abcam

ab307659

Anti-CD11a antibody [EPR26928-111A] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
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	EPR26928-111A
Purification technique	Affinity purification Protein A
Concentration	1.022 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30

Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Rat, Mouse
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Rat, Mouse, Human
Dilution info	-
Notes	-

Target data

See full target information ITGAL

Function

Integrin ITGAL/ITGB2 is a receptor for ICAM1, ICAM2, ICAM3 and ICAM4 (PubMed:10846180, PubMed:12526797, PubMed:1676048, PubMed:3086451). Integrin ITGAL/ITGB2 is a receptor for F11R (PubMed:11812992, PubMed:15528364). Integrin ITGAL/ITGB2 is a receptor for the secreted form of ubiquitin-like protein ISG15; the interaction is mediated by ITGAL (PubMed:29100055). Involved in a variety of immune phenomena including leukocyte-endothelial cell interaction, cytotoxic T-cell mediated killing, and antibody dependent killing by granulocytes and monocytes. Contributes to natural killer cell cytotoxicity (PubMed:15356110). Involved in leukocyte adhesion and transmigration of leukocytes including T-cells and neutrophils (PubMed:11812992). Acts as a platform at the immunological synapse to translate TCR engagement and density of the ITGAL ligand ICAM1 into graded adhesion (PubMed:38195629). Required for generation of common lymphoid progenitor cells in bone marrow, indicating a role in lymphopoiesis (By similarity). Integrin ITGAL/ITGB2 in association with ICAM3, contributes to apoptotic neutrophil phagocytosis by macrophages (PubMed:23775590). Integrins ITGAL:ITGB2 functions as a receptor of the neuron-specific adhesion molecule ICAM5 ensuring neuron cell-leukocyte adhesion (PubMed:10741396). Integrin ITGAL/ITGB2 that functions as a signaling

receptor of ICAM2, ensuring leukocyte cell-cell adhesion on resting cells (PubMed:1676048).

Storage

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

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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.

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.

Supplementary info

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

Activity summary	CD11a also known as ITGAL and LFA-1 alpha chain or integrin alpha L is a protein that functions as an important component of the immune system. It has a molecular mass of approximately 180 kDa. CD11a is expressed predominantly in

	leukocytes enabling these immune cells to adhere and interact with other cells. This adhesive property is especially critical in the trafficking of leukocytes to sites of inflammation and infection. CD11a pairs with CD18 to form the leukocyte function-associated antigen-1 (LFA-1) complex which plays a significant role in cell signaling and immune responses.
Biological function summary	This protein enables leukocyte adhesion and transendothelial migration which are essential for the immune surveillance process. CD11a is a part of the integrin family known for regulating cell adhesion and interactions with the extracellular matrix. By forming a heterodimer with CD18 it mediates tight adhesion between immune cells and endothelial cells. This interaction aids in the immune response by enhancing the activation and movement of T cells and other leukocytes through the vascular endothelium into tissues.
Pathways	The protein participates in the immune cell trafficking pathway and the integrin signaling pathway. In these pathways CD11a contributes to the modulation of immune responses and cell movement. The interaction of CD11a with intercellular adhesion molecule 1 (ICAM-1) and other proteins within these pathways emphasizes its role in the firm adhesion of leukocytes during inflammation and infection ultimately facilitating leukocyte extravasation and tissue infiltration.
Associated diseases and disorders	CD11a is highly relevant to autoimmune diseases such as psoriasis and multiple sclerosis. For instance in psoriasis the overactive immune response involves overexpression of integrins including CD11a leading to inflammation. The protein Efalizumab a monoclonal antibody against CD11a has been used in the treatment of psoriasis to reduce leukocyte adhesion and activation. Such relationships highlight CD11a's critical role in both normal immune function and pathological conditions.

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

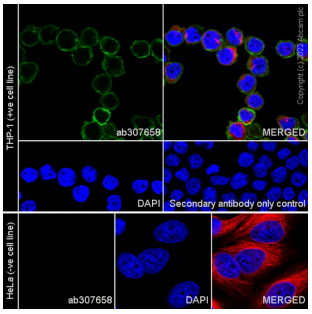
We do not recommend this combination. It is not covered by our product promise.

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.

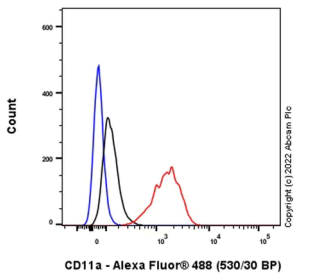
Full details and terms and conditions can be found here:
Terms & Conditions.

