abcam

ab25533

PE/Cy5® Anti-CD11b antibody [M1/70]

Anti-CD11b antibody [M1/70] conjugated to PE/Cy5® - suitable for flow cytometry, and reacts with mouse samples. Clone [M1/70] is a rat monoclonal antibody and one of the most commonly used clones for flow cytometry.

Design your panel with our interactive flow cytometry panel builder. Click here.

Lab Essentials

Key facts

Isotype	IgG2b
Host species	Rat
Conjugation	PE/Cy5®
Excitation/Emission	Ex: 496nm, Em: 667nm
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: 0.87% Sodium chloride, 0.14% Sodium dihydrogen phosphate, 0.1% Gelatin
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Itgam protein. The exact immunogen used to generate this antibody is proprietary information. Database link P05555
Clone number	M1/70
Purification technique	Affinity purification
Light chain type	kappa
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
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 (By similarity). 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. In association with beta subunit ITGB2/CD18, required for CD177-PRTN3-mediated activation of TNF primed neutrophils. Integrin ITGAM/ITGB2 is also a receptor for ICAM1 ligand ensuring adhesion between stimulated neutrophils and stimulated endothelial cells (By similarity). 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 (PubMed:18685038).

Storage

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

Notes

This product or portions thereof is manufactured under license from Carnegie Mellon University under U.S. Patent Number 5, 268, 486 and related patents. Cy® and CyDye® are trademarks of Cytiva.

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

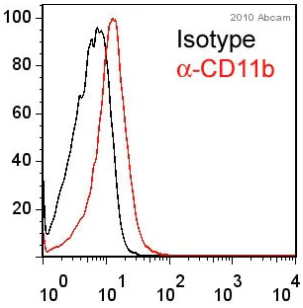
We do not recommend this combination. It is not covered by our product promise.

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.

4 product images

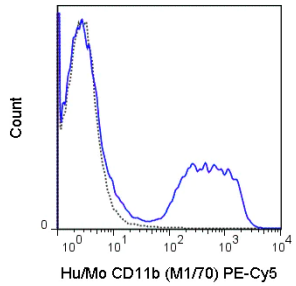


This image is courtesy of an anonymous customer review

Flow Cytometry - PE/Cy5® Anti-CD11b antibody [M1/70] (ab25533)

CD11b Flow Cytometry staining using rat Anti-CD11b antibody

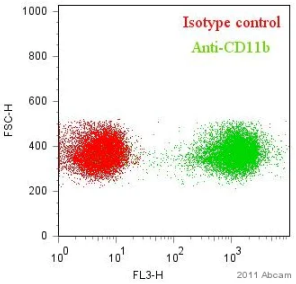
ab25533 staining CD11b in Human leukocytes by Flow Cytometry. Cells were prepared for staining after red blood cell lysis and were fixed in paraformaldehyde. The sample was incubated with the primary antibody (1/50 in PBS/BSA 1%) for 30 minutes at 4°C. Gating strategy: Neutrophils.



Flow Cytometry - PE/Cy5® Anti-CD11b antibody [M1/70] (ab25533)

CD11b Flow Cytometry staining using rat Anti-CD11b antibody

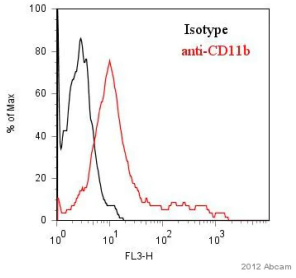
Flow Cytometry analysis of C57Bl/6 bone marrow cells labeling CD11b with ab25533 at 0.125 µg (solid line) or Rat IgG2b (PE/Cy5®) isotype control at 0.125 µg (dashed line).



Flow Cytometry - PE/Cy5® Anti-CD11b antibody [M1/70] (ab25533)

CD11b Flow Cytometry staining using rat Anti-CD11b antibody

Scatter plot showing mouse blood leukocyte cells stained with ab25533 (green). The cells were harvested from blood drawn from mice and prepared in PBS/BSA 1%. Cells were fixed in formaldehyde. The cells were then incubated in 1x PBS / 1% BSA to block non-specific protein-protein interactions followed by the antibody (1/100) for 30 min at 4°C. Isotype control antibody (red) was used under the same conditions.



Flow Cytometry - PE/Cy5® Anti-CD11b antibody [M1/70] (ab25533)

CD11b Flow Cytometry staining using rat Anti-CD11b antibody

ab25533 staining CD11b in Rat splenocytes by Flow Cytometry. Rat spleen was homogenized and red blood cells were lysed in PBS + 1% BSA and 0.01% sodium azide. The sample was incubated with the primary antibody (1/100 in PBS + 1% BSA and 0.01% sodium azide) for 1 hour at 4°C.
Gating Strategy: Live Macrophages.

This image is courtesy of an anonymous customer review

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