abcam

ab237965

Anti-CD11b antibody [M1/70] - BSA and Azide free

Recombinant

Key facts

Isotype	IgG2b
Host species	Rat
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	M1/70
Purification technique	Affinity purification Protein A
Concentration	1.041 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/1000 - 1/10000

Notes	ab18536 - Rat monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	ab18536 - Rat monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Not recommended

Species	Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information ITGAM

Function	Integrin ITGAM/ITGB2 is implicated in various adhesive interactions of monocytes, macrophages and granulocytes as well as in mediating the uptake of complement-coated particles and pathogens (PubMed:20008295, PubMed:9558116). It is identical with CR-3, the receptor for the iC3b fragment of the third complement component. It probably recognizes the R-G-D peptide in C3b. Integrin ITGAM/ITGB2 is also a receptor for fibrinogen and factor X. It recognizes P1 and P2 peptides of fibrinogen gamma chain. Regulates neutrophil migration (PubMed:28807980). In association with beta subunit ITGB2/CD18, required for CD177-PRTN3-mediated activation of TNF primed neutrophils (PubMed:21193407). Integrin ITGAM/ITGB2 is also a receptor for ICAM1 ligand ensuring adhesion between stimulated neutrophils and stimulated endothelial cells (PubMed:1980124). May regulate phagocytosis-induced apoptosis in extravasated neutrophils (By similarity). May play a role in mast cell development (By similarity). Required with TYROBP/DAP12 in microglia to control production of microglial superoxide ions which promote the neuronal apoptosis that occurs during brain development (By similarity).

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	+4°C
Storage information	Do Not Freeze

Notes

ab237965 is the carrier-free version of ab8878.

Want a custom formulation?

This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	CD11b also known as Integrin alpha M is a protein with a molecular weight of approximately 170 kDa. This protein functions mechanically as an important adhesion molecule. It forms a complex with CD18 to become part of leukocyte-specific beta2 integrins specifically the Mac-1 (CR3) receptor. CD11b is largely expressed on the surface of various myeloid cells including monocytes macrophages granulocytes and a subset of natural killer cells. Researchers often utilize anti-CD11b antibodies and other markers such as APC or CD11b IHC to study its expression in different contexts.
Biological function summary	CD11b plays a critical role in various immune responses by mediating phagocytosis chemotaxis and cell migration. It is essential for proper leukocyte adherence to endothelial cells and for the engulfment of pathogens or apoptotic cells. CD11b as part of the Mac-1 complex contributes to the immune surveillance and inflammatory processes. This complex interacts with diverse ligands like ICAM-1 fibrinogen and complement component iC3b facilitating an immunological response.
Pathways	CD11b is instrumental within the integrin signaling pathway and the Leukocyte Transendothelial Migration pathway. Its interaction with ICAM-1 is central to the leukocyte adhesion cascade influencing the movement of immune cells across endothelial barriers. CD11b also associates with proteins such as Src family kinases and PI3K which activate downstream signaling responsible for the reorganization of the cytoskeleton and cell movement during immune responses.
Associated diseases and disorders	CD11b is linked to inflammatory conditions like rheumatoid arthritis and systemic lupus erythematosus. Aberrant expression or function of CD11b can result in improper immune regulation contributing to the pathogenesis of these diseases. Its interaction with complement receptor iC3b plays a part in inflammation and tissue damage observed in these conditions. Consequently CD11b represents a potential target for therapeutic intervention in diseases where dysregulated immune activity is a feature.

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.

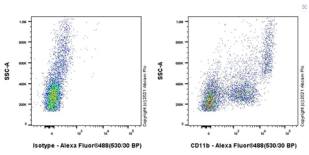
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

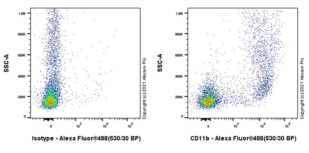
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4 product images



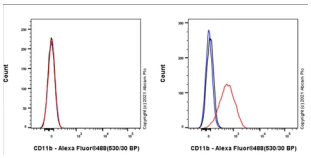
Flow Cytometry - Anti-CD11b antibody [M1/70] - BSA and Azide free (ab237965)

This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab8878). Flow Cytometry analysis of Human peripheral blood mononuclear cell (PBMC) cells labelling CD11b with ab8878 at a 1/10,000 dilution (0.01 µg) (right) compared to Rat monoclonal IgG - Isotype Control (right). Goat F(ab)2 Anti-Rat IgG Fc (Alexa Fluor® 488, ab150161) at 1/2000 dilution was used as the secondary antibody. Gated on viable cells.



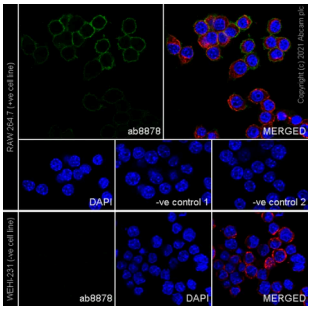
Flow Cytometry - Anti-CD11b antibody [M1/70] - BSA and Azide free (ab237965)

This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab8878). Flow Cytometry analysis of Mouse peripheral blood mononuclear cell (PBMC) cells labelling CD11b with ab8878 at a 1/10,000 dilution (0.01 µg) (right) compared to Rat monoclonal IgG - Isotype Control (right). Goat F(ab)2 Anti-Rat IgG Fc (Alexa Fluor® 488, ab150161) at 1/2000 dilution was used as the secondary antibody. Gated on viable cells.



Flow Cytometry - Anti-CD11b antibody [M1/70] - BSA and Azide free (ab237965)

This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab8878). Flow Cytometry analysis of WEHI-231 (Mouse B cell lymphoma B lymphocyte, Left) / RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage, Right) cells stained for CD11b using ab8878 at a 1/1000 dilution (0.1 µg) (Red) compared to Rat monoclonal IgG - Isotype Control (Black) and cells without incubation with primary antibody and secondary antibody (Blue). Goat F(ab)2 Anti-Rat IgG Fc (Alexa Fluor® 488, ab150161) at 1/2000 dilution was used as the secondary antibody. Negative control: WEHI-231. (PMID: 2457584) Gated on viable cells.



Immunocytochemistry/ Immunofluorescence - Anti-CD11b antibody [M1/70] - BSA and Azide free (ab237965)

CD11b Immunocytochemistry/ Immunofluorescence staining using rat Anti-CD11b antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab8878) Confocal image showing membranous staining in RAW 264.7 cells. RAW 264.7, WEHI-231 and THP-1 cells were fixed in 4% PFA and permeabilized with 0.1% Triton X-100. Primary antibody, ab8878 at 1:50 was incubated overnight at 4° C, followed by AlexaFluor® 488- conjugated Goat anti-Rat secondary antibody (ab150157) at 1/1000 dilution at RT for 45 min. ab179513 Anti-beta Tubulin, used as a counterstain at 1/200 dilution, was co-incubated with ab8878 overnight at 4° C, followed by Alexa Fluor® 594 Goat Anti-Rabbit secondary (ab150080) at 1/1000 dilution at RT for 45 min. Nucleus were visualized using DAPI. Negative control: WEHI-231 (PMID: 2457584)

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