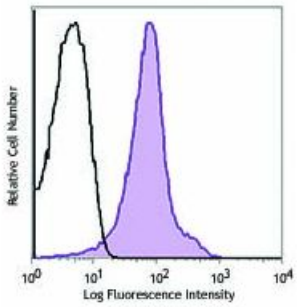
SONY

Product Data Sheet

APC anti-mouse CD49d

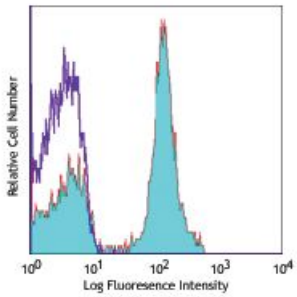
Catalog # / Size:	1118110 / 100 µg 1118105 / 25 µg
Clone:	R1-2
Isotype:	Rat IgG2b, κ
Immunogen:	AKR/Cum mouse spontaneous T lymphoma line TK1
Reactivity:	Mouse
Preparation:	The antibody was purified by affinity chromatography and conjugated with APC under optimal conditions.
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Workshop Number:	750 under optimal conditions.
Concentration:	0.2



C57BL/6 mouse splenocytes were stained with CD49d (clone R1-2) APC (filled histogram) or rat IgG2b, κAPC isotype control (open histogram).

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 ≤0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes:	The R1-2 antibody has been shown to partially block CD49d mediated interactions and, in combination with the 9C10 (MFR4.B) antibody, completely blocks VCAM-1 binding to VLA-4. Additional reported applications (for the relevant formats) include: *in vitro* and *in vivo* blocking of cell-cell adhesion and T cell costimulation[1-4], immunoprecipitation1, and immunohistochemistry of frozen sections5. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 103610).



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Application References:

1. Holzmann B, *et al.* 1989. *Cell* 56:37. (IP, Block)
2. Ferguson TA, *et al.* 1993. *J. Immunol.* 150:1172. (Block)
3. Andrew DP, *et al.* 1994. *J. Immunol.* 153:3847. (Block)
4. Kilshaw PJ, *et al.* 1991. *Eur. J. Immunol.* 21:2591. (Block)
5. Jaspers M, *et al.* 1995. *Differentiation* 59:79. (IHC)
6. Lawson BR, *et al.* 2007. *J. Immunol.* 178:5366. (FC)

Description: CD49d is a 150 kD glycoprotein, also known as α_4 integrin or VLA-4 α chain. It is a member of the integrin family, expressed on T and B cells, monocytes, eosinophils, basophils, mast cells, thymocytes, NK cells, and dendritic cells. CD49d is a heterodimer expressed with either of two β chains, β1 (CD29) or β7, to form the VLA-4 (integrin $\alpha_4\beta_1$) or LPAM-1 (integrin $\alpha_4\beta_7$) complexes. CD49d plays a critical role in adhesion and T cell costimulation. The primary ligands for CD49d are VCAM-1, MAdCAM-1, and fibronectin.

Antigen References:

1. Barclay AN, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press.
2. Lobb RR, *et al.* 1994 *J. Clin. Invest.* 94:1722.
3. Berlin C, *et al.* 1993. *Cell* 74:185.
4. Maguire JE, *et al.* 1995. *J. Exp. Med.* 182:2079.

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