Alexa Fluor® 647 anti-mouse CD11c Antibody

Catalog# / Size	117314 / 25 µg 117312 / 100 µg
Clone	N418
Regulatory Status	RUO
Other Names	αX integrin, integrin αX chain, CR4, p150, ITGAX
Isotype	Armenian Hamster IgG
Description	CD11c is a 150 kD glycoprotein also known as α_X integrin, CR4, and p150. CD11c forms a $\alpha_X\beta_2$ heterodimer with β_2 integrin (CD18). It is primarily expressed on dendritic cells, NK cells, a subset of intestinal intraepithelial lymphocytes (IEL), and some activated T cells. The $\alpha_X\beta_2$ integrin plays an important role in cell-cell contact by binding its ligands: iC3b, fibrinogen, and CD54.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Armenian Hamster
Immunogen	Mouse spleen dendritic cells
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® 647 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 3D IHC - Verified IHC - Reported but collaborator, not verified in house ICC, 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 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 other applications. * Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Excitation Laser	Red Laser (633 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunoprecipitation[3], immunohistochemical staining of acetone-fixed frozen sections[3], immunofluorescence microscopy[5, 9] (Alexa Fluor® 488 conjugated N418 was used for IHC in frozen sections[10]), and spatial biology (IBEX)[22,23].
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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Product Citations

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RRID

AB_492850 (BioLegend Cat. No. 117314)
AB_389328 (BioLegend Cat. No. 117312)

Antigen Details

Structure

Integrin α-chain, associates with integrin β_2 (CD18), 150 kD

Distribution	Dendritic cells, NK cells, intestinal intraepithelial lymphocytes (IEL), some activated T cells
Function	Cellular adhesion
Ligand/Receptor	iC3b, fibrinogen
Cell Type	Dendritic cells, Epithelial cells, 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 Facts Book Academic Press. 2. Springer TA. 1994. *Cell* 76:301. 3. Lopez-Rodriguez C, *et al.* 1996. *J. Immunol.* 156:3780.
Gene ID	16411

Related Protocols

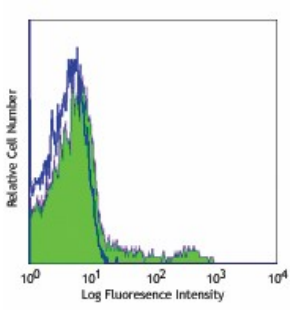
Cell Surface Flow Cytometry Staining Protocol

Ce3D™ Tissue Clearing Kit

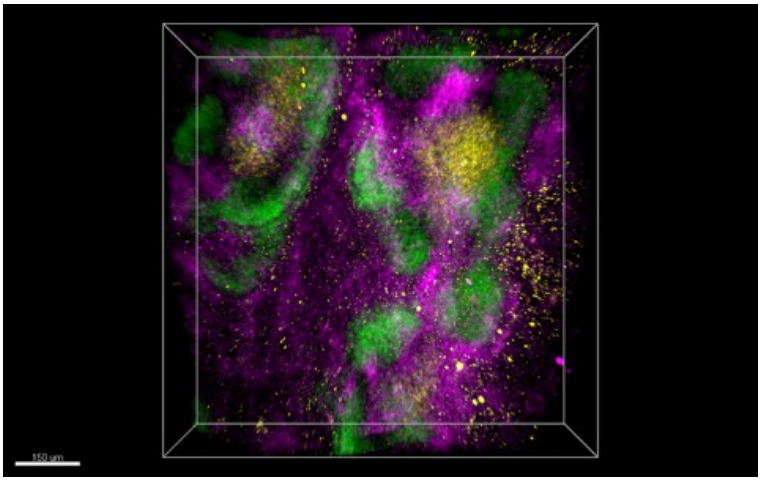
Other Formats

APC anti-mouse CD11c, Biotin anti-mouse CD11c, FITC anti-mouse CD11c, PE anti-mouse CD11c, Purified anti-mouse CD11c, Alexa Fluor® 488 anti-mouse CD11c, Alexa Fluor® 647 anti-mouse CD11c, PE/Cyanine5 anti-mouse CD11c, PE/Cyanine7 anti-mouse CD11c, Brilliant Violet 605™ anti-mouse CD11c, Alexa Fluor® 700 anti-mouse CD11c, Pacific Blue™ anti-mouse CD11c, APC/Cyanine7 anti-mouse CD11c, PerCP/Cyanine5.5 anti-mouse CD11c, PerCP anti-mouse CD11c, Brilliant Violet 421™ anti-mouse CD11c, Brilliant Violet 570™ anti-mouse CD11c, Brilliant Violet 785™ anti-mouse CD11c, Brilliant Violet 510™ anti-mouse CD11c, Brilliant Violet 650™ anti-mouse CD11c, Purified anti-mouse CD11c (Maxpar® Ready), Alexa Fluor® 594 anti-mouse CD11c, PE/Dazzle™ 594 anti-mouse CD11c, Brilliant Violet 711™ anti-mouse CD11c, APC/Fire™ 750 anti-mouse CD11c, TotalSeq™-A0106 anti-mouse CD11c, Brilliant Violet 750™ anti-mouse CD11c, TotalSeq™-B0106 anti-mouse CD11c, TotalSeq™-C0106 anti-mouse CD11c, KIRAVIA Blue 520™ anti-mouse CD11c, Spark Blue™ 550 anti-mouse CD11c, Spark NIR™ 685 anti-mouse CD11c, Spark UV™ 387 anti-mouse CD11c, Spark Red™ 718 anti-mouse CD11c

