Alexa Fluor® 488 anti-mouse/human CD11b Antibody

Catalog# / Size	101219 / 25 µg 101217 / 100 µg
Clone	M1/70
Regulatory Status	RUO
Other Names	αM integrin, Mac-1, Mo1, CR3, Ly-40, C3biR, ITGAM
Isotype	Rat IgG2b, κ
Description	CD11b is a 170 kD glycoprotein also known as αM integrin, Mac-1 α subunit, Mol, CR3, and Ly-40. CD11b is a member of the integrin family, primarily expressed on granulocytes, monocytes/macrophages, dendritic cells, NK cells, and subsets of T and B cells. CD11b non-covalently associates with CD18 (β2 integrin) to form Mac-1. Mac-1 plays an important role in cell-cell interaction by binding its ligands ICAM-1 (CD54), ICAM-2 (CD102), ICAM-4 (CD242), iC3b, and fibrinogen.

Product Details

Verified Reactivity	Mouse, Human, Cynomolgus, Rhesus
Reported Reactivity	Chimpanzee, Baboon, Rabbit
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	C57BL/10 splenocytes
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 488 under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. **Do not freeze.**
Application	FC - *Quality tested* IHC-F, 3D IHC - *Verified* SB - *Reported in the literature, not verified in house*
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤ 0.25 µg per 10^6 cells in 100 µl volume. For immunohistochemical staining on frozen tissue sections, the suggested use of this reagent is 2.5 - 10 µg per ml. For 3D immunohistochemistry on formalin-fixed tissues, a concentration of 5.0 µg/mL is suggested. It is recommended that the reagent be titrated for optimal performance for each application. * Alexa Fluor® 488 has a maximum emission of 519 nm when it is excited at 488 nm. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Excitation Laser	Blue Laser (488 nm)
Application Notes	Clone M1/70 has been verified for immunocytochemistry (ICC) and frozen immunohistochemistry (IHC-F). Additional reported applications (for relevant formats of this clone) include: immunoprecipitation[1,4], *in vitro* blocking[3,9,12], depletion[2,8], immunofluorescence microscopy[6,7,10], immunohistochemistry of acetone-fixed frozen sections[5,11-13], and spatial biology (IBEX)[35,36]. For *in vivo* studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-

Free, 0.2 µm filtered) (Cat. No. 101248).

Additional Product Notes

Iterative Bleaching Extended multi-pleXity (IBEX) is a fluorescent imaging technique capable of highly-multiplexed spatial analysis. The method relies on cyclical bleaching of panels of fluorescent antibodies in order to image and analyze many markers over multiple cycles of staining, imaging, and, bleaching. It is a community-developed open-access method developed by the Center for Advanced Tissue Imaging (CAT-I) in the National Institute of Allergy and Infectious Diseases (NIAID, NIH).

Application References

(PubMed link indicates BioLegend citation)

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RRID	AB_493545 (BioLegend Cat. No. 101219) AB_389305 (BioLegend Cat. No. 101217)

Antigen Details

Structure	Integrin family, associates with integrin β_2 (CD18), 170 kD
Distribution	Granulocytes, monocytes/macrophages, dendritic cells, NK cells, subsets of T and B cells
Function	Adhesion, chemotaxis
Ligand/Receptor	ICAM-1 (CD54), ICAM-2 (CD102), ICAM-4 (CD242), iC3b, fibrinogen
Cell Type	B cells, Dendritic cells, Granulocytes, Macrophages, Monocytes, Neutrophils, NK cells, T cells, Tregs
Biology Area	Cell Adhesion, Cell Biology, Costimulatory Molecules, Immunology, Innate Immunity, Neuroscience, Neuroscience Cell Markers
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	1. Barclay A, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press. 2. Springer TA. 1994. *Cell* 76:301. 3. Coxon A, *et al.* 1996. *Immunity* 5:653.
Gene ID	16409 3684

Related Protocols

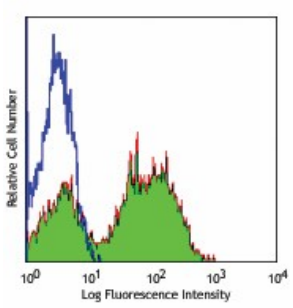
Cell Surface Flow Cytometry Staining Protocol

