abcam

ab13219

Anti-CD11+CD18 antibody [24]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing ITGB2 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P05107
Clone number	24
Purification technique	Affinity purification Protein A/G
Specificity	This antibody specifically recognises the human CD11+CD18 activation epitope.
Epitope	Recognises an epitope which is expressed by beta 2 (CD18) integrins in high affinity conformation.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Expected

Species	Human, Dog, Mouse, Rat
Dilution info	Use at an assay dependent concentration.

Notes	-

IP

Expected

Species	Mouse, Rat, Human, Dog
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Expected

Species	Mouse
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Species	Rat
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Species	Human
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Species	Dog
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

WB

Expected

Species	Mouse, Rat, Human, Dog

Dilution info	Use at an assay dependent concentration.
Notes	-

RIA

Expected

Species	Mouse, Rat, Human, Dog
Dilution info	Use at an assay dependent concentration.
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

Supplementary info

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

Activity summary	CD11+CD18 also known as integrin αLβ2 or LFA-1 is a heterodimeric protein complex with a molecular weight of approximately 180 kDa. It consists of two subunits CD11a (αL) and CD18 (β2) which are expressed on the surface of leukocytes such as neutrophils monocytes and lymphocytes. This complex plays an important role in cell-cell adhesion and interactions with the extracellular matrix. CD11+CD18 is an essential mediator of leukocyte adhesion and is involved in the immune response.
Biological function summary	CD11a/CD18 enables leukocyte adhesion to endothelial cells and guides their migration towards sites of inflammation. It functions as part of a larger integrin family responsible for various cellular processes. The protein complex binds to its ligand ICAM-1 (Intercellular Adhesion Molecule 1) initiating a cascade of signaling events that facilitate immune surveillance and cell junction formation. This adhesion complex is integral to the regulation of immune system functions.
Pathways	CD11a and CD18 participate in the leukocyte extravasation pathway which is important for trafficking immune cells to areas of injury or infection. The protein complex also interacts within the T-cell receptor signaling pathway assisting in T-cell activation and proliferation. It works alongside proteins such as ICAM-1 to maintain cellular communication and adhesion allowing for a coordinated immune response. The involvement of CD11+CD18 in these pathways highlights its role in mediating inflammatory responses.
Associated diseases and disorders	CD11+CD18 is associated with inflammatory diseases like rheumatoid arthritis and leukocyte adhesion deficiency (LAD). In rheumatoid arthritis the overexpression and dysregulation of this integrin can contribute to the chronic inflammation characteristic of the disease. In LAD mutations affecting CD18 hinder normal leukocyte adhesion leading to recurrent infections. Aberrations in the expression or function of CD18 can affect other proteins in the immune system linking it to various immune-related disorders and immune system dysregulation.

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.

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