Datasheet: MCA2245A488

Description:	RAT ANTI MOUSE CD41:Alexa Fluor® 488
Specificity:	CD41
Other names:	INTEGRIN ALPHA IIB
Format:	ALEXA FLUOR® 488
Product Type:	Monoclonal Antibody
Clone:	MWReg30
Isotype:	IgG1
Quantity:	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.

	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.

Target Species

Mouse

Product Form

Purified IgG conjugated to Alexa Fluor 488 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Alexa Fluor®488	495	519

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 (NaN_3)
1% Bovine Serum Albumin

Approx. Protein Concentrations

Ig concentration 0.05 mg/ml

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 10^6 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 Gαi2 is an essential mediator of thrombo-inflammatory organ damage in mice. Proc Natl Acad Sci U S A. 112 (20): 6491-6.
14. Kamat, V. *et al.* (2015) Microfluidic assessment of functional culture-derived platelets in human thrombi under flow. Exp Hematol. 43 (10): 891-900.e4.
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 CM *et al.* (2015) Identification of roles for the SNARE-associated protein, SNAP29, in mouse platelets. Nov 20. [Epub ahead of print]
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. Woods SJ *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.
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. 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.

Storage	Store at +4ºC or at -20ºC if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life	18 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
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: 10041: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

RAT IgG1 NEGATIVE CONTROL:Alexa Fluor® 488 (MCA1211A488)

Recommended Useful Reagents

MOUSE SEROBLOCK FcR (BUF041A)
MOUSE SEROBLOCK FcR (BUF041B)

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