

Alexa Fluor® 647 anti-mouse CD49d

Catalog # / Size: 1118065 / 25 µg
1118070 / 100 µg

Clone: R1-2

Isotype: Rat IgG2b, κ

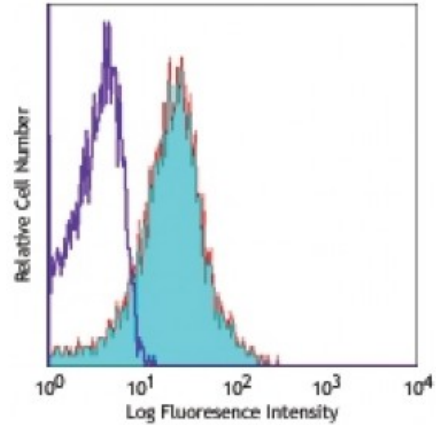
Immunogen: AKR/Cum mouse spontaneous T lymphoma line TK1

Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 647 under optimal conditions.

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

Concentration: 0.5



C57BL/6 mouse splenocytes stained with R1-2 Alexa Fluor® 647

Applications:

Applications: Immunofluorescence

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 microg per 10⁶ cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.

* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm.

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 costimulation¹⁻⁴, 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).

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

Description: CD49d is a 150 kD glycoprotein, also known as α₄ 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 α₄β₁) or LPAM-1 (integrin α₄β₇) 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 1. Barclay AN, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press.

- References:**
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*