

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Glycoprotein V/CD42d in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with recombinant human GPVI is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Glycoprotein V/CD42d Gln17-Gly523 Accession # P40197
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.

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

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, GPIIb/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).

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