

Datasheet: MCA923F

Description:	MOUSE ANTI HUMAN CD49d:FITC
Specificity:	CD49d
Other names:	INTEGRIN ALPHA 4 CHAIN, VLA-4
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	44H6
Isotype:	IgG1
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	■			Neat

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species	Human		
Product Form	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	FITC	490	525
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide		
Stabilisers	1% Bovine Serum Albumin		
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml		
Immunogen	HOON pre-B leukaemia cell line.		
External Database Links	UniProt: P13612 Related reagents		

Entrez Gene:[3676](#) ITGA4 [Related reagents](#)

Synonyms	CD49D
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the SP2.0-Ag14 mouse myeloma cell line.
Specificity	Mouse anti Human CD49d monoclonal antibody, clone 44H6 recognizes human CD49d also known as integrin alpha-4 or VLA-4 subunit alpha. CD49d is a ~150kDa single pass type 1 transmembrane glycoprotein with seven FG-GAP repeats, characteristic of alpha integrins, in its extracellular domain. CD49d can be proteolytically cleaved to yield fragments of 80 and 70kDa (Hemler et al. 1987). CD49d associates with either CD29 to form VLA-4 or with Integrin beta-7 to form The Peyer patches-specific homing receptor LPAM-1, involved in the lymphocyte migration and homing to gut-associated lymphoid tissue (Sackstein 2006) through its interaction with MadCam-1, preferentially expressed on Peyer's patch high endothelial venules and postcapillary venules in lamina propria (Briskin et al. 1997) Mouse anti human CD49d, clone 44H6 is reported to induce homotypic aggregation of pre-B cell lines including HOON and NALM-6 (Letarte et al. 1993).
Flow Cytometry	Use 10ul of the antibody to label 100ul whole blood or 10 ⁶ cells in 100ul.
References	1. Quackenbush, E.J. & Letarte, M. (1985) Identification of several cell surface proteins of non-T, non-B acute lymphoblastic leukemia by using monoclonal antibodies. J Immunol. 134 (2): 1276-85. 2. Letarte, M. et al. (1993) Homotypic aggregation of pre-B leukemic cell lines by antibodies to VLA integrins correlates with their expression of CD9. Leukemia 7(1): 93-103. 3. Hartz B et al. (2011) α 4 integrin levels on mobilized peripheral blood stem cells predict rapidity of engraftment in patients receiving autologous stem cell transplantation. Blood. 118 (8): 2362-5. 4. Ling, K.L. et al. (2007) Modulation of CD103 expression on human colon carcinoma-specific CTL. J Immunol. 178: 2908-15. 5. Eigenmann, P.A. et al. (1999) The mucosal adhesion receptor alpha4beta7 integrin is selectively increased in lymphocytes stimulated with beta-lactoglobulin in children allergic to cow's milk. J Allergy Clin Immunol. 103: 931-6. 6. Rabe, H. et al. (2011) Higher proportions of circulating FOXP3+ and CTLA-4+ regulatory T cells are associated with lower fractions of memory CD4+ T cells in infants. J Leukoc Biol. 90: 1133-40. 7. Seoh, J.Y. et al. (2001) Cell cycling status of human cord blood CD34+ cells during ex vivo expansion is related to the level of very late antigen expression. J Korean Med Sci. 16: 20-4. 8. Seoh, J.Y. (2001) VLA-4 expression and cell cycling status during ex vivo expansion of human cord blood CD34+ cells. Acta Haematol. 105: 111-5. 9. Dogan, A. et al. (1997) Expression of lymphocyte homing receptors and vascular addressins in low-grade gastric B-cell lymphomas of mucosa-associated lymphoid tissue. Am J Pathol. 151: 1361-9. 10. La Heij, E. et al. (1998) Adhesion molecules in iris biopsy specimens from patients with uveitis. Br J Ophthalmol. 82: 432-7. 11. Humphries, J.D. and Humphries, M.J. (2007) CD14 is a ligand for the integrin alpha4beta1. FEBS Lett. 581: 757-63. 12. Grindebacke, H. et al. (2009) Dynamic development of homing receptor expression and memory cell differentiation of infant CD4+CD25high regulatory T cells. J Immunol. 183: 4360-70. 13. Kim, T.J. et al. (2010) Suppression of human anti-porcine natural killer cell xenogeneic responses by combinations of monoclonal antibodies specific to CD2 and NKG2D and extracellular signal-regulated kinase inhibitor. Immunology. 130: 545-55.

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Storage

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

18 months from date of despatch.

Health And Safety Information

Material Safety Datasheet documentation #10041 available at: 10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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