

## Datasheet: MCA2245AMO

**BATCH NUMBER 149145**

<b>Description:</b>	RAT ANTI MOUSE CD41:Amethyst Orange
<b>Specificity:</b>	CD41
<b>Other names:</b>	INTEGRIN ALPHA IIB
<b>Format:</b>	Amethyst Orange
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MWReg30
<b>Isotype:</b>	IgG1
<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	▪			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>	Mouse						
<b>Product Form</b>	Purified IgG conjugated to Amethyst Orange - liquid						
<b>Max Ex/Em</b>	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>Amethyst Orange</td> <td>405</td> <td>540</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	Amethyst Orange	405	540
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
Amethyst Orange	405	540					
<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						
<b>Approx. Protein</b>	Ig concentration 0.1 mg/ml						

## Concentrations

---

**Immunogen** Purified murine platelets

---

## External Database Links

### UniProt:

[Q9QUM0](#) [Related reagents](#)

### Entrez Gene:

[16399](#) Itga2b [Related reagents](#)

---

## Specificity

**Rat anti Mouse CD41 antibody, clone MWReg30** recognizes the mouse integrin alpha IIb subunit CD41. CD41 is a ~125 kDa single pass type 1 transmembrane glycoprotein expressed by platelets, megakaryocytes ([Zhang et al. 2007](#)), mast cells ([Berlanga et al. 2005](#)), and hematopoietic progenitors ([Mitjavila-Garcia et al. 2002](#)). CD41 forms a heterodimer with [CD61](#).

The CD41/CD61 complex is important for platelet adhesion and aggregation ([Patel et al. 2003](#)) acting as a receptor for many extracellular matrix proteins including fibronectin, thrombospondin and vitronectin ([Weisel et al. 1992](#)).

Rat anti mouse CD41, clone MWReg30 has been reported to inhibit PMA induced aggregation *in vitro* and to induce hypothermia *in vivo* ([Nieswandt et al. 1999](#)).

---

## Flow Cytometry

Use 10ul of the suggested working dilution to label 10<sup>6</sup> cells in 100ul.

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 ([BUF041A/B](#)).

---

## References

1. Winter, O. *et al.* (2010) Megakaryocytes constitute a functional component of a plasma cell niche in the bone marrow. [Blood. 116: 1867-75.](#)
2. Tamagawa-Mineoka, R. *et al.* (2007) The role of platelets in leukocyte recruitment in chronic contact hypersensitivity induced by repeated elicitation. [Am J Pathol. 170: 2019-29.](#)
3. Takayama, M. *et al.* (2010) Genetic analysis of hierarchical regulation for Gata1 and NF-E2 p45 gene expression in megakaryopoiesis. [Mol Cell Biol. 30: 2668-80.](#)
4. Larson, M.K. and Watson, S.P. (2006) Regulation of proplatelet formation and platelet release by integrin alpha IIb beta3. [Blood. 108: 1509-14.](#)
5. Zanzinger, K. *et al.* (2009) Regulation of triggering receptor expressed on myeloid cells 1 expression on mouse inflammatory monocytes. [Immunology. 128: 185-95.](#)
6. Lutskiy, M.I. *et al.* (2007) WASP localizes to the membrane skeleton of platelets. [Br J Haematol. 139: 98-105.](#)
7. Sullivan, B.P. *et al.* (2010) Protective and damaging effects of platelets in acute cholestatic liver injury revealed by depletion and inhibition strategies. [Toxicol Sci. 115: 286-94.](#)
8. Fujita, R. *et al.* (2013) NF-E2 p45 Is Important for Establishing Normal Function of Platelets. [Mol Cell Biol. 33: 2659-70.](#)
9. Perez, L.E. *et al.* (2008) SH2-inositol phosphatase 1 negatively influences early

- megakaryocyte progenitors. [PLoS One. 3: e3565.](#)
10. Teeling, J.L. *et al.* (2012) Intracerebral immune complex formation induces inflammation in the brain that depends on Fc receptor interaction [Acta Neuropathol. 124: 479-90.](#)
  11. Motohashi, H. *et al.* (2010) NF-E2 domination over Nrf2 promotes ROS accumulation and megakaryocytic maturation. [Blood. 115 \(3\): 677-86.](#)
  12. Flierl, U. *et al.* (2015) Phosphorothioate backbone modifications of nucleotide-based drugs are potent platelet activators. [J Exp Med. 212 \(2\): 129-37.](#)
  13. Devanathan, V. *et al.* (2015) Platelet Gi protein Gai2 is an essential mediator of thrombo-inflammatory organ damage in mice. [Proc Natl Acad Sci U S A. 112 \(20\): 6491-6.](#)
  14. Woods, S.J. *et al.* (2015) Kinetic profiling of *in vivo* lung cellular inflammatory responses to mechanical ventilation. [Am J Physiol Lung Cell Mol Physiol. 308 \(9\): L912-21.](#)
  15. Goggs, R. *et al.* (2013) The small GTPase Rif is dispensable for platelet filopodia generation in mice. [PLoS One. 8 \(1\): e54663.](#)
  16. Williams, C.M. *et al.* (2016) Identification of roles for the SNARE-associated protein, SNAP29, in mouse platelets. [Platelets. 27 \(4\): 286-94.](#)
  17. Cuccurullo, A. *et al.* (2016) Blockade of Thrombopoietin Reduces Organ Damage in Experimental Endotoxemia and Polymicrobial Sepsis. [PLoS One. 11 \(3\): e0151088.](#)
  18. Criel, M. *et al.* (2016) Absence of Pear1 does not affect murine platelet function *in vivo*. [Thromb Res. 146: 76-83.](#)
  19. Ryan, J. *et al.* (2016) Myeloid cell-mediated renal injury in rapidly progressive glomerulonephritis depends upon spleen tyrosine kinase. [J Pathol. 238 \(1\): 10-20.](#)
  20. Thomson, A.K. *et al.* (2017) Survival of motor neurone protein is required for normal postnatal development of the spleen. [J Anat. 230 \(2\): 337-46.](#)
  21. Asai, J. *et al.* (2016) Platelets Regulate the Migration of Keratinocytes via Podoplanin/CLEC-2 Signaling during Cutaneous Wound Healing in Mice. [Am J Pathol. 186 \(1\): 101-8.](#)

---

<b>Storage</b>	<p>Store at +4°C or at -20°C if preferred.</p> <p>Storage in frost-free freezers is not recommended.</p> <p>This product should be stored undiluted. This product is photosensitive and should be protected from light.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. 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>	<p>Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2245AMO">https://www.bio-rad-antibodies.com/SDS/MCA2245AMO</a></p> <p>10041</p>
--------------------------------------	--

---

<b>Regulatory</b>	For research purposes only
-------------------	----------------------------

## Related Products

### Recommended Useful Reagents

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

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

<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)

'M361826:200318'

**Printed on 29 Apr 2024**

---

© 2024 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)