Datasheet: MCA594GA

Description:	MOUSE ANTI HUMAN CD42a
Specificity:	CD42a
Other names:	GPIX
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	FMC-25
Isotype:	IgG1
Quantity:	0.1 mg

Product Details

RRID AB_10847067

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	▪			1/50 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	

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 Human

Product Form Purified IgG - 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 (NaN_3)

Carrier Free Yes

Approx. Protein Concentrations IgG concentration 1.0mg/ml

Immunogen	Peripheral blood mononuclear cells.
External Database Links	**UniProt:** P14770 Related reagents **Entrez Gene:** 2815 GP9 Related reagents
Specificity	**Mouse anti Human CD42a antibody, clone FMC-25** recognizes human CD42a, also known as Platelet glycoprotein IX, Glycoprotein 9 or GP-IX. CD42a is a 177 amino acid, ~20kDa type I single pass transmembrane glycoprotein containing a single leucine-rich repeat containing N-terminal domain and a single leucine-rich repeat containing C-terminal domain. CD42a is expressed by platelets and megakaryocytes and forms a covalent complex with CD42c (GP-1b-beta), CD42b (GP-1b-alpha) and CD42d (platelet glycoprotein V) to create the platelet surface receptor for von Willebrand factor. Incubation of the intact von Willebrand receptor complex with clone FMC-25 does not appear to inhibit binding of von Willebrand factor to the receptor (Yan *et al.* 2011). Defects in the GP1BB gene encoding human CD42a can lead to the inherited bleeding disorder Bernard-Soulier syndrome (Diz-Küçükkaya 2013), characterized by prolonged bleeding times, thrombocytopenia and the appearance of giant platelets in the circulation (Johns *et al.* 2014). Mouse anti human CD42a antibody, clone FMC-25 has been successfully used as a capture reagent for platelet-autoantibody complexes in the sera of patients presenting thrombocytopenia associated with antiphospholipid syndrome (Godeau *et al.* 1997).
Flow Cytometry	Use 10ul of the suggested working dilution to label 1 x 10^6 cells in 100ul.
Histology Positive Control Tissue	Bone marrow
References	1. Zola, H. *et al.* (1984) Monoclonal antibodies against antigens of the human platelet surface: preparation and properties. Pathology. 16 (1): 73-8. 2. Berndt, M.C. *et al.* (1985) Molecular characterization of quinine/quinidine drug-dependent antibody platelet interaction using monoclonal antibodies. Blood. 66 (6): 1292-301. 3. Berndt, M.C. *et al.* (1985) Purification and preliminary characterization of the glycoprotein Ib complex in the human platelet membrane. Eur J Biochem. 151 (3): 637-49. 4. Berndt, M.C. *et al.* (1983) Additional glycoprotein defects in Bernard-Soulier's syndrome: confirmation of genetic basis by parental analysis. Blood. 62 (4): 800-7. 5. San Miguel, J.F. *et al.* (1985) Characterization of blast cells in chronic granulocytic leukaemia in transformation, acute myelofibrosis and undifferentiated leukaemia. II. Studies with monoclonal antibodies and terminal transferase. Br J Haematol. 59 (2): 297-309. 6. San Miguel, J.F. *et al.* (1986) Surface marker analysis in acute myeloid leukaemia and correlation with FAB classification. Br J Haematol. 64 (3): 547-60. 7. Smith GA *et al.* (2007) Severe fetomaternal alloimmune thrombocytopenia due to anti-human platelet antigen (HPA)-1a in a mother with a rare and silenced ITGB3*0101 (GPIIIa) allele. Vox Sang. 93 (4): 325-30. 8. Berndt, M.C. *et al.* (1988) Ristocetin-dependent reconstitution of binding of von Willebrand factor to purified human platelet membrane glycoprotein Ib-IX complex. Biochemistry. 27 (2): 633-40. 9. Yan, R. *et al.* (2011) Reconstitution of the platelet glycoprotein Ib-IX complex in phospholipid bilayer Nanodiscs. Biochemistry. 50: 10598-606. 10. Sailer, T. *et al.* (2006) The course of severe autoimmune thrombocytopenia in patients not undergoing splenectomy. Haematologica. 91: 1041-5.

11. Tomicic, M. *et al.* (2006) Frequency of HPA-15a and HPA-15b (Gov a/b) human platelet alloantigens in the Croatian population. Arch Med Res. 37: 172-4.
12. Starcevic, M. *et al.* (2010) Neonatal alloimmune thrombocytopenia caused by anti-HLA-A24 alloantibodies. Acta Paediatr. 99: 630-2.
13. Schallmoser, K. *et al.* (2006) Specificities of platelet autoantibodies and platelet activation in lupus anticoagulant patients: a relation to their history of thromboembolic disease. Lupus. 15: 507-14.
14. Meyer, O. *et al.* (2003) Diclofenac-induced antibodies against RBCs and platelets: two case reports and a concise review. Transfusion. 43: 345-9.
15. Lubenow, N. *et al* (2000) Very low platelet counts in post-transfusion purpura falsely diagnosed as heparin-induced thrombocytopenia. Report of four cases and review of literature. Thromb Res. 100: 115-25.
16. Ghevaert, C. *et al.* (2008) A nonsynonymous SNP in the ITGB3 gene disrupts the conserved membrane-proximal cytoplasmic salt bridge in the alphaIIbbeta3 integrin and cosegregates dominantly with abnormal proplatelet formation and macrothrombocytopenia. Blood. 111: 3407-14.
17. Bub, C.B. *et al.* (2016) The use of a potential novel tool in virtual crossmatching for platelet transfusion in platelet refractoriness. Vox Sang. 110 (1): 70-8.
18. Michel, M. *et al.* (2002) Platelet autoantibodies and lupus-associated thrombocytopenia. Br J Haematol. 119 (2): 354-8.
19. Schallmoser, K. *et al.* (2006) Delayed detectability of anti-HPA-3a by the MAIPA assay in a severe neonatal alloimmune thrombocytopenia, but successful transfusion of incompatible donor platelets: a case report. Vox Sang. 91 (2): 181-3.
20. Wihadmadyatami, H. *et al.* (2015) Alloantibody against new platelet alloantigen (Lap(a)) on glycoprotein IIb is responsible for a case of fetal and neonatal alloimmune thrombocytopenia. Transfusion. 55 (12): 2920-9.

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	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos., HRP
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Rabbit Anti Mouse IgG (STAR8...)	DyLight®800
Rabbit Anti Mouse IgG (STAR13...)	HRP
Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG (STAR70...)	FITC

Goat Anti Mouse IgG (Fc) (STAR120...)	FITC, HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos., DyLight®488, DyLight®680, DyLight®800, FITC, HRP

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA928)

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

'M343845:190111'

Printed on 20 May 2019