

# Anti-CD61 / Integrin beta-3 / Platelet Glycoprotein IIIa Antibody

Mouse Monoclonal Antibody

Catalog # AH13333

## Product Information

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<b>Application</b>	IHC-P, IHC-F, IF, FC
<b>Primary Accession</b>	<a href="#">P05106</a>
<b>Other Accession</b>	<a href="#">218040</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Isotype</b>	Mouse / IgG1, kappa
<b>Clone Names</b>	ITGB3/1713
<b>Calculated MW</b>	87058

## Additional Information

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<b>Gene ID</b>	3690
<b>Other Names</b>	BDPLT2; GP3A; GPIIIa; GT; HPA 1; HPA 4; Integrin beta-3; ITGB3; NAIT; Platelet fibrinogen receptor beta subunit; Platelet glycoprotein IIIa; PTP
<b>Application Note</b>	Flow Cytometry (0.5-1ug/million cells in 0.1ml); ,Immunofluorescence (0.5-1ug/ml); ,Immunohistology (Frozen & Formalin-fixed) (1-2ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 10-20 min followed by cooling at RT for 20 minutes) ,Optimal dilution for a specific application should be determined.
<b>Format</b>	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
<b>Storage</b>	Store at 2 to 8°C.Antibody is stable for 24 months.
<b>Precautions</b>	Anti-CD61 / Integrin beta-3 / Platelet Glycoprotein IIIa Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	ITGB3 ( <a href="#">HGNC:6156</a> )
<b>Synonyms</b>	GP3A

Integrin alpha-V/beta-3 (ITGAV:ITGB3) is a receptor for cytотactин,

<b>Function</b>	fibronectin, laminin, matrix metalloproteinase-2, osteopontin, osteomodulin, prothrombin, thrombospondin, vitronectin and von Willebrand factor. Integrin alpha-IIb/beta-3 (ITGA2B:ITGB3) is a receptor for fibronectin, fibrinogen, plasminogen, prothrombin, thrombospondin and vitronectin. Integrins alpha-IIb/beta-3 and alpha-V/beta-3 recognize the sequence R-G-D in a wide array of ligands. Integrin alpha-IIb/beta-3 recognizes the sequence H-H-L-G-G-A-K-Q-A-G-D-V in fibrinogen gamma chain (By similarity). Following activation integrin alpha-IIb/beta-3 brings about platelet/platelet interaction through binding of soluble fibrinogen (PubMed: <a href="#">9111081</a> ). This step leads to rapid platelet aggregation which physically plugs ruptured endothelial surface. Fibrinogen binding enhances SELP expression in activated platelets (By similarity). ITGAV:ITGB3 binds to fractalkine (CX3CL1) and acts as its coreceptor in CX3CR1-dependent fractalkine signaling (PubMed: <a href="#">23125415</a> , PubMed: <a href="#">24789099</a> ). ITGAV:ITGB3 binds to NRG1 (via EGF domain) and this binding is essential for NRG1-ERBB signaling (PubMed: <a href="#">20682778</a> ). ITGAV:ITGB3 binds to FGF1 and this binding is essential for FGF1 signaling (PubMed: <a href="#">18441324</a> ). ITGAV:ITGB3 binds to FGF2 and this binding is essential for FGF2 signaling (PubMed: <a href="#">28302677</a> ). ITGAV:ITGB3 binds to IGF1 and this binding is essential for IGF1 signaling (PubMed: <a href="#">19578119</a> ). ITGAV:ITGB3 binds to IGF2 and this binding is essential for IGF2 signaling (PubMed: <a href="#">28873464</a> ). ITGAV:ITGB3 binds to IL1B and this binding is essential for IL1B signaling (PubMed: <a href="#">29030430</a> ). ITGAV:ITGB3 binds to PLA2G2A via a site (site 2) which is distinct from the classical ligand-binding site (site 1) and this induces integrin conformational changes and enhanced ligand binding to site 1 (PubMed: <a href="#">18635536</a> , PubMed: <a href="#">25398877</a> ). ITGAV:ITGB3 acts as a receptor for fibrillin-1 (FBN1) and mediates R-G-D-dependent cell adhesion to FBN1 (PubMed: <a href="#">12807887</a> ). In brain, plays a role in synaptic transmission and plasticity. Involved in the regulation of the serotonin neurotransmission, is required to localize to specific compartments within the synapse the serotonin receptor SLC6A4 and for an appropriate reuptake of serotonin. Controls excitatory synaptic strength by regulating GRIA2-containing AMPAR endocytosis, which affects AMPAR abundance and composition (By similarity). ITGAV:ITGB3 act as a receptor for CD40LG (PubMed: <a href="#">31331973</a> ). ITGAV:ITGB3 acts as a receptor for IBSP and promotes cell adhesion and migration to IBSP (PubMed: <a href="#">10640428</a> ). Integrin ITGA2B:ITGB3 is also the receptor of the erythrocyte-specific ICAM4 ligand involved in heterotypic cell-cell adhesion between erythrocytes and activated platelets (PubMed: <a href="#">12477717</a> ).
<b>Cellular Location</b>	Cell membrane; Single-pass type I membrane protein. Cell projection, lamellipodium membrane. Cell junction, focal adhesion. Postsynaptic cell membrane {ECO:0000250 UniProtKB:O54890}; Single-pass type I membrane protein {ECO:0000250 UniProtKB:O54890}. Synapse {ECO:0000250 UniProtKB:O54890}
<b>Tissue Location</b>	Isoform beta-3A and isoform beta-3C are widely expressed. Isoform beta-3A is specifically expressed in osteoblast cells; isoform beta-3C is specifically expressed in prostate and testis

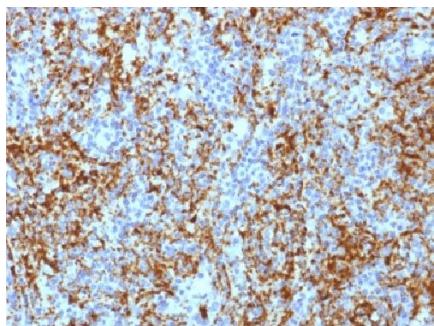
## Background

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Reacts with human integrin beta3 (GPIIIa, vitronectin receptor beta chain). It associates with the  $\alpha$ V-chain (CD51) to form vitronectin receptor, or with the  $\alpha$ IIb-chain (CD41) to form the GpIIb/GpIIIa complex (CD41/CD61). The CD41/CD61 complex appears early in megakaryocyte maturation. The activated CD41/CD61 complex is a receptor for von Willebrand factor, soluble fibrinogen, fibronectin, vitronectin and thrombospondin. It plays a central role in platelet activation and aggregation. The CD51/CD61 is implicated in tumor metastasis and adenoviral infection. The antibody detects platelets in smears of blood and bone marrow, as well as megakaryocytes in frozen sections and cell smears. The antibody is useful for classification of megakaryoblastic leukemia.

## Images

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Formalin-fixed, paraffin-embedded human Spleen  
stained with CD61 Monoclonal Antibody (ITGB3/1713).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.