Ce3D™ Tissue Clearing Kit

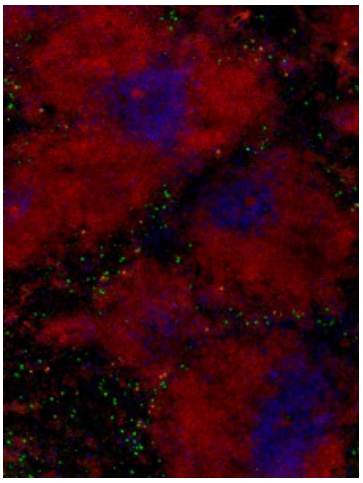
Other Formats

APC anti-mouse/human CD11b, Biotin anti-mouse/human CD11b, FITC anti-mouse/human CD11b, PE anti-mouse/human CD11b, PE/Cyanine5 anti-mouse/human CD11b, Purified anti-mouse/human CD11b, PE/Cyanine7 anti-mouse/human CD11b, Alexa Fluor® 488 anti-mouse/human CD11b, Alexa Fluor® 647 anti-mouse/human CD11b, Alexa Fluor® 700 anti-mouse/human CD11b, Pacific Blue™ anti-mouse/human CD11b, APC/Cyanine7 anti-mouse/human CD11b, PerCP/Cyanine5.5 anti-mouse/human CD11b, PerCP anti-mouse/human CD11b, Brilliant Violet 421™ anti-mouse/human CD11b, Brilliant Violet 570™ anti-mouse/human CD11b, Brilliant Violet 605™ anti-mouse/human CD11b, Brilliant Violet 650™ anti-mouse/human CD11b, Brilliant Violet 711™ anti-mouse/human CD11b, Brilliant Violet 785™ anti-mouse/human CD11b, Brilliant Violet 510™ anti-mouse/human CD11b, Ultra-LEAF™ Purified anti-mouse/human CD11b, Purified anti-mouse/human CD11b (Maxpar® Ready), Alexa Fluor® 594 anti-mouse/human CD11b, PE/Dazzle™ 594 anti-mouse/human CD11b, APC/Fire™ 750 anti-mouse/human CD11b, TotalSeq™-A0014 anti-mouse/human CD11b, Brilliant Violet 750™ anti-mouse/human CD11b, TotalSeq™-B0014 anti-mouse/human CD11b, TotalSeq™-C0014 anti-mouse/human CD11b, Spark NIR™ 685 anti-mouse/human CD11b, PE/Fire™ 640 anti-mouse/human CD11b, Spark YG™ 593 anti-mouse/human CD11b, Spark YG™ 570 anti-mouse/human CD11b, PE/Fire™ 810 anti-mouse/human CD11b, APC/Fire™ 810 anti-mouse/human CD11b Antibody, Spark Blue™ 550 anti-mouse/human CD11b, Spark UV™ 387 anti-mouse/human CD11b

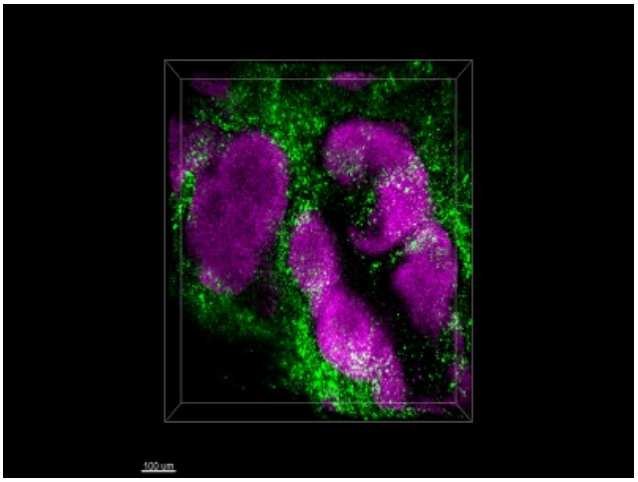
Product Data



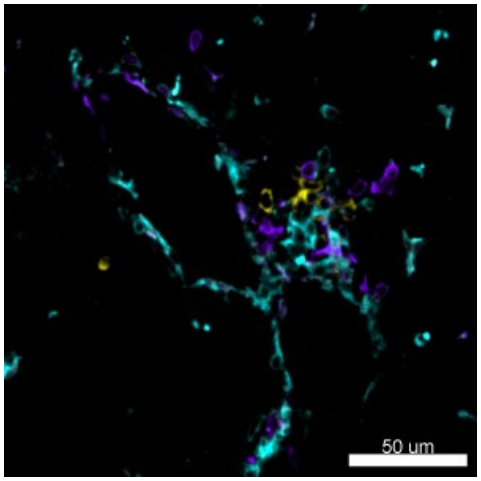
C57BL/6 mouse bone marrow cells were stained with CD11b (clone M1/70) Alexa Fluor® 488 (filled histogram) or rat IgG2b Alexa Fluor® 488 isotype control (open histogram) (gated on total cell population).



C57BL/6 mouse frozen spleen section was fixed with 4% paraformaldehyde (PFA) for ten minutes at room temperature and blocked with 5% FBS for 30 minutes at room temperature. Then the section was stained with 2.5 µg/ml of CD11b (clone M1/70) Alexa Fluor® 488 (green), and co-stained with 5 µg/ml of CD3 (clone 17A2) Alexa Fluor® 647 (cyan) and 5 µg/ml of CD45R/B220 (clone RA3-6B2) Alexa Fluor® 594 (red) overnight at 4°C. The image was captured with a 10X objective.



Paraformaldehyde-fixed (1%), 500 µm-thick mouse spleen section was processed according to the Ce3D™ Tissue Clearing Kit protocol (Cat. No. 427701). The section was costained with anti-mouse/human CD11b Antibody (clone M1/70) Alexa Fluor® 488 at 5 µg/mL (green), and anti-mouse IgD Antibody (clone 11-26c.2a) Alexa Fluor® 594 at 5 µg/mL (magenta). The section was then optically cleared and mounted in a sample chamber. The image was captured with a 10X objective using Zeiss 780 confocal microscope and processed by Imaris image analysis software.
Watch the video.



Confocal image of C57BL/6 mouse liver sample acquired using the IBEX method of highly multiplexed antibody-based imaging: CD4 (yellow) in Cycle 1, CD11c (cyan) in Cycle 4, and CD11b (purple) in Cycle 4. Tissues were prepared using ~1% (vol/vol) formaldehyde and a detergent. Following fixation, samples are immersed in 30% (wt/vol) sucrose for cryoprotection. Images are courtesy of Drs. Andrea J. Radtke and Ronald N. Germain of the Center for Advanced Tissue Imaging (CAT-I) in the National Institute of Allergy and Infectious Diseases (NIAID, NIH).

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587