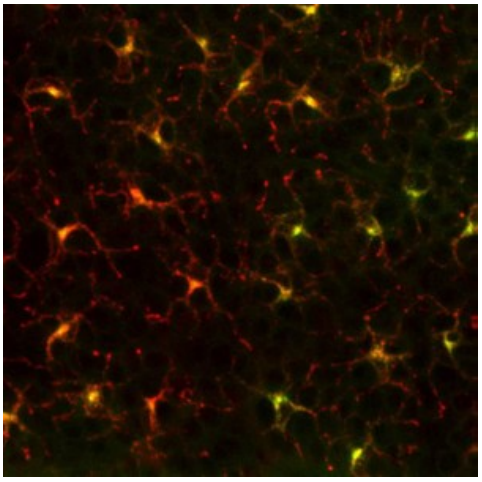
Product Data



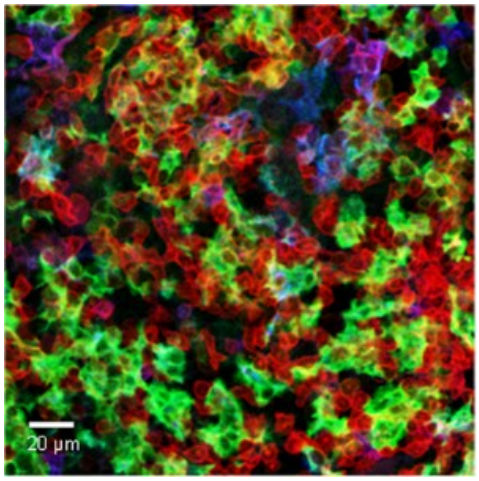
C57BL/6 mouse splenocytes stained with N418 Alexa Fluor® 647



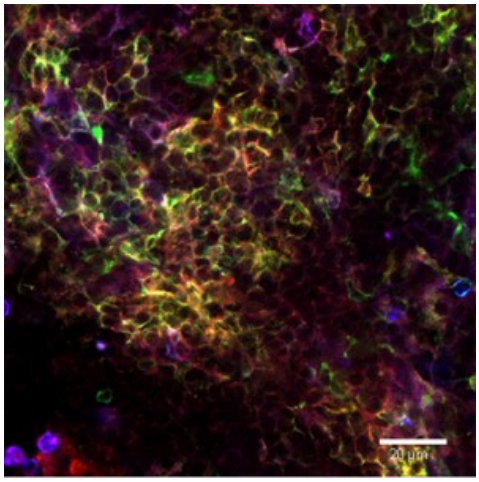
Paraformaldehyde-fixed (4%), 500 µm-thick mouse spleen section was processed according to the Ce3DTM Tissue Clearing Kit protocol (cat. no. 427701). The section was costained with anti-mouse/human CD45R/B220 Antibody (clone RA3-6B2) Alexa Fluor® 488 at 5 µg/mL (green), anti-mouse CD8a Antibody (clone 53-6.7) Alexa Fluor® 594 at 5 µg/mL (yellow), and anti-mouse CD11c Antibody (clone N418) Alexa Fluor® 647 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.



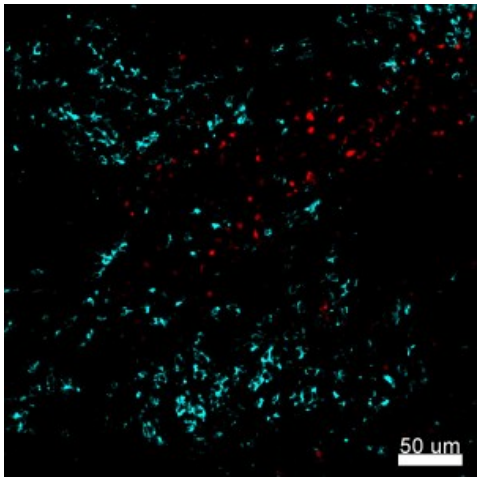
Fixed whole mount mouse epidermis Langerhans cells were stained with Alexa Fluor® 647 CD11c (red) (clone N418) and PE CD207 (yellow) (clone 4C7). Isotype controls at the same concentrations were used for the negative control. Cells were mounted in Prolong Gold and imaged with a Leica SP8 confocal. Image courtesy of Grzegorz Chodaczek and Zbigniew Mikulski at LIAI.



Live intravital mouse spleen imaging. PE CD11b (red) (clone M1/70), Alexa Fluor® 488 F4/80 (green) (clone BM8), and Alexa Fluor® 647 CD11c (blue) (clone N418) were imaged 30 minutes after iv injection of 10 µg per antibody. Isotype controls at the same concentrations, time post injection, and exposure conditions were used for the negative control. Cells were imaged with a Leica SP5 confocal on anesthetized mice. Image courtesy of Grzegorz Chodaczek and Zbigniew Mikulski at LIAI.



Fixed whole mount mouse spleen was stained with FITC CD172a (red) (clone P84), Alexa Fluor® CD11c (yellow) (clone N418), and PE CD11b (blue) (clone M1/70). Isotype controls at the same concentrations were used for the negative control. Cells were mounted in Prolong Gold and imaged with a Leica SP8 confocal. Image courtesy of Grzegorz Chodaczek and Zbigniew Mikulski at LIAI.



Confocal image of C57BL/6 mouse spleen sample acquired using the IBEX method of highly multiplexed antibody-based imaging: CD11c (cyan) in Cycle 2 and CD68 (red) in Cycle 3. 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).

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