

## Datasheet: MCA275GA

<b>Description:</b>	MOUSE ANTI RAT CD11b
<b>Specificity:</b>	CD11b
<b>Other names:</b>	INTEGRIN ALPHA M CHAIN, MAC-1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	OX-42
<b>Isotype:</b>	IgG2a
<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	▪			1/50 - 1/100
Immunohistology - Frozen	▪			1/50 - 1/100
Immunohistology - Paraffin (1)			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	
Immunofluorescence	▪			

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.

(1)**OX-42 is reported to be suitable for paraffin-embedded sections following PLP fixation (Whiteland *et al.*, 1995).**

<b>Target Species</b>	Rat
<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>	0.09% Sodium Azide
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml

<b>Immunogen</b>	Resident rat peritoneal macrophages.
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the NSO/U mouse myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Rat CD11b, clone OX-42</b>, recognizes rat CD11b, also known as <a href="#">integrin alpha-M</a>, the receptor for the iC3b component of complement. CD11b is a 1151 amino acid single pass type 1 transmembrane glycoprotein possessing a single <a href="#">vWFA</a> domain and multiple <a href="#">FG-GAP</a> repeats. CD11b is expressed on most macrophages, including resident and activated peritoneal macrophages and Kupffer cells and around 35% of alveolar macrophages. The antibody also labels dendritic cells, granulocytes and <a href="#">microglia</a> in the brain (<a href="#">Robinson et al.1986</a>).</p> <p>Mouse anti Rat CD11b, clone OX-42 is reported to inhibit complement mediated rosettes (<a href="#">Robinson et al.1986</a>) as well as inhibit myelin binding and uptake (<a href="#">van der Laan et al.1996</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. Robinson, A.P. <i>et al.</i> (1986) Macrophage heterogeneity in the rat as delineated by two monoclonal antibodies MRC OX-41 and MRC OX-42, the latter recognizing complement receptor type 3. <a href="#">Immunology. 57 (2): 239-47.</a></li> <li>2. Barclay, A.N. (1981) The localization of population of lymphocytes defined by monoclonal antibodies in rat lymphoid tissues. <a href="#">Immunology. 42: 593-600.</a></li> <li>3. Milligan, C.E. <i>et al.</i> (1991) Differential immunochemical markers reveal the normal distribution of brain macrophages and microglia in the developing rat brain. <a href="#">J Comp Neurol. 314 (1): 125-35.</a></li> <li>4. Whiteland, J.L. <i>et al.</i> (1995) Immunohistochemical detection of T-cell subsets and other leukocytes in paraffin-embedded rat and mouse tissues with monoclonal antibodies. <a href="#">J Histochem Cytochem. 43 (3): 313-20.</a></li> <li>5. Zilka, N. <i>et al.</i> (2009) Human misfolded truncated tau protein promotes activation of microglia and leukocyte infiltration in the transgenic rat model of tauopathy. <a href="#">J Neuroimmunol. 209 (1-2): 16-25.</a></li> <li>6. Shokouhi, B.N. <i>et al</i> (2010) Microglial responses around intrinsic CNS neurons are correlated with axonal regeneration. <a href="#">BMC Neurosci. 11: 13.</a></li> <li>7. Calvo, M. <i>et al.</i> (2010) Neuregulin-ErbB signaling promotes microglial proliferation and chemotaxis contributing to microgliosis and pain after peripheral nerve injury. <a href="#">J Neurosci. 30 (15): 5437-50.</a></li> <li>8. Jean, Y.H. <i>et al.</i> (2009) Capnellene, a natural marine compound derived from soft coral, attenuates chronic constriction injury-induced neuropathic pain in rats <a href="#">Br J Pharmacol. 158: 713-25.</a></li> <li>9. Morales-Garcia, J.A. <i>et al.</i> (2011) Phosphodiesterase 7 inhibition preserves dopaminergic neurons in cellular and rodent models of Parkinson disease. <a href="#">PLoS One. 6(2):e17240.</a></li> <li>10. Spencer-Segal, J.L. <i>et al.</i> (2011) Distribution of Phosphorylated TrkB Receptor in the Mouse Hippocampal Formation Depends on Sex and Estrous Cycle Stage. <a href="#">J Neurosci. 31: 6780-90.</a></li> <li>11. Chew, S.S. <i>et al.</i> (2011) Response of retinal Connexin43 to optic nerve injury. <a href="#">Invest Ophthalmol Vis Sci. 52: 3620-9.</a></li> <li>12. Huh, S.H. <i>et al</i> (2011) Ethyl pyruvate rescues nigrostriatal dopaminergic neurons by regulating glial activation in a mouse model of Parkinson's disease. <a href="#">J Immunol. 187: 960-9.</a></li> <li>13. Jeong, H.K. <i>et al.</i> (2010) Inflammatory responses are not sufficient to cause delayed neuronal death in ATP-induced acute brain injury. <a href="#">PLoS One. 5: e13756.</a></li> <li>14. Liew, H.K. <i>et al.</i> (2012) Systemic administration of urocortin after intracerebral hemorrhage reduces neurological deficits and neuroinflammation in rats. <a href="#">J Neuroinflammation. 9: 13.</a></li> <li>15. Szmydynger-Chodobska, J. <i>et al.</i> (2011) Multiple sites of vasopressin synthesis in the injured brain. <a href="#">J Cereb Blood Flow Metab. 31: 47-51.</a></li> <li>16. Tchoukalova, Y.D. <i>et al.</i> (2012) <i>In vivo</i> adipogenesis in rats measured by cell kinetics in adipocytes and plastic-adherent stroma-vascular cells in response to high-fat diet and</li> </ol>

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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. 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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**Shelf Life**

18 months from date of despatch.

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**Health And Safety**

Material Safety Datasheet documentation #10040 available at:

**Information**10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>**Regulatory**

For research purposes only

## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">Alk. Phos.</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR8...)	<a href="#">DyLight®800</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>
Human Anti Mouse IgG2a (HCA037...)	<a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (H/L) (STAR117...)	<a href="#">Alk. Phos.</a> , <a href="#">DyLight®488</a> , <a href="#">DyLight®549</a> , <a href="#">DyLight®649</a> , <a href="#">DyLight®680</a> , <a href="#">DyLight®800</a> , <a href="#">FITC</a> , <a href="#">HRP</a>

### Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL \(MCA1210\)](#)**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)**Worldwide**

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

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