

Technical Data Sheet

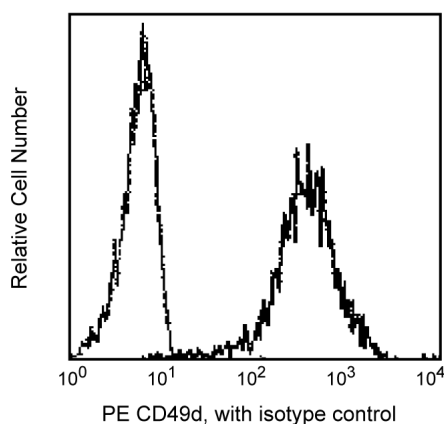
PE Mouse Anti-Human CD49d

Product Information

Material Number:	560972
Alternate Name:	Integrin $\alpha 4$ chain; Integrin alpha 4; ITGA4; IA4; alpha 4 subunit of VLA-4
Size:	25 tests
Vol. per Test:	20 μ l
Clone:	9F10
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human Tested in Development: Baboon, Rhesus, Cynomolgus, Sheep, Horse, Bovine, Dog, Cat.
Workshop:	V S215
Storage Buffer:	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.

Description

The 9F10 monoclonal antibody specifically reacts with the integrin $\alpha 4$ chain, that is expressed as a heterodimer with either of two β integrin subunits, $\beta 1$ (CD29) or $\beta 7$. The $\alpha 4\beta 1$ integrin (VLA-4) is expressed on lymphocytes, monocytes, thymocytes, NK cells, and several B- and T-cell lines, and mediates binding to VCAM-1 (CD106) and the CS-1 region of fibronectin. The $\alpha 4\beta 7$ integrin has a similar tissue distribution, except it is found on only a small subpopulation of thymocytes. Integrin $\alpha 4\beta 7$ also binds fibronectin and VCAM-1, and has been shown in the mouse to preferentially bind the mucosal vascular addressin molecule, MAdCAM-1. This antibody is useful for studies of the expression by and function of cells that express $\alpha 4$ chain-containing integrins.



Profile of peripheral blood lymphocytes analyzed on a FACScan (BDIS, San Jose, CA)

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed. Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
555749	PE Mouse IgG1, κ Isotype Control	100 tests	MOPC-21

Product Notices

- This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100- μ l experimental sample (a test).
- Since applications vary, each investigator should titrate the reagent to obtain optimal results.

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3. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
6. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

- Berlin C, Berg EL, Briskin MJ, et al. Alpha 4 beta 7 integrin mediates lymphocyte binding to the mucosal vascular addressin MAdCAM-1. *Cell*. 1993; 74(1):185-195. (Biology)
- Hemler ME. VLA proteins in the integrin family: structures, functions, and their role on leukocytes. *Annu Rev Immunol*. 1990; 8:365-400. (Biology)
- Hemler ME, Huang C, Takada Y, Schwarz L, Strominger JL, Clabby ML. Characterization of the cell surface heterodimer VLA-4 and related peptides. *J Biol Chem*. 1987; 262(24):11478-11485. (Biology)
- Parker CM, Cepek KL, Russell GJ, et al. A family of beta 7 integrins on human mucosal lymphocytes. *Proc Natl Acad Sci U S A*. 1992; 89(5):1924-1928. (Biology)
- Schlossman SF, Boumsell L, Gilks W, et al, ed. *Leukocyte Typing V: White Cell Differentiation Antigens*. New York: Oxford University Press; 1995. (Clone-specific)

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