

PE anti-human CD49d

Catalog # / Size: 2121515 / 25 tests
2121520 / 100 tests

Clone: 9F10

Isotype: Mouse IgG1, κ

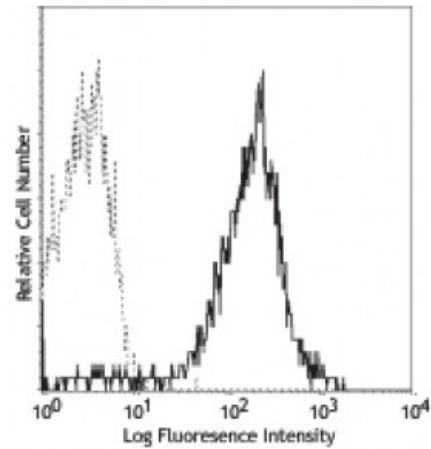
Reactivity: Human

Preparation: The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions. The solution is free of unconjugated PE and unconjugated antibody.

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



Human peripheral blood lymphocytes stained with 9F10 PE

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. **Test size products are transitioning from 20 microL to 5 microL per test.** Please check your vial or your CoA to find the suggested use of this reagent per million cells in 100 microL staining volume or per 100 microL of whole blood. 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/ μ g, Azide-Free, 0.2 μ m 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 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

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.