

# Datasheet: MCA740PE

Description:	MOUSE ANTI HUMAN CD42b:RPE
Specificity:	CD42b
Other names:	GPIB-ALPHA
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	AK2
Isotype:	lgG1
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 <u>www.bio-</u> 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. The suggested working dilution is given as a guide only. It is recommended that the user titrates the antibody for use in his/her own system using appropriate negative/positive controls.					
Target Species	Human					
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - Iyophilized					
Reconstitution	Reconstitute with 1 ml distilled water					
Max Ex/Em	Fluorophore	Excitation N	lax (nm)	Emission Max (nm)		
	RPE 488nm laser	496		578		
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 A 5% Sucrose	lbumin				

External Database Links	UniProt: <u>P07359</u> <u>Related reagents</u>			
	Entrez Gene: <u>2811</u> GP1BA <u>Related reagents</u>			
RRID	AB_324702			
Specificity	Mouse anti Human CD42b antibody, clone AK2 recognizes the human CD42b cell surface antigen, also known as platelet glycoprotein GP1B.			
	CD42b is expressed by platelets and megakaryocytes. Clone AK2 has been reported to block the binding of von Willebrand Factor (VWF) to platelets.			
Flow Cytometry	Use 10ul of the suggested working dilution to label 100ul whole blood.			
References	1. Ward, C.M. & Berndt, M.C. (1995) Epitope and functional characterization of the CD42 (gplb/IX) mAb panel. Leucocyte Typing V. White Cell Differentiation Antigens. Volume Two. Oxford University Press, Oxford.			
	2. Burgess, J.K. <i>et al.</i> (1998) Quinine-dependent antibodies bind a restricted set of epitopes on the glycoprotein Ib-IX complex: characterization of the epitopes. <u>Blood. 92:</u> 2366-73.			
	3. Burgess, J.K. <i>et al.</i> (2000) Rifampicin-dependent antibodies bind a similar or identical epitope to glycoprotein IX-specific quinine-dependent antibodies. <u>Blood. 95: 1988-92.</u>			
	<ul> <li>4. Jayo, A. <i>et al.</i> (2010) L718P mutation in the membrane-proximal cytoplasmic tail of beta</li> <li>3 promotes abnormal alpha IIb beta 3 clustering and lipid microdomain coalescence, and</li> <li>associates with a thrombasthenia-like phenotype. <u>Haematologica. 95: 1158-66.</u></li> <li>5. Lova, P. <i>et al.</i> (2004) Contribution of protease-activated receptors 1 and 4 and</li> </ul>			
	glycoprotein Ib-IX-V in the G(i)-independent activation of platelet Rap1B by thrombin. J Biol Chem. 279: 25299-306.			
	6. Shen, Y. <i>et al.</i> (2000) Requirement of leucine-rich repeats of glycoprotein (GP) Ibalpha for shear-dependent and static binding of von Willebrand factor to the platelet membrane GP Ib-IX-V complex. <u>Blood. 95: 903-10.</u>			
	7. Wright, S.D. <i>et al.</i> (1993) Double heterozygosity for mutations in the platelet			
	<ul> <li>glycoprotein IX gene in three siblings with Bernard-Soulier syndrome. <u>Blood. 81: 2339-47.</u></li> <li>8. Nomura, S. <i>et al.</i> (1995) Significance of cytokines and CD68-positive microparticles in</li> </ul>			
	immune thrombocytopenic purpura. <u>Eur J Haematol. 55: 49-56.</u>			
	9. Speich, H.E. <i>et al.</i> (2008) Platelets undergo phosphorylation of Syk at Y525/526 and			
	Y352 in response to pathophysiological shear stress. <u>Am J Physiol Cell Physiol. 295:</u> <u>C1045-54.</u>			
	10. Balduini, A. <i>et al</i> (2008) Adhesive receptors, extracellular proteins and myosin IIA			
	orchestrate proplatelet formation by human megakaryocytes. <u>J Thromb Haemost. 6:</u> <u>1900-7.</u>			
	11. Amor, N.B. et al. (2009) Acidic-store depletion is required for human platelet			
	aggregation. <u>Blood Coagul Fibrinolysis. 20: 511-6.</u>			
	12. Tasneem, S. <i>et al.</i> (2009) Platelet adhesion to multimerin 1 in vitro: influences of platelet membrane receptors, von Willebrand factor and shear. <u>J Thromb Haemost. 7:</u>			
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	<u>685-92.</u>				
	13. Lincoln, B. et al. (2010) Integrated system investigating shear-mediated platelet				
	interactions with von Willebrand factor using microliters of whole blood Anal Biochem.				
	<u>405: 174-83.</u>				
	14. Goetzl, E.J. <i>et al.</i> (2016) Human plasma platelet-derived exosomes: effects of aspirin.				
	FASEB J. 30 (5): 2058-63.				
	15. Michalska-Jakubus, M. et al. (2017) Plasma endothelial microparticles reflect the				
	extent of capillaroscopic alterations and correlate with the severity of skin involvement in				
	systemic sclerosis. <u>Microvasc Res. 110: 24-31.</u>				
	16. Ralph, A. et al. (2016) Computational Tracking of Shear-Mediated Platelet Interactions				
	with von Willebrand Factor. Cardiovasc Eng Technol. 7 (4): 389-405.				
	17. Rossi, E. et al. (2018) Human endoglin as a potential new partner involved in platelet-				
	endothelium interactions. Cell Mol Life Sci. 75 (7): 1269-84.				
	18. Kim, J.S. et al. (2021) Randomization to Omega-3 Fatty Acid Supplementation and				
	Endothelial Function in COPD: The COD-Fish Randomized Controlled Trial. Chronic Obstr				
	Pulm Dis. 8(1):41-53.				
	19. Yang, B. et al. (2023) Endothelial-Related Biomarkers in Evaluation of Vascular				
	Function During Progression of Sepsis After Severe Trauma: New Potential Diagnostic				
	Tools in Sepsis. J Inflamm Res. 16: 2773-82.				
	20. Michalska-Jakubus, M.M. et al. (2020) Anti-endothelial cell antibodies are associated				
	with apoptotic endothelial microparticles, endothelial sloughing and decrease in				
	angiogenic progenitors in systemic sclerosis. Postepy Dermatol Alergol. 37 (5): 725-35.				
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	Material Safety Datasheet documentation #20487 available at:				
Information	https://www.bio-rad-antibodies.com/SDS/MCA740PE				
	20487				
Regulatory	For research purposes only				

## **Related Products**

### **Recommended Negative Controls**

MOUSE IgG1 NEGATIVE CONTROL:RPE (MCA928PE)

### **Recommended Useful Reagents**

HUMAN SEROBLOCK (BUF070A) HUMAN SEROBLOCK (BUF070B)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-r	Worldwide ad.com	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-	Europe rad.com	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-ra	To d.qamu	
batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M419686:230616'							

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