

Biotin anti-human CD49d

Catalog # / Size: 2121670 / 100 µg

Clone: 9F10

Isotype: Mouse IgG1, κ

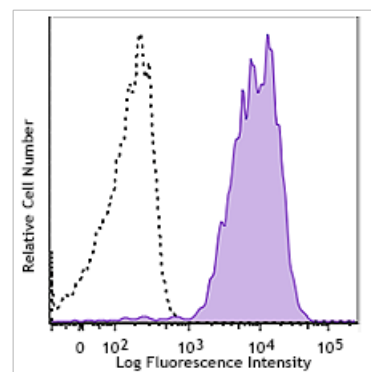
Reactivity: Human, Non-human primate, Other

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

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Workshop Number: V S215

Concentration: 0.5 mg/ml



Human peripheral blood lymphocytes were stained with biotinylated CD49d (clone 9F10) (filled histogram) or biotinylated Mouse IgG1, κ isotype control (open histogram), followed by SAV-PE.

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 ≤0.5 µg per million cells in 100 µl 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}.

Application 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.

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.