10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CD61 / Integrin beta-3 (Platelet Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone 25E11.]
Catalog # AH11613

Product Information

Application	IF, FC
Primary Accession	P05106
Other Accession	3690, 218040
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgM, kappa
Clone Names	25E11.
Calculated MW	87058

Additional Information

Gene ID	3690
Other Names	Integrin beta-3, Platelet membrane glycoprotein IIIa, GPIIIa, CD61, ITGB3, GP3A
Application Note	IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	CD61 / Integrin beta-3 (Platelet Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ITGB3 (HGNC:6156)
Synonyms	GP3A
Function	Integrin alpha-V/beta-3 (ITGAV:ITGB3) is a receptor for cytotactin, fibronectin, laminin, matrix metalloproteinase-2, osteopontin, osteomodulin, prothrombin, thrombospondin, vitronectin and von Willebrand factor (VWF). 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-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:9111081). 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:23125415, PubMed:24789099). ITGAV:ITGB3 binds to NRG1 (via EGF domain) and this binding is essential for NRG1-ERBB signaling (PubMed:20682778). ITGAV:ITGB3 binds to FGF1 and this binding is essential for FGF1 signaling (PubMed:18441324). ITGAV:ITGB3 binds to FGF2 and this binding is essential for FGF2 signaling (PubMed:28302677). ITGAV:ITGB3 binds to IGF1 and this binding is essential for IGF1 signaling (PubMed:19578119). ITGAV:ITGB3 binds to IGF2 and this binding is essential for IGF2 signaling (PubMed:28873464). ITGAV:ITGB3 binds to IL1B and this binding is essential for IL1B signaling (PubMed:29030430). 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:18635536, PubMed:25398877). ITGAV:ITGB3 acts as a receptor for fibrillin-1 (FBN1) and mediates R-G-D-dependent cell adhesion to FBN1 (PubMed:12807887). 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:31331973). ITGAV:ITGB3 acts as a receptor for IBSP and promotes cell adhesion and migration to IBSP (PubMed:10640428). 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:12477717). ITGAV:ITGB3 acts as a receptor for SNED1 and mediates R-G-D-dependent cell adhesion to SNED1 (PubMed:39713860).
Cellular Location	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}
Tissue Location	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

Reacts with human integrin beta3 (GPIIIa, vitronectin receptor beta chain). The protein detectable is a complex of CD41 and CD61.The apparent molecular weight of the GPIIIa by SDS-PAGE is 105kDa reduced and 90kDa unreduced. Ligands are fibronectin, fibrinogen, von Willebrand factor, vitronectin and thrombospondin. Residues 237-248 of GPIIIa or CD61 are critical in adhesive protein binding. □

References

McMichael AJ et al. (eds) Leukocyte Typing III, Oxford University Press, Oxford, 1987. | Schlossman S. et al. (eds) Leukocyte Typing V, Oxford University Press, Oxford, 1995

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