

Alexa Fluor® 647 anti-human CD49d

Catalog # / Size:	2121675 / 25 tests 2121680 / 100 tests
Clone:	9F10
Isotype:	Mouse IgG1, κ
Reactivity:	Human, Non-human primate
Preparation:	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 647 under optimal conditions. The solution is free of unconjugated Alexa Fluor® 647.
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).
Workshop Number:	V S215
Concentration:	Lot-specific

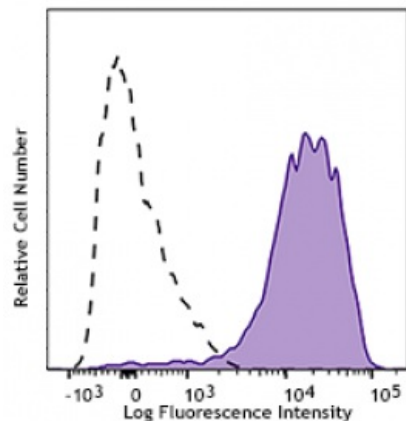
Applications:

Applications:	Flow Cytometry
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 or 5 μ l per 100 μ l of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633 nm / 635 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} .
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Application 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.
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Human peripheral blood lymphocytes were stained with CD49d (clone 9F10) Alexa Fluor® 647 (filled histogram) or mouse IgG1

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 ($\alpha_4\beta_1$, VLA-4) or β_7 ($\alpha_4\beta_7$). 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. $\alpha_4\beta_7$ is the receptor for VCAM-1 and MAdCAM-1. CD49d participates in mononuclear cell trafficking to endothelial
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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.

Antigen
References:

1. Elices M, Ed.1995. *Springer Semin. Immunopathol.* 16(4).
2. Lobb RR and Helmer ME. *et al.* 1994. *J. Clin. Invest.* 94:1722.