

Integrin Beta-3 Antibody (Y773)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AE1017a

Specification

Integrin Beta-3 Antibody (Y773) - Product Information

Application	WB, IHC
Primary Accession	P05106
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Concentration	1mg/ml
Isotype	Rabbit IgG
Calculated MW	87058

Integrin Beta-3 Antibody (Y773) - Additional Information

Gene ID 3690

Other Names

Integrin beta-3, Platelet membrane glycoprotein IIIa, GPIIIa, CD61, ITGB3, GP3A

Target/Specificity

The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Dilution

IHC~~1:50~1:100

Format

affinity Purified IgG, in PBS, 0.02% sodium azide and 50% glycerol.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Integrin Beta-3 Antibody (Y773) is for research use only and not for use in diagnostic or therapeutic procedures.

Integrin Beta-3 Antibody (Y773) - 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. 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).

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

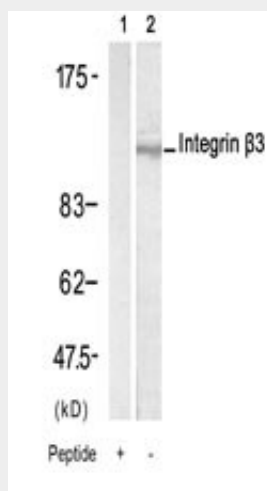
Isoform beta-3A and isoform beta-3C are widely expressed. Isoform beta-3A is specifically expressed in osteoblast cells; isoform beta-3C is specifically expressed in prostate and testis

Integrin Beta-3 Antibody (Y773) - Protocols

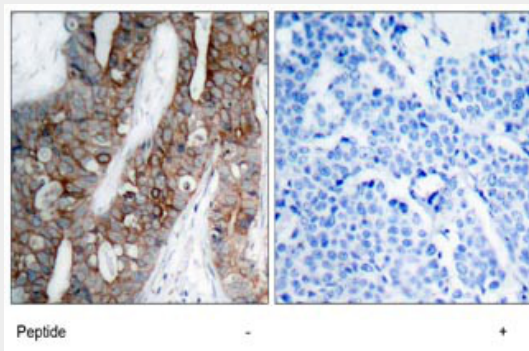
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Integrin Beta-3 Antibody (Y773) - Images



Western blot analysis of extracts from HUVEC cells using Integrin Beta-3 Antibody (Y773) .



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using Integrin Beta-3 Antibody (Y773) (#AE1017a).

Integrin Beta-3 Antibody (Y773) - Background

The ITGB3 protein product is the integrin beta chain beta 3. Integrins are integral cell-surface proteins composed of an alpha chain and a beta chain. A given chain may combine with multiple partners resulting in different integrins. Integrin beta 3 is found along with the alpha IIb chain in platelets. Integrins are known to participate in cell adhesion as well as cell-surface mediated signalling.

Integrin Beta-3 Antibody (Y773) - References

Platelet glycoprotein IIIa (platelet antigen 1/platelet antigen 2) polymorphism and 1-year outcome in patients with stable coronary artery disease. Addad F, et al. Blood Coagul Fibrinolysis, 2010 Aug 25. PMID 20739877.

Platelet gene polymorphisms and risk of bleeding in patients undergoing elective coronary angiography: A genetic substudy of the PRAGUE-8 trial. Motovska Z, et al. *Atherosclerosis*, 2010 Jul 16. PMID 20691446.

A genetic association study of maternal and fetal candidate genes that predispose to preterm prelabor rupture of membranes (PROM). Romero R, et al. *Am J Obstet Gynecol*, 2010 Jul 29. PMID 20673868.

The allele frequencies of HPA 1-16 determined by PCR-SSP in Chinese Cantonese donors. Nie YM, et al. *Transfus Med*, 2010 Jul 28. PMID 20667040.

Maternal genes and facial clefts in offspring: a comprehensive search for genetic associations in two population-based cleft studies from Scandinavia. Jugessur A, et al. *PLoS One*, 2010 Jul 9. PMID 20634891.