

# Datasheet: MCA923FT

Description:	MOUSE ANTI HUMAN CD49d:FITC
Specificity:	CD49d
Other names:	INTEGRIN ALPHA 4 CHAIN, VLA-4
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	44H6
lsotype:	lgG1
Quantity:	25 μg

## **Product Details**

RRID	AB_2130044				
Applications	from testing within our	laboratories, pee refer to reference ase visit <u>www.bio</u>	r-reviewe es indica -rad-antik		al communications from n. For general protocol
		Yes	No	Not Determined	Suggested Dilution
	Flow Cytometry				Neat
	exclude its use in such	procedures. Sug user titrates the	ggested v	In a particular technique vorking dilutions are give for use in their own syste	
Target Species	Human				
Product Form	Purified IgG conjugate	d to Fluorescein	lsothiocy	anate Isomer 1 (FITC) - I	iquid
Max Ex/Em	Fluorophore FITC	Excitation Max (n 490	m) Emi	ssion Max (nm) 525	
Preparation	Purified IgG prepared I	by affinity chroma	atography	on Protein G from tissue	e culture supernatant
Buffer Solution	Phosphate buffered sa	line			
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum A	Albumin			
Approx. Protein Concentrations	IgG concentration 0.1	mg/ml			
Immunogen	HOON pre-B leukaemi	a cell line.			
External Database Links	UniProt:				

### P13612 Related reagents

	Entrez Gene: <u>3676</u> ITGA4 <u>Related reagents</u>
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	<b>Mouse anti Human CD49d monoclonal antibody, clone 44H6</b> 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 70 kDa (Hemler <i>et al.</i> 1987). CD49d associates with either CD29 to form VLA-4 or with Integrin beta-7 to form The Peyer's 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 <i>et al.</i> 1997)
	Mouse anti human CD49d, clone 44H6 is reported to induce homotypic aggregation of pre-B cell lines including <u>HOON</u> and <u>NALM-6</u> ( <u>Letarte <i>et al.</i> 1993</u> ).
Flow Cytometry	Use 10ul of the antibody to label 100ul whole blood or 10 <sup>6</sup> cells in 100ul.
References	<ol> <li>Quackenbush, E.J. &amp; 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.</li> <li>Letarte, M. <i>et al.</i> (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.</li> <li>Hartz B <i>et al.</i> (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.</li> <li>Ling, K.L. <i>et al.</i> (2007) Modulation of CD103 expression on human colon carcinoma-specific CTL. JImmunol. 178: 2908-15.</li> <li>Eigenmann, PA. <i>et al.</i> (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.</li> <li>Rabe, H. <i>et al.</i> (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.</li> <li>Seoh, J.Y. <i>et al.</i> (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.</li> <li>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.</li> <li>Dogan, A. <i>et al.</i> (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.</li> <li>Dogan, A. <i>et al.</i> (1998) Adhesion molecules in iris biopsy specimens from patients with uveitis. Br J Ophthalmol. 82: 432-7.</li> <li>Humphries, J.D. and Humphries, M.J. (2007) CD14 is a ligand for the integrin alpha4beta1. FEBS Lett. 581: 757-63.</li> <li>Grindeb</li></ol>

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	family integrins through novel integrin-binding mechanisms. <u>Blood. 98: 458-66.</u>
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	induces tissue factor expression by a mechanism involving mitogen-activated protein kinase. J Biol
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	<u>Biochem. pii: S0009-9120(13)00442-6.</u>
	20. Zucchetto, A. et al. (2012) The CD49d/CD29 complex is physically and functionally associated
	with CD38 in B-cell chronic lymphocytic leukemia cells. Leukemia. 26 (6): 1301-12.
Storage	Store at +4°C or at -20°C if preferred.
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Guarantee Health And Safety	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. 18 months from date of despatch. Material Safety Datasheet documentation #10041 available at:
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### **Related Products**

### **Recommended Negative Controls**

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA928F)

#### **Recommended Useful Reagents**

HUMAN SEROBLOCK (BUF070A) HUMAN SEROBLOCK (BUF070B)

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