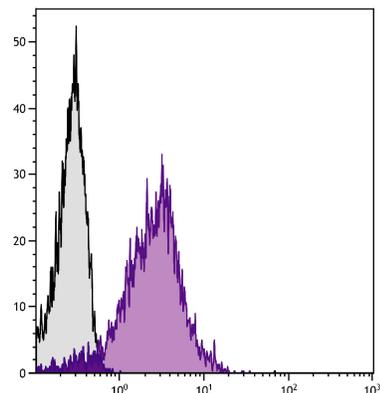




## Mouse Anti-Human CD49d

Cat. No.	Format	Size
9432-01	Purified (UNLB)	0.1 mg
9432-02	Fluorescein (FITC)	100 tests
9432-09	R-phycoerythrin (PE)	100 tests



Human peripheral blood lymphocytes were stained with Mouse Anti-Human CD49d-FITC (SB Cat. No. 9432-02).

### Overview

<b>Clone</b>	7.2
<b>Isotype</b>	Mouse IgG <sub>1</sub> κ
<b>Immunogen</b>	Unknown
<b>Specificity</b>	Human CD49d; Mr 150 kDa
<b>Alternate Name(s)</b>	VLA-4, Integrin α <sub>4</sub> , VLA-4α, ITGA4, IA4
<b>Workshop</b>	N/A

### Description

CD49d, a member of the integrin family of extracellular matrix and cell adhesion molecules, is the integrin α<sub>4</sub> chain. CD49d associates noncovalently with CD29, the integrin β<sub>1</sub> subunit, to form the α<sub>4</sub>β<sub>1</sub> very late antigen-4 (VLA-4) heterodimer. Integrin α<sub>4</sub> can also associate with integrin β<sub>7</sub> to form the α<sub>4</sub>β<sub>7</sub> heterodimer. It is expressed on most leukocytes with the possible exception of neutrophils. VLA-4 mediates leukocyte binding to CD106 (VCAM-1) and is involved in the migration of leukocytes from blood to tissue at sites of inflammation. VLA-4 can also provide a costimulatory signal to T cells for activation and proliferation. The α<sub>4</sub>β<sub>7</sub> integrin heterodimer is expressed on a small subpopulation of thymocytes, most lymph node T and B lymphocytes, NK cells, and eosinophils. Integrin α<sub>4</sub>β<sub>7</sub> also binds to fibronectin and VCAM-1.

### Applications

FC – Quality tested <sup>5,6</sup>  
 ICC – Reported in literature <sup>1-3</sup>  
 IP – Reported in literature <sup>7</sup>  
 WB – Reported in literature <sup>4</sup>

### Working Dilutions

<b>Flow Cytometry</b>	Purified (UNLB) antibody	≤ 1 μg/10 <sup>6</sup> cells
	FITC and PE conjugates	10 μL/10 <sup>6</sup> cells
For flow cytometry, the suggested use of these reagents is in a final volume of 100 μL		

**Other Applications** Since applications vary, you should determine the optimum working dilution for the product that is appropriate for your specific need.

**For Research Use Only. Not for Diagnostic or Therapeutic Use.**

## Handling and Storage

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- The purified (UNLB) antibody is supplied as 0.1 mg of purified immunoglobulin in 1.0 mL of borate buffered saline, pH 8.2. *No preservatives or amine-containing buffer salts added.* Store at 2-8°C.
- The fluorescein (FITC) conjugate is supplied as 100 tests in 1.0 mL of PBS/NaN<sub>3</sub>. Store at 2-8°C.
- The R-phycoerythrin (PE) conjugate is supplied as 100 tests in 1.0 mL of PBS/NaN<sub>3</sub> and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- Protect fluorochrome-conjugated forms from light. Reagents are stable for the period shown on the label if stored as directed.

## Warning

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Some reagents contain sodium azide. Please refer to product specific SDS.

## References

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1. Leitinger B, Hogg N. Effects of I domain deletion on the function of the  $\beta 2$  integrin lymphocyte function-associated antigen-1. *Mol Biol Cell.* 2000;11:677-90. (ICC)
2. Leitinger B, Hogg N. The involvement of lipid rafts in the regulation of integrin function. *J Cell Sci.* 2002;115:963-72. (ICC)
3. Arthos J, Cicala C, Martinelli E, Macleod K, van Ryk D, Wei D, et al. HIV-1 envelope protein binds to and signals through integrin  $\alpha_4\beta_7$ , the gut mucosal homing receptor for peripheral T cells. *Nat Immunol.* 2008;9:301-9. (ICC)
4. McDowall A, Inwald D, Leitinger B, Jones A, Liesner R, Klein N, et al. A novel form of integrin dysfunction involving  $\beta 1$ ,  $\beta 2$ , and  $\beta 3$  integrins. *J Clin Invest.* 2003;111:51-60. (WB)
5. Andersen CA, Handley M, Pollara G, Ridley AJ, Katz DR, Chain BM.  $\beta 1$ -Integrins determine the dendritic morphology which enhances DC-SIGN-mediated particle capture by dendritic cells. *Int Immunol.* 2006;18:1295-1303. (FC)
6. Gehwolf R, Band E, Trost A, Iglseider B, Trinkka E, Haschke-Becher E, et al. TaqMan<sup>R</sup> proximity ligation technology for the detection of heterodimeric adhesion receptors on lymphocytes. *J Immunol Methods.* 2014;404:81-6. (FC)
7. Personal Communication (IP)