6 product images



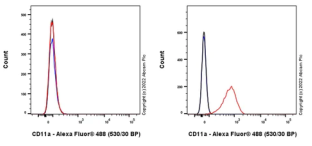
Immunocytochemistry/ Immunofluorescence - Anti-CD11a antibody [EPR26928-111A] - BSA and Azide free (ab307659)

This data was developed using ab307658, the same antibody clone in a different buffer formulation. Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized THP-1 (human monocytic leukemia monocyte) cells labelling CD11a with ab307658 at 1/50 (9.36 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing membranous staining in THP-1 cell line.Negative control: HeLa (PMID: 12036881).Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



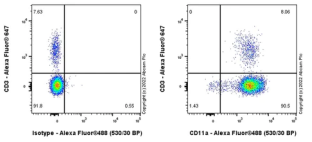
Flow Cytometry - Anti-CD11a antibody [EPR26928-111A] - BSA and Azide free (ab307659)

This data was developed using ab307658, the same antibody clone in a different buffer formulation. Flow cytometric analysis of THP-1 (human monocytic leukemia monocyte) cells labelling CD11a with ab307658 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody. Gated on viable cells.



Flow Cytometry - Anti-CD11a antibody [EPR26928-111A] - BSA and Azide free (ab307659)

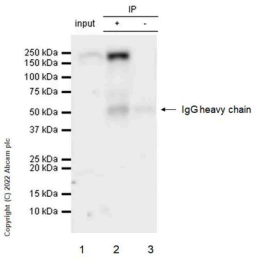
This data was developed using ab307658, the same antibody clone in a different buffer formulation. Flow cytometric analysis of HeLa (human cervix adenocarcinoma epithelial cell, Left) / Jurkat (human T cell leukemia T lymphocyte, Right) cells labelling CD11a with ab307658 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody. Gated on viable cells. Negative control: Hela (PMID:12036881).



Flow Cytometry - Anti-CD11a antibody [EPR26928-111A] - BSA and Azide free (ab307659)

This data was developed using ab307658, the same antibody clone in a different buffer formulation. Flow cytometric analysis of Human peripheral blood mononuclear cell (PBMC) cells labelling CD11a with ab307658 at 1/500 dilution (0.1ug)/ Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without

incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody. Cells were stained with rabbit IgG or ab307658. Then stained with anti-CD3 conjugated to Alexa Fluor® 647.



Immunoprecipitation - Anti-CD11a antibody [EPR26928-111A] - BSA and Azide free (ab307659)

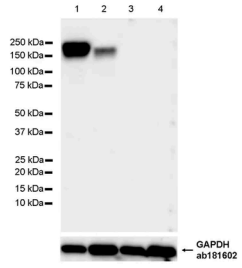
This data was developed using ab307658, the same antibody clone in a different buffer formulation. CD11a was immunoprecipitated from 0.35 mg THP-1 whole cell lysate with ab307658 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab307658 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution. Lane 1: THP-1 (human monocytic leukemia monocyte) whole cell lysate Lane 2: ab307658 IP in THP-1 whole cell lysate Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab307658 in THP-1 whole cell lysate Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 15 seconds
All lanes:
Immunoprecipitation - Anti-CD11a antibody [EPR26928-111A] (ab307658) at 1/30 dilution

All lanes:
THP-1 (human monocytic leukemia monocyte) whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 15s



Western blot - Anti-CD11a antibody [EPR26928-111A] - BSA and Azide free (ab307659)

This data was developed using ab307658, the same antibody clone in a different buffer formulation. Blocking and diluting buffer and concentration: 5% NFDM/TBST Negative control: K562 (PMID: 7497527), Hela (PMID: 12036881). The observed Mw of 180KDa is higher than the predicted Mw may due to glycosylation. Exposure time: 37 seconds
All lanes:
Western blot - Anti-CD11a antibody [EPR26928-111A] (ab307658) at 1/1000 dilution

Lane 1:
THP-1 (human monocytic leukemia monocyte) whole cell lysate at 20 µg

Lane 2:
Jurkat (human T cell leukemia T lymphocyte) whole cell lysate at 20 µg

Lane 3:
K562 (human chronic myelogenous leukemia lymphoblast) whole cell lysate at 20 µg

Lane 4:
HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Observed band size: 180 kDa

Exposure time: 37s

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