Datasheet: MCA2245F

BATCH NUMBER 153739

Description:	RAT ANTI MOUSE CD41:FITC
Specificity:	CD41
Other names:	INTEGRIN ALPHA IIB
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	MWReg30
Isotype:	IgG1
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 Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
FITC	490	525

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide
1% Bovine Serum Albumin

Approx. Protein

IgG concentration 0.1 mg/ml

Concentrations	
Immunogen	Purified murine platelets
External Database Links	**UniProt:** Q9QUM0 Related reagents **Entrez Gene:** 16399 Itga2b Related reagents
RRID	AB_324532
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. 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.

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. 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.
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/MCA2245F 10041
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

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

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	**Worldwide**	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	**Europe**	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 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

'M366439:200529'

Printed on 09 Feb 2024