

Human Glycoprotein V/CD42d PE-conjugated Antibody

Monoclonal Mouse IgG₁ Clone # 508209

Catalog Number: FAB4249P

100 Tests

DESCRIPTION			
Species Reactivity	Human		
Specificity	Detects human Glycoprotein V/CD42d in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human GPVI is observed.		
Source	Monoclonal Mouse IgG ₁ Clone # 508209		
Purification	Protein A or G purified from hybridoma culture supernatant		
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Glycoprotein V/CD42d Gln17-Gly523 Accession # P40197		
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm		
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.		
	*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.		

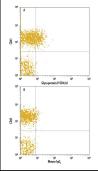
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Flow Cytometry	10 μL/10 ⁶ cells	See Below

DATA

Flow Cytometry



Detection of Glycoprotein V/CD42d in Human Blood Platelets by Flow Cytometry. Human peripheral blood platelets were stained with Anti-Human CD41 FITC-conjugated Antibody and either (A) Mouse Anti-Human Glycoprotein V/CD42d PE-conjugated Monoclonal Antibody (Catalog # FAB4249P) or (B) Mouse IgG₁ Phycoerythrin Isotype Control (Catalog # IC002P). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage

Protect from light. Do not freeze.

• 12 months from date of receipt, 2 to 8 °C as supplied.



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BACKGROUND

GPV (platelet glycoprotein V; designated CD42d) is an 83 kDa type I transmembrane (TM) glycoprotein of the leucine-rich repeat (LRR) family (1, 2). It is expressed exclusively within the platelet / megakaryocyte lineage, where it noncovalently interacts with other platelet TM LRR proteins, GPlbα/β and GPIX, at a ratio of one GPV to two of each other subunit (2). The GPI-V-IX complex tethers platelets to von Willebrand factor on the surface of injured endothelial cells. Absence of the complex results in Bernard-Soulier syndrome, a rare bleeding disorder (1-3). The human GPV cDNA encodes a 560 amino acid (aa) protein with a 16 aa signal sequence, a 507 aa extracellular domain (ECD) containing 15 LRR, a 21 aa TM sequence, and a short (16 aa) cytoplasmic tail that binds calmodulin in resting, but not activated platelets. The human GPV ECD shares 70%, 71% and 81% aa identity with mouse, rat and equine GPV, respectively. GPV can form soluble fragments of 80 kDa by ADAM10 or ADAM17 cleavage after P507, or 69 kDa by thrombin cleavage after R476 (1, 4, 5). High circulating soluble GPV may be an indicator of platelet activation, but may also be caused by high doses of aspirin (6-8). The function of GPV is not entirely clear. Deletion of GPV in mice does not produce any obvious change to surface expression or function of GPIb and GPIX, but surface expression of GPV requires GPIb (9, 10). Deletion studies also indicate that GPV may play a minor role in collagen adhesion, and may modify platelet aggregation in response to thrombin (3, 11-15).

References:

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