

Datasheet: MCA2503F

Description:	MOUSE ANTI HUMAN CD49d:FITC
Specificity:	CD49d
Other names:	INTEGRIN ALPHA 4 CHAIN, VLA-4
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	Bu49
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 - 1/10

Where this product 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 product for use in their own system using appropriate negative/positive controls.

Target Species	Human		
Species Cross Reactivity	Reacts with: Dog N.B. Antibody reactivity and working conditions may vary between species.		
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 G		
Buffer Solution	Phosphate buffered saline		
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)		
	1% Bovine Serum Albumin		
Approx. Protein Concentrations	IgG concentration 0.1mg/ml		
Immunogen	Hyatt myeloma cell line		

**External Database
Links**

UniProt:

[P13612](#) [Related reagents](#)

Entrez Gene:

[3676](#) ITGA4 [Related reagents](#)

Synonyms

CD49D

Fusion Partners

Cells from immunised mice were fused with cells of the NS0 myeloma cell line

Specificity

Mouse anti Human CD49d monoclonal antibody, clone Bu49 recognizes human CD49d, also known as integrin alpha 4 or VLA-4 alpha subunit. CD49d is a ~150 kDa single pass type I transmembrane glycoprotein. CD49d can be proteolytically cleaved to yield fragments of ~80 and ~70 kDa ([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](#)).

CD49d is expressed on a broad range of cells including lymphocytes, monocytes, eosinophils and thymocytes. CD49d expression may serve as a prognostic marker of survival and disease progression in patients with chronic lymphocytic leukemia and may have therapeutic potential ([Bulian *et al.* 2008](#))

Mouse anti human CD49, clone Bu49 cross-reacts with the canine B-cell leukemia cell line GL-1 and induces homotypic cell aggregation ([Ikewaki *et al.* 2010](#)).

Flow Cytometry

Use 10ul of the suggested working dilution to label 1×10^6 cells in 100ul.

References

1. Oxford University Press. (1995) Leucocyte Typing V. White cell differentiation antigens. Volume Two. p 1617-8.
2. Ikewaki, N. *et al.* (2010) Anti-human very late antigen-alpha4 (CD49d) monoclonal antibody (BU49) cross-reacts with the canine B-cell leukemia cell line GL-1, resulting in the induction of homotypic cell aggregation. [Cell Immunol. 263: 55-64.](#)
3. Hamilton, E. *et al.* (2012) Mimicking the tumour microenvironment: three different co-culture systems induce a similar phenotype but distinct proliferative signals in primary chronic lymphocytic leukaemia cells. [Br J Haematol. 158: 589-99.](#)

Storage

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

Storage in frost-free freezers is not recommended.

This product should be stored undiluted. 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 \(BUF070B\)](#)

**North & South
America**

Tel: +1 800 265 7376

Fax: +1 919 878 3751

Email: antibody_sales_us@bio-rad.com

Worldwide

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

Email: antibody_sales_uk@bio-rad.com

Europe

Tel: +49 (0) 89 8090 95 21

Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_de@bio-rad.com

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