

## Datasheet: MCA2503

<b>Description:</b>	MOUSE ANTI HUMAN CD49d
<b>Specificity:</b>	CD49d
<b>Other names:</b>	INTEGRIN ALPHA 4 CHAIN, VLA-4
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	Bu49
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.2 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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/50 - 1/200
Immunohistology - Frozen (1)	▪			
Immunohistology - Paraffin		▪		
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	

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.

**(1)The epitope recognised by this antibody is reported to be sensitive to formaldehyde fixation and tissue processing. Bio-Rad recommends the use of acetone fixation for frozen sections.**

### Target Species

Human

### Species Cross Reactivity

Reacts with: Dog

**N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0mg/ml
<b>Immunogen</b>	Hyatt myeloma cell line.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P13612</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">3676</a> ITGA4    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	CD49D
<b>RRID</b>	AB_844508
<b>Fusion Partners</b>	Cells from immunized mice were fused with cells of the NS0 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human CD49d monoclonal antibody, clone Bu49</b> 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 (<a href="#">Hemler et al. 1987</a>). CD49d associates with either <a href="#">CD29</a> 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 (<a href="#">Sackstein 2006</a>) through its interaction with MadCam-1, preferentially expressed on Peyer's patch high endothelial venules and postcapillary venules in lamina propria (<a href="#">Briskin et al. 1997</a>).</p> <p>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 (<a href="#">Bulian et al. 2008</a>).</p> <p>Mouse anti human CD49, clone Bu49 cross-reacts with the canine B-cell leukemia cell line GL-1 and induces homotypic cell aggregation (<a href="#">Ikewaki et al. 2010</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 1x10 <sup>6</sup> cells in 100ul.

<b>Histology Positive Control Tissue</b>	Human tonsil.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Oxford University Press. (1995) Leucocyte Typing V. White cell differentiation antigens. Volume Two. p 1617-8.</li> <li>2. Skibinski, G. <i>et al.</i> (1998) Tonsil stromal-cell lines expressing FDC-like properties: isolation, characterization, and interaction with B lymphocytes. <a href="#">Dev Immunol. 6 (3-4): 273-84.</a></li> <li>3. Ikewaki, N. <i>et al.</i> (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. <a href="#">Cell Immunol. 263: 55-64.</a></li> <li>4. Hamilton, E. <i>et al.</i> (2012) Mimicking the tumour microenvironment: three different co-culture systems induce a similar phenotype but distinct proliferative signals in primary chronic lymphocytic leukaemia cells. <a href="#">Br J Haematol. 158: 589-99.</a></li> </ol>
<b>Storage</b>	<p>This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.</p>
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2503">https://www.bio-rad-antibodies.com/SDS/MCA2503</a> 10040
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">Alk. Phos.</a> , <a href="#">HRP</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (H/L) (STAR117...)	<a href="#">Alk. Phos.</a> , <a href="#">DyLight®488</a> , <a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®680</a> , <a href="#">DyLight®800</a> , <a href="#">FITC</a> , <a href="#">HRP</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>
Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

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find a

batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)

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