

## Datasheet: MCA1230G

<b>Description:</b>	RAT ANTI MOUSE 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>	PS/2
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	0.25 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 - 1/100
Immunohistology - Frozen	▪			
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.

#### Target Species

Mouse

#### Species Cross Reactivity

Reacts with: Human

**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.

#### Product Form

Purified IgG - liquid

#### Preparation

Purified IgG prepared by affinity chromatography on Protein G 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 1.0 mg/ml
<b>Immunogen</b>	P815 DBA/2 murine mastocytoma cells.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q00651</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">16401</a> Itga4    <a href="#">Related reagents</a></p>
<b>RRID</b>	AB_566801
<b>Fusion Partners</b>	Spleen cells from immunized Fisher rats were fused with SP2/0 mouse myeloma cells
<b>Specificity</b>	<p><b>Rat anti Mouse CD49d monoclonal antibody, clone PS/2</b> recognizes murine alpha 4 integrin (CD49d), a ~150 kDa single pass type I membrane glycoprotein that can associate with either beta 1 integrin (CD29) or beta 7 integrin to form heterodimers CD49d/CD29 (VLA-4) and alpha4/beta7 (LPAM-1) respectively (<a href="#">Holzmann et al. 1989</a>). CD49d is expressed on most lymphocytes, granulocytes, monocytes and thymocytes. The primary ligands for CD49d are CD106 (VCAM-1), fibronectin and MAdCAM-1 (<a href="#">Sheppard et al. 1994</a>).</p> <p>Clone PS/2 has also been reported to block the binding of CD49d to its ligands (<a href="#">Andrew et al. 1994</a>).</p>
<b>Flow Cytometry</b>	Use 10µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100µl
<b>References</b>	<ol style="list-style-type: none"> <li>Miyake, K. <i>et al.</i> (1991) Evidence for a role of the integrin VLA-4 in lympho-hemopoiesis. <a href="#">J Exp Med. 173 (3): 599-607.</a></li> <li>Miyake, K. <i>et al.</i> (1991) A VCAM-like adhesion molecule on murine bone marrow stromal cells mediates binding of lymphocyte precursors in culture. <a href="#">J Cell Biol. 114 (3): 557-65.</a></li> <li>Andrew, D.P. <i>et al.</i> (1994) Distinct but overlapping epitopes are involved in alpha 4 beta 7-mediated adhesion to vascular cell adhesion molecule-1, mucosal addressin-1, fibronectin, and lymphocyte aggregation. <a href="#">J Immunol. 153 (9): 3847-61.</a></li> <li>Tchilian, E.Z. <i>et al.</i> (1997) Anti-alpha 4 integrin antibody induces apoptosis in murine thymocytes and staphylococcal enterotoxin B-activated lymph node T cells. <a href="#">Immunology. 92: 321-7.</a></li> <li>Enghofer, M. <i>et al.</i> (1998) Lymphocyte transfer in streptozotocin-induced diabetes: adhesion of donor cells to islet endothelium. <a href="#">Am J Physiol. 274: E928-35.</a></li> </ol>

6. Liu, Z.J. *et al.* (1999) A novel role for H-Ras in the regulation of very late antigen-4 integrin and VCAM-1 via c-Myc-dependent and -independent mechanisms. [J Immunol. 163: 4901-8.](#)
7. Tanneau, G.M. *et al.* (1999) Differential recruitment of T- and IgA B-lymphocytes in the developing mammary gland in relation to homing receptors and vascular addressins. [J Histochem Cytochem. 47: 1581-92.](#)
8. Fukuoka, M. *et al.* (2000) Antiadhesive function of 130-kd glycoform of CD43 expressed in CD4 T-lymphocyte clones and transfectant cell lines. [Blood. 96: 4267-75.](#)
9. Hokibara, S. *et al.* (2000) Effects of monoclonal antibodies to adhesion molecules on eosinophilic myocarditis in *Toxocara canis*-infected CBA/J mice. [Clin Exp Immunol. 114: 236-44.](#)
10. Bowden, R.A. *et al.* (2002) Role of alpha4 integrin and VCAM-1 in CD18-independent neutrophil migration across mouse cardiac endothelium. [Circ Res. 90: 562-9.](#)
11. Hirata, T. *et al.* (2002) P-, E-, and L-selectin mediate migration of activated CD8+ T lymphocytes into inflamed skin. [J Immunol. 169: 4307-13.](#)
12. Maus, U.A. *et al.* (2004) Pneumolysin-induced lung injury is independent of leukocyte trafficking into the alveolar space. [J Immunol. 173: 1307-12.](#)
13. Ferrer, P. *et al.* (2005) Association between pterostilbene and quercetin inhibits metastatic activity of B16 melanoma. [Neoplasia. 7: 37-47.](#)
14. Eshghi, S. *et al.* (2007) Alpha4beta1 integrin and erythropoietin mediate temporally distinct steps in erythropoiesis: integrins in red cell development. [J Cell Biol. 177: 871-80.](#)
15. Vaz, R. *et al.* (2012) Fibronectin promotes migration, alignment and fusion in an *in vitro* myoblast cell model. [Cell Tissue Res. 348: 569-78.](#)
16. Zhang, Y. *et al.* (2012) Autotaxin through lysophosphatidic acid stimulates polarization, motility, and transendothelial migration of naive T cells. [J Immunol. 189: 3914-24.](#)
17. Gillberg, L. *et al.* (2013) Effective treatment of mouse experimental colitis by alpha 2 integrin antibody: comparison with alpha 4 antibody and conventional therapy. [Acta Physiol \(Oxf\). 207: 326-36.](#)
18. Omenetti, S. *et al.* (2015) Dysregulated intrahepatic CD4<sup>+</sup> T-cell activation drives liver inflammation in ileitis-prone SAMP1/YitFc mice. [Cell Mol Gastroenterol Hepatol. 1 \(4\): 406-19.](#)
19. Chung, K.J. *et al.* (2017) A self-sustained loop of inflammation-driven inhibition of beige adipogenesis in obesity. [Nat Immunol. 18 \(6\): 654-64.](#)

<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>	<p>Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1230G">https://www.bio-rad-antibodies.com/SDS/MCA1230G</a></p> <p>10040</p>
<b>Regulatory</b>	For research purposes only

---

## Related Products

### Recommended Secondary Antibodies

Goat Anti Rat IgG (STAR69...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR73...)	<a href="#">RPE</a>
Rabbit Anti Rat IgG (STAR17...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR72...)	<a href="#">HRP</a>
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	<a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®800</a>
Rabbit Anti Rat IgG (STAR21...)	<a href="#">HRP</a>
Rabbit Anti Rat IgG (STAR16...)	<a href="#">DyLight®800</a>
Goat Anti Rat IgG (STAR131...)	<a href="#">Alk. Phos.</a> , <a href="#">Biotin</a>

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
----------------------------------	---	------------------	---	---------------	---

To 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)

'M408681:221013'

Printed on 12 Aug 2023