

APC anti-human CD49d Antibody

Catalog# / Size	304307 / 25 tests 304308 / 100 tests
Clone	9F10
Regulatory Status	RUO
Workshop	V S215
Other Names	VLA-4 α chain, α 4 integrin, Integrin α 4 chain, ITGA4
Isotype	Mouse IgG1, κ
Description	CD49d is a 150 kD α integrin chain known as α 4 integrin or VLA-4 α chain. It forms a heterodimer with either integrin β 1 (α 4 β 1, VLA-4) or β 7 (α 4 β 7). CD49d is expressed broadly on T lymphocytes, B lymphocytes, monocytes, thymocytes, eosinophils, basophils, mast cells, NK cells, dendritic cells, and some non-hematopoietic cells, but not on normal red blood cells, platelets or neutrophils. VLA-4 binds to VCAM-1 (CD106) and fibronectin. α 4 β 7 is the receptor for VCAM-1 and MAdCAM-1. CD49d participates in mononuclear cell trafficking to endothelial sites of inflammation and has roles in cell-cell interactions and cell adhesion to extracellular matrices. CD49d is involved in lymphocyte migration, T cell activation, and hematopoietic stem cell differentiation. CD49d is a marker to isolate pure populations of Treg cells due to its absence on Foxp3 ⁺ cells.

Product Details

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	African Green, Baboon, Cat, Cow, Chimpanzee, Common Marmoset, Dog, Horse, Sheep, Squirrel Monkey
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography, and conjugated with APC under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
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
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 5 μ l per million cells in 100 μ l staining volume or 5 μ l per 100 μ l of whole blood.
Excitation Laser	Red Laser (633 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections, and <i>in vitro</i> T cell costimulation ^{2,3} . The Ultra-LEAF™ Purified antibody (Endotoxin < 0.01 EU/ μ g, Azide-Free, 0.2 μ m filtered) is recommended for functional assays (Cat. No. 304339 and 304340).
Application References	<ol style="list-style-type: none"> Schlossman S, <i>et al.</i> Eds. 1995. Leucocyte Typing V. Oxford University Press. New York. Jeong SH, <i>et al.</i> 2004. <i>J. Virol.</i> 78:6995. (Costim) Vogel TU, <i>et al.</i> 2002. <i>J. Immunol.</i> 169:4511. (Costim) Kleinewietfeld M, <i>et al.</i> 2009. <i>Blood</i> 113:827. (FC) PubMed Palacios F, <i>et al.</i> 2010. <i>Blood</i> 115:4488. PubMed Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC)
(PubMed link indicates BioLegend citation)	

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Product Citations

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RRID

AB_314433 (BioLegend Cat. No. 304307)
AB_2130041 (BioLegend Cat. No. 304308)

Antigen Details

Structure	Integrin, type I transmembrane glycoprotein, 150 kD.
Distribution	T cells, B cells, NK, dendritic cells, thymocytes, monocytes, eosinophils, mast cells.
Function	Lymphocyte migration, T cell activation, stem cell differentiation.
Ligand/Receptor	Fibronectin, VCAM-1, MAdCAM-1
Cell Type	B cells, Dendritic cells, Eosinophils, Mast cells, Monocytes, NK cells, T cells, Thymocytes, Tregs
Biology Area	Cell Adhesion, Cell Biology, Immunology, Innate Immunity
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	1. Elices M, Ed. 1995. <i>Springer Semin. Immunopathol.</i> 16(4). 2. Lobb RR and Helmer ME. <i>et al.</i> 1994. <i>J. Clin. Invest.</i> 94:1722.
Gene ID	3676

Related Protocols

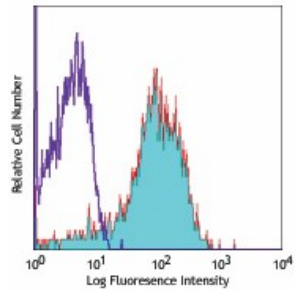
[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-human CD49d, PE anti-human CD49d, PE/Cyanine5 anti-human CD49d, Purified anti-human CD49d, Alexa Fluor® 594 anti-human CD49d, PerCP/Cyanine5.5 anti-human CD49d, PE/Cyanine7 anti-human CD49d, FITC anti-human CD49d, Brilliant Violet 510™ anti-human CD49d, Brilliant Violet 421™ anti-human CD49d, Purified anti-human CD49d (Maxpar® Ready), Brilliant Violet 605™ anti-human CD49d, PE/Dazzle™ 594 anti-human CD49d, APC/Cyanine7 anti-human CD49d, Brilliant Violet 711™ anti-human CD49d, Alexa Fluor® 647 anti-human CD49d, Biotin anti-human CD49d, TotalSeq™-A0576 anti-human CD49d, Brilliant Violet 785™ anti-human CD49d, APC/Fire™ 750 anti-human CD49d, Ultra-LEAF™ Purified anti-human CD49d, TotalSeq™-C0576 anti-human CD49d, TotalSeq™-B0576 anti-human CD49d Antibody, TotalSeq™-D0576 anti-human CD49d

Product Data

Human peripheral blood lymphocytes
stained with 9F10 APC



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