

Datasheet: MCA594

Description:	MOUSE ANTI HUMAN CD42a
Specificity:	CD42a
Other names:	GPIX
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	FMC-25
Isotype:	IgG1
Quantity:	0.25 mg

Product Details

RRID AB_321697

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 (NaN₃)

Carrier Free Yes

Approx. Protein Concentrations IgG concentration 1.0 mg/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 10⁶ 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 alphaIIb beta3 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.
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Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
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Regulatory	For research purposes only
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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
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