abcam

ab128797

Anti-CD11b antibody

Lab Essentials

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Purification technique	Affinity purification Immunogen
Specificity	Replenishment batches of our polyclonal antibody, ab128797 are tested in Flow Cyt. Previous batches were additionally validated in IP and WB. These applications are still expected to work and are covered by our Abpromise guarantee. You may also be interested in our alternative recombinant antibody, ab184308.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC

Tested

Species	Mouse
Dilution info	1 µg/mL
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

IP

Tested

Species	Mouse
Dilution info	5 µg/mL
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	0.1 µg for 10^5 Cells
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1 µg/mL
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	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 (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 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

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

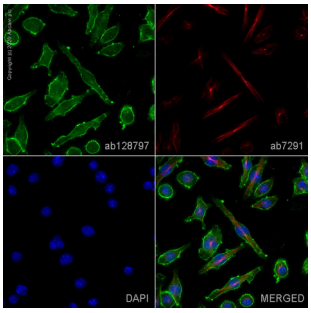
We do not recommend this combination. It is not covered by our product promise.

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.

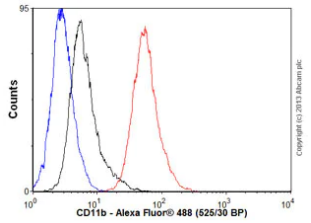
4 product images



Immunocytochemistry - Anti-CD11b antibody (ab128797)

CD11b Immunocytochemistry staining using rabbit Anti-CD11b antibody

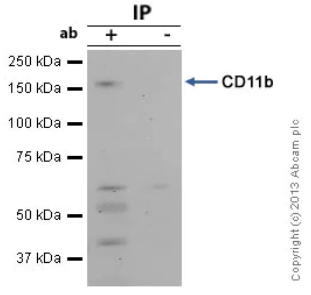
ab128797 staining CD11b in Raw264.7 (LPS treated) cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab128797 at 1µg/ml and ab7291, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with ab150081, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and ab150080, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue). Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



Flow Cytometry (Intracellular) - Anti-CD11b antibody (ab128797)

CD11b Flow Cytometry (Intracellular) staining using rabbit Anti-CD11b antibody

Overlay histogram showing RAW 264.7 cells stained with ab128797 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab128797, 0.1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (polyclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Immunoprecipitation - Anti-CD11b antibody (ab128797)

CD11b was immunoprecipitated using 0.5mg RAW 264.7 whole cell extract, 5µg of Rabbit polyclonal to CD11b and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).
The antibody was incubated under agitation with Protein G beads for 10min, RAW 264.7 whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.

Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab128797.

Secondary: Mouse monoclonal [SB62a] Secondary Antibody to Rabbit IgG light chain (HRP) (ab99697).

Band: 170kDa, non specific bands - 42, 55 and 65kDa: We are unsure as to the identity of this extra band; CD11b

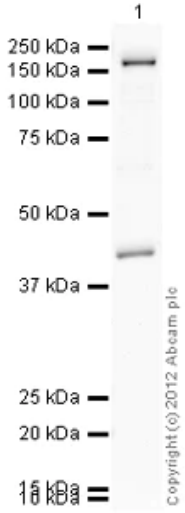
All lanes:
Immunoprecipitation - Anti-CD11b antibody (ab128797)

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 127 kDa

Exposure time: 20min



Western blot - Anti-CD11b antibody (ab128797)

CD11b contains a number of potential glycosylation sites (SwissProt) which may explain its migration at a higher molecular weight than predicted. The predicted molecular weight of CD11b is 127 kDa (SwissProt), however we expect to observe a banding pattern around 170 kDa. Abcam welcomes customer feedback and would appreciate any comments regarding this product and the data presented above.
All lanes:
Western blot - Anti-CD11b antibody (ab128797) at 1 µg/mL

All lanes:
RAW 264.7 (Mouse leukaemic monocyte macrophage cell line) Whole Cell Lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 127 kDa

Observed band size: 170 kDa, 42 kDa

Exposure time: 4min

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