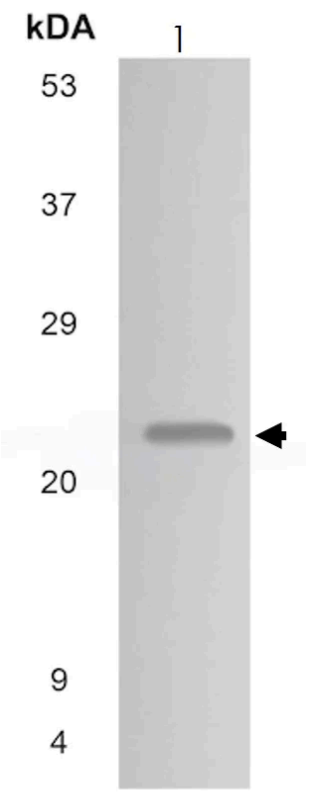
We do not recommend this combination. It is not covered by our product promise.

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



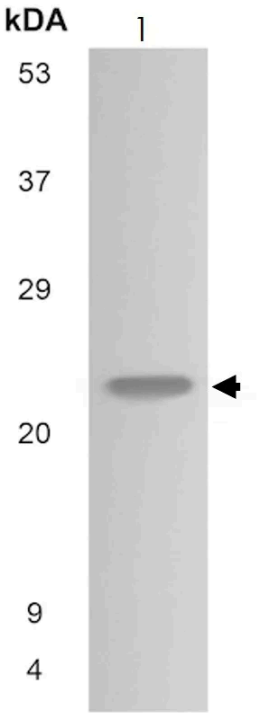
Western blot - Anti-CD16b antibody [MM0272-5L11] (ab89207)

All lanes:
Western blot - Anti-CD16b antibody [MM0272-5L11] (ab89207) at 1/500 dilution

All lanes:
Human placenta tissue lysate

Predicted band size: 26 kDa

Observed band size: 23 kDa



Western blot - Anti-CD16b antibody [MM0272-5L11] (ab89207)

All lanes:
Western blot - Anti-CD16b antibody [MM0272-5L11] (ab89207) at 1/500 dilution

All lanes:
Human embryonic tissue lysate

Predicted band size: 26 kDa

Observed band size: 23 kDa

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