

## Datasheet: MCA1230F

<b>Description:</b>	RAT ANTI MOUSE CD49d:FITC
<b>Specificity:</b>	CD49d
<b>Other names:</b>	INTEGRIN ALPHA 4 CHAIN, VLA-4
<b>Format:</b>	FITC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	PS/2
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/5 - 1/10

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

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 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 from tissue culture supernatant

### Buffer Solution

Phosphate buffered saline

<b>Preservative Stabilisers</b>	0.09% Sodium Azide 1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.1 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_321456
<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>	<p>Use 10ul of the suggested working dilution to label <math>10^6</math> cells in 100ul.</p> <p>The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity Fc receptors. This may be reduced by using SeroBlock FcR (<a href="#">BUF041A/B</a>).</p>
<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>Bellingan, G.J. <i>et al.</i> (2002) Adhesion molecule-dependent mechanisms regulate the rate of macrophage clearance during the resolution of peritoneal inflammation. <a href="#">J Exp Med. 196: 1515-21.</a></li> <li>Fukuoka, M. <i>et al.</i> (2000) Antiadhesive function of 130-kd glycoform of CD43 expressed in CD4 T-lymphocyte clones and transfectant cell lines. <a href="#">Blood. 96: 4267-75.</a></li> </ol>

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19. 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.](#)
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21. 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.](#)

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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.

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<b>Guarantee</b>	12 months from date of despatch
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10041 available at: 10041: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf</a>
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<b>Regulatory</b>	For research purposes only
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## Related Products

### Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto:antibody_sales_us@bio-rad.com)

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Tel: +44 (0)1865 852 700

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