

Datasheet: MCA2245B BATCH NUMBER 155277

Description:	RAT ANTI MOUSE CD41:Biotin		
Specificity:	CD41		
Other names:	INTEGRIN ALPHA IIB		
Format:	Biotin		
Product Type:	Monoclonal Antibody		
Clone:	MWReg30		
Isotype:	lgG1		
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	-			Neat - 1/10

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 Biotin - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml
Immunogen	Purified murine platelets

External Database Links

UniProt:

Q9QUM0 Related reagents

Entrez Gene:

16399 Itga2b Related reagents

RRID

AB 323941

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 (<u>Patel et al.</u> 2003) acting as a receptor for many extracellular matrix proteins including fibronectin, thrombospondin and vitronectin (<u>Weisel et al.</u> 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 (<u>BUF041A/B</u>).

References

- 1. Winter, O. *et al.* (2010) Megakaryocytes constitute a functional component of a plasma cell niche in the bone marrow. <u>Blood</u>. 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. <u>Am J Pathol. 170:</u> 2019-29.
- 3. Takayama, M. *et al.* (2010) Genetic analysis of hierarchical regulation for Gata1 and NF-E2 p45 gene expression in megakaryopoiesis. <u>Mol Cell Biol.</u> 30: 2668-80.
- 4. Larson, M.K. and Watson, S.P. (2006) Regulation of proplatelet formation and platelet release by integrin alpha IIb beta3. <u>Blood</u>. 108: 1509-14.
- 5. Zanzinger, K. *et al.* (2009) Regulation of triggering receptor expressed on myeloid cells 1 expression on mouse inflammatory monocytes. lmmunology.128:185-95.
- 6. Lutskiy, M.I. *et al.* (2007) WASP localizes to the membrane skeleton of platelets. <u>Br J Haematol. 139: 98-105.</u>
- 7. Sullivan, B.P. *et al.* (2010) Protective and damaging effects of platelets in acute cholestatic liver injury revealed by depletion and inhibition strategies. <u>Toxicol Sci. 115:</u> 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. <u>PLoS One. 3: e3565.</u>
- 10. Teeling, J.L. et al. (2012) Intracerebral immune complex formation induces

inflammation in the brain that depends on Fc receptor interaction <u>Acta Neuropathol. 124:</u> 479-90.

- 11. Motohashi, H. *et al.* (2010) NF-E2 domination over Nrf2 promotes ROS accumulation and megakaryocytic maturation. <u>Blood. 115 (3): 677-86.</u>
- 12. Flierl, U. *et al.* (2015) Phosphorothioate backbone modifications of nucleotide-based drugs are potent platelet activators. <u>J Exp Med. 212 (2): 129-37.</u>
- 13. Devanathan, V. *et al.* (2015) Platelet Gi protein Gαi2 is an essential mediator of thrombo-inflammatory organ damage in mice. <u>Proc Natl Acad Sci U S A. 112 (20): 6491-6.</u>
- 14. Woods, S.J. *et al.* (2015) Kinetic profiling of *in vivo* lung cellular inflammatory responses to mechanical ventilation. <u>Am J Physiol Lung Cell Mol Physiol.</u> 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. <u>Platelets. 27 (4): 286-94.</u>
- 17. Cuccurullo, A. *et al.* (2016) Blockade of Thrombopoietin Reduces Organ Damage in Experimental Endotoxemia and Polymicrobial Sepsis. <u>PLoS One. 11 (3): e0151088.</u>
- 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. <u>J Pathol. 238 (1): 10-20.</u>
- 20. Thomson, A.K. *et al.* (2017) Survival of motor neurone protein is required for normal postnatal development of the spleen. <u>J Anat. 230 (2): 337-46.</u>
- 21. Asai, J. *et al.* (2016) Platelets Regulate the Migration of Keratinocytes via Podoplanin/CLEC-2 Signaling during Cutaneous Wound Healing in Mice. <u>Am J Pathol.</u> 186 (1): 101-8.

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.

Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA2245B 10041
Regulatory	For research purposes only

North & South Tel: +1 800 265 7376 America Fax: +1 919 878 3751 Worldwide

Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Europe

Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_us@bio-rad.com

Email: antibody_sales_uk@bio-rad.com

Email: antibody_sales_de@bio-rad.com

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

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