

**International Blood Group
Reference Laboratory**500 North Bristol Park
Northway
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Antigen	CD41/CD61
Clone	PAB-6
Product Code	9460
Immunoglobulin Class	Mouse IgG1, kappa light chain

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and Production Unit**Tel: +44 (0)117 921 7500
Fax: +44 (0)117 912 5796Website: <http://ibgri.blood.co.uk>Email: enquiries.IBGRL@nhsbt.nhs.uk**Antigen Description and Distribution**

Integrin GpIIb (CD41) is a 135 kDa calcium-dependent, noncovalently associated heterodimer consisting of a heavy chain (GpIIb alpha; 120kDa) and a light chain (GpIIb beta; 23kDa) linked by a single disulfide bond. The alpha chain contains four calcium-binding sites and is entirely extracellular, while the beta chain has extracellular, transmembrane and cytoplasmic domains¹. The integrin alpha IIb chain interacts with the integrin beta 3 subunit (CD61) to form the platelet glycoprotein complex, GpIIb/IIIa. It is expressed on platelets and megakaryocytes. The CD41/CD61 complex appears early in megakaryocyte maturation². Ligands for the GpIIb/IIIa heterodimer include fibrinogen, von Willebrand factor, fibronectin, vitronectin, and thrombospondin. The GpIIb/IIIa complex is the major integrin on platelets and is important for clot retraction, platelet adhesion and aggregation.

Clone

PAB 6 does not have HPA-1a specificity but enables the detection of HPA-1, HPA-3 and other GpIIb/IIIa reactive antibodies. PAB 6 binds to platelets as determined by indirect immunofluorescence test and can be used to assess the presence/absence of GpIIb/IIIa on the surface of platelets in cases of suspected Glanzmann's thrombasthenia.

Suggested dilution in MAIPA³ assay: 1/10

This antibody can also be used in the indirect immunofluorescence test for detection of GpIIb/IIIa on the surface of platelets in the investigation of suspected Glanzmann's thrombasthenia.

Please perform your own experiments to determine the optimal dilutions for use in your laboratory.

References

1. Sun QH, Newman PJ. CD guide. CD41. In: Kishimoto T, Kikutani H, von dem Borne AEG, Goyert SM, Mason DY, Miyasaka M, et al., editors. Leucocyte typing VI. White cell differentiation antigens. Proceedings of the 6th International Workshop and Conference; 1996 Nov 10-14; Kobe, Japan. New York, London: Garland Publishing Inc.; 1997. p. 1139.
2. Vinci G, Tabilio A, Deschamps JF, van Haeke D, Henri A, Guichard J, et al. Immunological study of *in vitro* maturation of human megakaryocytes. Br J Haematol 1984;56:589-605.
3. Campbell K, Rishi K, Howkins G, Gilby D, Mushens R, Ghevaert C, Metcalfe P, Ouwehand W, Lucas G (2007). A modified rapid monoclonal antibody-specific immobilisation of platelet antigen assay for the detection of human platelet antigens (HPA) antibodies: a multicentre evaluation. Vox Sanguinis, **93**, 289-297.