abcam

ab317290

Alexa Fluor® 647 Anti-CD11a antibody [EPR26928-111A]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR26928-111A
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/5000
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 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, Store in the dark

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.

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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

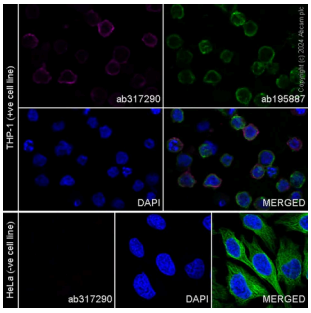
We do not recommend this combination. It is not covered by our product promise.

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.

3 product images

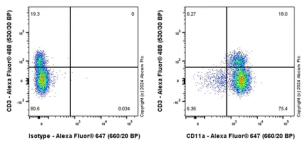


Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-CD11a antibody [EPR26928-111A] (ab317290)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized THP-1 (human monocytic leukemia monocyte) cells labelling CD11a with ab317290 at 1/50 (10.0 ug/ml) dilution (Green).

Confocal image showing membranous staining in THP-1 cell line (shown in magenta). The counterstain was observed in green. Nuclear DNA was labeled with DAPI (shown in blue). Negative control: HeLa (PMID: 12036881). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

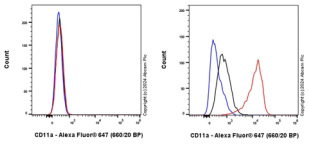
ab195887 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 488) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Green).



Flow Cytometry - Alexa Fluor® 647 Anti-CD11a antibody [EPR26928-111A] (ab317290)

Flow cytometric analysis of Human PBMC (human peripheral blood mononuclear cell) cells labelling CD11a with ab317290 at 1/5000 dilution (0.01ug)/ Right compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 647) (ab199093) / Left isotype control.

Gated on viable cells. Cells are co-stained with CD3 conjugated to Alexa Fluor® 488.



Flow Cytometry - Alexa Fluor® 647 Anti-CD11a antibody [EPR26928-111A] (ab317290)

Flow cytometric analysis of HeLa (human cervical adenocarcinoma epithelial cell, Left) / THP-1 (human monocytic leukemia monocyte, Right) cells labelling CD11a with ab317290 at 1/5000 dilution (0.01ug)/Red compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 647) (ab199093) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Negative control: HeLa (PMID:12036881). Gated on viable cells.

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