abcam

ab218639

APC Anti-CD11b antibody [ICRF44]

Anti-CD11b antibody [ICRF44] conjugated to APC - suitable for flow cytometry, and reacts with human samples. Clone [ICRF44] is a mouse monoclonal antibody and one of the most commonly used clones for flow cytometry.

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Lab Essentials

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	APC
Excitation/Emission	Ex: 650nm, Em: 660nm
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: 12% Sodium dihydrogen phosphate, 0.87% Sodium chloride, 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 P11215
Clone number	ICRF44
Purification technique	Affinity purification
Light chain type	kappa
Purification notes	Purified from tissue culture supernatant and conjugated under optimal conditions, with unreacted dye removed from the preparation.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	5 µL for 10^5-10^8 Cells
Notes	in a final volume of approximately 100 uL.

Predicted

Species	Pig, Chimpanzee, Baboon, Cynomolgus monkey, Rhesus monkey
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 (PubMed:20008295, PubMed:9558116). 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 (PubMed:28807980). In association with beta subunit ITGB2/CD18, required for CD177-PRTN3-mediated activation of TNF primed neutrophils (PubMed:21193407). Integrin ITGAM/ITGB2 is also a receptor for ICAM1 ligand ensuring adhesion between stimulated neutrophils and stimulated endothelial cells (PubMed:1980124). 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 (By similarity).

Storage

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

Storage information	Store in the dark

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

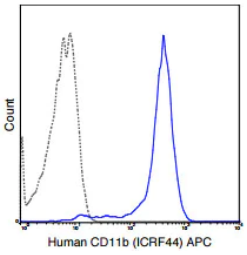
We do not recommend this combination. It is not covered by our product promise.

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.

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1 product image



Flow Cytometry - APC Anti-CD11b antibody [ICRF44] (ab218639)

CD11b Flow Cytometry staining using mouse Anti-CD11b antibody

Flow cytometric analysis of Human peripheral blood monoocytes labeling CD11b with ab218639 at 5 µL (1 µg) (solid line) or 1 µg Allophycocyanin Mouse IgG1 isotype control (dashed line).

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