

## Datasheet: MCA2245A488

<b>Description:</b>	RAT ANTI MOUSE CD41:Alexa Fluor® 488
<b>Specificity:</b>	CD41
<b>Other names:</b>	INTEGRIN ALPHA IIB
<b>Format:</b>	ALEXA FLUOR® 488
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MWReg30
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	100 TESTS/1ml

## 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 Alexa Fluor® 488 - liquid		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	Alexa Fluor®488	495	519
<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 Concentrations</b>	Ig concentration 0.05 mg/ml		

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

The Fc region of monoclonal antibodies may bind to cells expressing low affinity Fc receptors. This may be reduced by using SeroBlock FcR ([BUF041A/BUF041B](#)).

## References

1. Larson, M.K. and Watson, S.P. (2006) Regulation of proplatelet formation and platelet release by integrin alpha IIb beta3. [Blood. 108: 1509-14.](#)
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. Lutskiy, M.I. et al. (2007) WASP localizes to the membrane skeleton of platelets. [Br J Haematol. 139: 98-105.](#)
4. Perez, L.E. et al. (2008) SH2-inositol phosphatase 1 negatively influences early megakaryocyte progenitors. [PLoS One. 3: e3565.](#)
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. Winter, O. et al. (2010) Megakaryocytes constitute a functional component of a plasma cell niche in the bone marrow. [Blood. 116: 1867-75.](#)
7. 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.](#)
8. 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.](#)
9. Motohashi, H. et al. (2010) NF-E2 domination over Nrf2 promotes ROS accumulation and megakaryocytic maturation. [Blood. 115 \(3\): 677-86.](#)
10. Göçmen, A.Y. et al. (2011) Effect of resveratrol on platelet activation in hypercholesterolemic rats: CD40-CD40L system as a potential target. [Appl Physiol Nutr](#)

[Metab. 36 \(3\): 323-30.](#)

11. 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.](#)
12. Fujita, R. *et al.* (2013) NF-E2 p45 Is Important for Establishing Normal Function of Platelets. [Mol Cell Biol. 33: 2659-70.](#)
13. Goggs, R. *et al.* (2013) The small GTPase Rif is dispensable for platelet filopodia generation in mice. [PLoS One. 8 \(1\): e54663.](#)
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. Flierl, U. *et al.* (2015) Phosphorothioate backbone modifications of nucleotide-based drugs are potent platelet activators. [J Exp Med. 212 \(2\): 129-37.](#)
16. Devanathan, V. *et al.* (2015) Platelet Gi protein G $\alpha$ i2 is an essential mediator of thrombo-inflammatory organ damage in mice. [Proc Natl Acad Sci U S A. 112 \(20\): 6491-6.](#)
17. Cuccurullo, A. *et al.* (2016) Blockade of Thrombopoietin Reduces Organ Damage in Experimental Endotoxemia and Polymicrobial Sepsis. [PLoS One. 11 \(3\): e0151088.](#)
18. 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.](#)
19. Criel, M. *et al.* (2016) Absence of Pear1 does not affect murine platelet function *in vivo*. [Thromb Res. 146: 76-83.](#)
20. 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.](#)
21. Williams, C.M. *et al.* (2016) Identification of roles for the SNARE-associated protein, SNAP29, in mouse platelets. [Platelets. 27 \(4\): 286-94.](#)
22. 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.](#)
23. Moore, S.F. *et al.* (2021) Opposing Roles of GSK3 $\alpha$  and GSK3 $\beta$  Phosphorylation in Platelet Function and Thrombosis. [Int J Mol Sci. 22\(19\):10656.](#)

---

**Storage**

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.

---

**Guarantee**

12 months from date of despatch

---

**Acknowledgements**

This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchased product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in

research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or [outlicensing@thermofisher.com](mailto:outlicensing@thermofisher.com)

---

<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2245A488">https://www.bio-rad-antibodies.com/SDS/MCA2245A488</a> 10041
--------------------------------------	---

---

<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)  
'M413535:221123'

**Printed on 09 Feb 2024**

---

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