

## Datasheet: MCA1230EL

**BATCH NUMBER 154993**

|                      |                                    |
|----------------------|------------------------------------|
| <b>Description:</b>  | RAT ANTI MOUSE CD49d:Low Endotoxin |
| <b>Specificity:</b>  | CD49d                              |
| <b>Other names:</b>  | INTEGRIN ALPHA 4 CHAIN, VLA-4      |
| <b>Format:</b>       | Low Endotoxin                      |
| <b>Product Type:</b> | Monoclonal Antibody                |
| <b>Clone:</b>        | PS/2                               |
| <b>Isotype:</b>      | IgG2b                              |
| <b>Quantity:</b>     | 0.5 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           |     |    | ▪              |                    |
| Functional Assays          | ▪   |    |                |                    |

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.

|                                 |   |
|---------------------------------|---|
| <b>Target Species</b>           | Mouse   |
| <b>Species Cross Reactivity</b> | <p>Reacts with: Human</p> <p><b>N.B.</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.</p> |
| <b>Product Form</b>             | Purified IgG - liquid   |

|                                       |   |
|---------------------------------------|---|
| <b>Preparation</b>                    | Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant   |
| <b>Buffer Solution</b>                | Phosphate buffered saline   |
| <b>Preservative Stabilisers</b>       | None present  |
| <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><br/> <a href="#">Q00651</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b><br/> <a href="#">16401</a> Itga4    <a href="#">Related reagents</a></p>  |
| <b>RRID</b>                           | AB_566804   |
| <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 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.   |
| <b>References</b>                     | <ol style="list-style-type: none"> <li>1. 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>2. 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>3. 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>4. 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.</a></li> </ol> |

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17. Zhang, Y. *et al.* (2012) Autotaxin through lysophosphatidic acid stimulates polarization, motility, and transendothelial migration of naive T cells. [J Immunol. 189: 3914-24.](#)
18. Ferrer, P. *et al.* (2005) Association between pterostilbene and quercetin inhibits metastatic activity of B16 melanoma. [Neoplasia. 7: 37-47.](#)
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**Storage**

Store at -20°C only.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

|                                      |  |
|--------------------------------------|--|
| <b>Guarantee</b>                     | 12 months from date of despatch  |
| <b>Health And Safety Information</b> | Material Safety Datasheet documentation #10162 available at:<br><a href="https://www.bio-rad-antibodies.com/SDS/MCA1230EL">https://www.bio-rad-antibodies.com/SDS/MCA1230EL</a><br>10162 |
| <b>Regulatory</b>                    | For research purposes only   |

## Related Products

### Recommended Secondary Antibodies

|  |   |
|--|---|
| Rabbit Anti Rat IgG (STAR16...)                | <a href="#">DyLight®800</a>   |
| Rabbit Anti Rat IgG (STAR17...)                | <a href="#">FITC</a>  |
| Goat Anti Rat IgG (STAR72...)                  | <a href="#">HRP</a>   |
| Goat Anti Rat IgG (STAR69...)                  | <a href="#">FITC</a>  |
| Goat Anti Rat IgG (STAR73...)                  | <a href="#">RPE</a>   |
| Rabbit Anti Rat IgG (STAR21...)                | <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> |
| 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<br>Fax: +1 919 878 3751<br>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<br>Fax: +44 (0)1865 852 739<br>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<br>Fax: +49 (0) 89 8090 95 50<br>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://www.bio-rad-antibodies.com/datasheets)  
'M364993:200529'

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