

Anti-Human CD49d (ALC1/I)



FITC	49DF-100T	100 test
PE	49DPE-100T	100 test
PerCP	49DPP-100T	100 test
APC	49DA-100T	100 test

RUO

1. PRODUCT DESCRIPTION

- **Clone:** ALC1/I;
- **Isotype:** IgG1;
- **Tested application:** flow cytometry;
- **Immunogen:** The anti-CD49d monoclonal antibody derives from U-937 cell line;
- **Species reactivity:** Human;
- **Storage instruction:** store in the dark at 2-8 °C;
- **Storage buffer:** aqueous buffered solution containing protein stabilizer and 0.09% sodium azide (NaN₃);
- **Recommended usage:** Immunostep's CD49d, clone ALC1/I is a monoclonal antibody intended for the identification and enumeration of T and B lymphocytes and weakly on monocytes using flow cytometry. This reagent is effective for direct immunofluorescence staining of human tissue for flow cytometric analysis using 1 test for 10⁶ cells;
- **Presentation:** liquid;
- **Source:** Supernatant proceeding from an in vitro cell culture of a cell hybridoma;
- **Purification:** Affinity chromatography;
- **Other names:** Alpha-4 integrin chain; VLA-4 alpha chain, CD49 antigen-like family member D, Integrin alpha-IV, VLA-4 subunit alpha;
- **Gene ID:** 3676;
- **Molecular weight:** 150 kDa.

2. ANTIGEN DETAILS

Large description: Anti-CD49d (Anti-VLA- α -4) clone ALC1/I recognizes the α -chain of very-late antigen (VLA)-4, a member of the integrin family of cell adhesion molecules. VLA-4, like other integrins, is a noncovalently associated heterodimeric glycoprotein composed of α and β subunits and is involved in cell-cell and cell-extracellular matrix interactions. The β -chain of the VLA-4 complex is the CD29 antigen.

The CD49d antigen binds to CS-1, an alternatively spliced domain of fibronectin. When functioning as a cell receptor, the CD49d antigen binds to the vascular cell-adhesion molecule-1 (VCAM-1). The interaction between the CD49d antigen and VCAM-1 is known to play an important role in stabilizing the adhesion of lymphocytes to endothelial cells and in mediating B-lymphocyte precursor/bone marrow stromal cell adhesion. The CD49d antigen, when associated with the β integrin, forms a lymphocyte homing receptor for Peyer's patch, binding to the mucosal vascular addressin MAdCAM-1. The CD49d antigen is also involved in CD3-dependent CD4+ T-lymphocyte activation via its interaction with fibronectin.^[1-6]

3. WARRANTY

Warranted only to conform to the quantity and contents stated on the label or in the product labelling at the time of delivery to the customer. Immunostep disclaims hereby other warranties.

Immunostep's sole liability is limited to either the replacement of the products or refund of the purchase price.

4. ADDITIONAL INFORMATION

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Please, refer to www.immunostep.com technical support for more information.

5. REFERENCES

1. Holzmann B, McIntyre BW, Weissman IL. Identification of a murine Peyer's patch--specific lymphocyte homing receptor as an integrin molecule with an alpha chain homologous to human VLA-4 alpha. *Cell*1989 Jan 13;56(1):37-46.
2. Albelda SM, Buck CA. Integrins and other cell adhesion molecules. *FASEB J*1990 Aug;4(11):2868-80.
3. Elices MJ, Osborn L, Takada Y, Crouse C, Luhowskyj S, Hemler ME, et al. VCAM-1 on activated endothelium interacts with the leukocyte integrin VLA-4 at a site distinct from the VLA-4/fibronectin binding site. *Cell*1990 Feb 23;60(4):577-84.
4. Nojima Y, Humphries MJ, Mould AP, Komoriya A, Yamada KM, Schlossman SF, et al. VLA-4 mediates CD3-dependent CD4+ T cell activation via the CS1 alternatively spliced domain of fibronectin. *J Exp Med*1990 Oct 01;172(4):1185-92.
5. Springer TA. Adhesion receptors of the immune system. *Nature*1990 Aug 02;346(6283):425-34.
6. Dittel BN, McCarthy JB, Wayner EA, LeBien TW. Regulation of human B-cell precursor adhesion to bone marrow stromal cells by cytokines that exert opposing effects on the expression of vascular cell adhesion molecule-1 (VCAM-1). *Blood*1993 May 01;81(9):2272-82.
7. Modderman PW. New clusters: CD29/CDw49, CD47 CD51, CD55, and CD61. In: Knapp W, Dörken B, Gilks WR, et al, eds. *Leucocyte Typing IV: White Cell Differentiation Antigens*. New York, NY: Oxford University Press; 1989:1017-1019.

6. EXPLANATION OF SYMBOLS

	Fluorochrome
	Product reference
	Content for <n> analysis
	Regulatory Status
	Research Use Only
	Manufacturer

7. MANUFACTURED BY: IMMUNOSTEP S.L.



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