Purified anti-mouse/rat CD29 Antibody

Catalog# / Size	102201 / 50 µg 102202 / 500 µg
Clone	HMβ1-1
Regulatory Status	RUO
Other Names	integrin β1, VLA-β chain, β1 integrin, GPIIa, ITGB1
Isotype	Armenian Hamster IgG
Description	CD29 is a 130 kD protein, also known as integrin β_1, VLA-β chain, or GPIIa. It is a member of the integrin family, expressed broadly on leukocytes, endothelial cells, smooth muscle, and epithelial cells. In association with CD49a-f, CD29 forms the VLA-1 through VLA-6 complexes, respectively. It plays an important role in cell-cell or cell-matrix interaction. The HMß1-1 antibody reacts with both mouse and rat CD29. It is able to block cell adhesion and inhibit T cell proliferation.

Product Details

Verified Reactivity	Mouse, Rat
Antibody Type	Monoclonal
Host Species	Armenian Hamster
Immunogen	Purified mouse VLA-4 ($\alpha_4\beta_1$, CD49d/CD29)
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - *Quality tested* IHC-F - *Verified* IP, Block - *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. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Additional reported applications (for the relevant formats) include: immunoprecipitation[1], immunohistochemistry[4] of acetone-fixed frozen sections, *in vitro* blocking of the adhesion of mouse tumor cell lines to extracellular matrix proteins and *in vitro* inhibition of T cell proliferative responses[1], and *in vivo* inhibition of neutrophil migration[2]. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 102235 and 102236).

Application References

(PubMed link indicates BioLegend citation)

1. Noto K, *et al.* 1995. *Int. Immunol.* 7:835.
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Product Citations

1. Jia W, *et al.* 2005. Blood. 106:3854. PubMed
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14. Carlson T, *et al.* 2008. Development. 135:2193. PubMed
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RRID

AB_312878 (BioLegend Cat. No. 102201)
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Antigen Details

Structure	Integrin family, 130 kD
Distribution	Leukocytes, endothelial cells, smooth muscle, epithelial cells
Function	Adhesion
Ligand/Receptor	Extracellular matrix
Cell Type	Embryonic Stem Cells, Endothelial cells, Epithelial cells, Leukocytes, Mesenchymal Stem Cells, Tregs
Biology Area	Cell Adhesion, Cell Biology, Immunology, Innate Immunity, Stem Cells
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	1. Noto K, *et al.* 1995. *Int. Immunol.* 7:835. 2. Springer TA. 1990. *Nature* 346:425.
Gene ID	16412 24511

Related Protocols

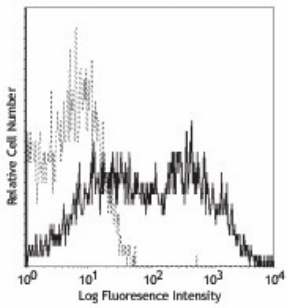
Immunohistochemistry Protocol for Frozen Sections

Cell Surface Flow Cytometry Staining Protocol

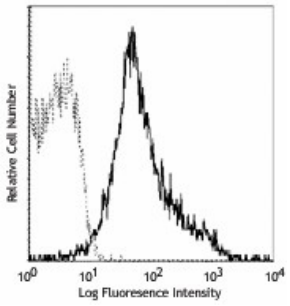
Other Formats

Biotin anti-mouse/rat CD29, Purified anti-mouse/rat CD29, FITC anti-mouse/rat CD29, PE anti-mouse/rat CD29, Alexa Fluor® 488 anti-mouse/rat CD29, Alexa Fluor® 647 anti-mouse/rat CD29, APC anti-mouse/rat CD29, Alexa Fluor® 700 anti-mouse/rat CD29, PE/Cyanine5 anti-mouse/rat CD29, PE/Cyanine7 anti-mouse/rat CD29, Pacific Blue™ anti-mouse/rat CD29, APC/Cyanine7 anti-mouse/rat CD29, PerCP/Cyanine5.5 anti-mouse/rat CD29, Alexa Fluor® 594 anti-mouse/rat CD29, PE/Dazzle™ 594 anti-mouse/rat CD29, TotalSeq™-A0570 anti-mouse/rat CD29, Ultra-LEAF™ Purified anti-mouse/rat CD29, TotalSeq™-C0570 anti-mouse/rat CD29 Antibody

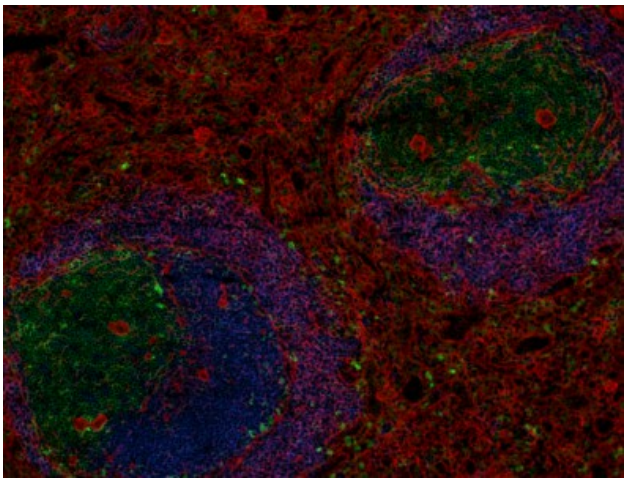
Product Data



Lou rat bone marrow cells stained with HMβ1-1 biotin, then detected with Sav-PE.



C57BL/6 mouse splenocytes stained with HMβ1-1 PE.



Rat 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 10 µg/mL of CD4 (clone W3/25) Alexa Fluor® 488 (green), 10 µg/mL of CD45RC (clone OX-22) Alexa Fluor® 647 (blue), and 10 µg/mL of purified CD29 (clone HMβ1-1) overnight at 4°C, followed by 5 µg/mL of anti-Armenian hamster IgG (clone Poly4055) Alexa Fluor® 594 (red) for two hours at room temperature. The image was captured by 10X objective.

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