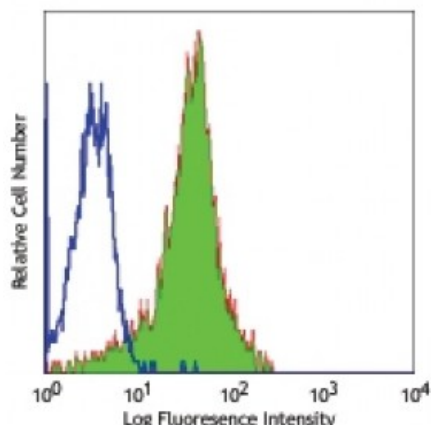


Purified anti-human CD49d

| | |
|--------------------------|---|
| Catalog # / Size: | 2121510 / 100 µg 2121505 / 25 µg |
| Clone: | 9F10 |
| Isotype: | Mouse IgG1, κ |
| Reactivity: | Human |
| Preparation: | The antibody was purified by affinity chromatography. |
| Formulation: | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide. |
| Workshop Number: | V S215 |
| Concentration: | 0.5 |



Human peripheral blood lymphocytes stained with purified 9F10, followed by anti-mouse IgGs FITC

Applications:

Applications: Flow Cytometry, Immunohistochemistry

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 ≤0.5 microg per million cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections, and *in vitro* T cell costimulation^{2,3}. The LEAF™ Purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 304310).

Application References:

- Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
- Jeong SH, *et al.* 2004. *J. Virol.* 78:6995. (Costim)
- Vogel TU, *et al.* 2002. *J. Immunol.* 169:4511. (Costim)
- Kleinewietfeld M, *et al.* 2009. *Blood* 113:827. (FC) [PubMed](#)
- Palacios F, *et al.* 2010. *Blood* 115:4488. [PubMed](#)
- Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
- Sestak K, *et al.* 2007. *Vet. Immunol. Immunopathol.* 119:21.
- Mattapallil MJ, *et al.* 2011. *J. Immunol.* 187:1977. [PubMed](#)

Description: CD49d is a 150 kD α integrin chain known as α₄ integrin or VLA-4 α chain. It forms a heterodimer with either integrin β1 (α₄β₁, VLA-4) or β7 (α₄β₇). 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. α₄β₇ 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.

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.