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Antigen	CD41/CD61
Clone	PAB-1
Product Code	9459
Immunoglobulin Class	Mouse IgG1, kappa light chain

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-1 does not have HPA-1a specificity but enables the detection of HPA-1, HPA-3 and other GpIIb/IIIa reactive antibodies. PAB-1 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 MAIPA assay: 1/10

PAB1 binds to platelets in immunofluorescence tests as assessed by flowcytometry.

Please perform your own experiments to confirm 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.