

## Datasheet: MCA2872PE

<b>Description:</b>	MOUSE ANTI RAT CD49d:RPE
<b>Specificity:</b>	CD49d
<b>Other names:</b>	INTEGRIN ALPHA 4 CHAIN, VLA-4
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MRalpha4-1
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	100 TESTS

## 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	▪			Neat

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.

<b>Target Species</b>	Rat		
<b>Product Form</b>	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
<b>Reconstitution</b>	Reconstitute with 1ml distilled water		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	RPE 488nm laser	496	578
<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>	0.09% Sodium Azide (NaN <sub>3</sub> ) 1% Bovine Serum Albumin 5% Sucrose		

<b>Immunogen</b>	RBL-2H3 rat basophilic leukaemia cell line.
<b>RRID</b>	AB_1658108
<b>Fusion Partners</b>	Spleen cells from immunised Balb/c mice were fused with cells of the P3U1 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Rat CD49d monoclonal antibody, clone MRalpha4-1</b> recognizes rat CD49d, otherwise known as integrin alpha 4 chain/VLA-4, a ~150 kDa single pass type-1 transmembrane glycoprotein and member of the integrin alpha chain family, which acts as a receptor for fibronectin and CD106 (VCAM-1).</p> <p>CD49d is expressed broadly on T and B lymphocytes, monocytes, thymocytes, mast cells and dendritic cells and is involved in cell-cell interactions, mononuclear cell trafficking to sites of endothelial inflammation, and the adhesion of cells to the extracellular matrix.</p> <p>Clone MRalpha4-1 inhibits the <i>in vitro</i> and <i>in vivo</i> functions of CD49d (<a href="#">Yasuda et al. 1995</a>). Studies have shown that in rat Peyer's patches, clone MRalpha4-1 inhibits the rolling and adherence of lymphocytes to postcapillary venules (PCV), and significantly inhibits the transendothelial migration of T lymphocytes (<a href="#">Tsuzuki et al. 1996</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 1x10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Yasuda, M. <i>et al.</i> (1995) Expression and function of fibronectin binding integrins on rat mast cells. <a href="#">Int Immunol. 7 (2): 251-8.</a></li> <li>2. Tsuzuki Y <i>et al.</i> (1996) alpha 4 integrin plays a critical role in early stages of T lymphocyte migration in Peyer's patches of rats. <a href="#">Int Immunol. 8 (3): 287-95.</a></li> <li>3. Summers, L. <i>et al.</i> (2013) Activation of brain endothelial cells by interleukin-1 is regulated by the extracellular matrix after acute brain injury. <a href="#">Mol Cell Neurosci. 57: 93-103.</a></li> </ol>
<b>Storage</b>	<p>Prior to reconstitution store at +4°C.</p> <p>After reconstitution store at +4°C.</p> <p>DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.</p>
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #20487 available at: 20487: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/20487.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/20487.pdf</a>
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:RPE \(MCA1210PE\)](#)

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