

Datasheet: MCA2245PE

BATCH NUMBER 0612R

Description:	RAT ANTI MOUSE CD41:RPE
Specificity:	CD41
Other names:	INTEGRIN ALPHA IIB
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	MWReg30
Isotype:	IgG1
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat

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.

Target Species	Mouse						
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized						
Reconstitution	Reconstitute with 1 ml distilled water						
Max Ex/Em	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>RPE 488nm laser</td> <td>496</td> <td>578</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	RPE 488nm laser	496	578
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
RPE 488nm laser	496	578					
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant						
Buffer Solution	Phosphate buffered saline						
Preservative	0.09% Sodium Azide						
Stabilisers	1% Bovine Serum Albumin						

5% Sucrose

Immunogen Purified murine platelets

External Database Links

UniProt:

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

Entrez Gene:

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

RRID AB_324625

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 10⁶ 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.](#)

22. Moore, S.F. *et al.* (2021) Opposing Roles of GSK3 α and GSK3 β Phosphorylation in Platelet Function and Thrombosis. [Int J Mol Sci. 22\(19\):10656.](#)

Storage

Prior to reconstitution store at +4°C. Following reconstitution store at +4°C.

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.

Guarantee

12 months from date of despatch

Health And Safety Information

Material Safety Datasheet documentation #20487 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2245PE>
20487

Regulatory

For research purposes only

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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M375446:210104'

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