

# Integrin $\beta$ 3 Polyclonal Antibody

Catalog # AP73775

## Product Information

Application	WB, IHC-P
Primary Accession	<a href="#">P05106</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	87058

## Additional Information

Gene ID	3690
Other Names	ITGB3; GP3A; Integrin beta-3; Platelet membrane glycoprotein IIIa; GPIIIa; CD61
Dilution	WB~~WB 1:500-2000, ELISA 1:10000-20000 IHC 1:50-300 IHC-P~~WB 1:500-2000, ELISA 1:10000-20000 IHC 1:50-300
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

## Protein Information

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

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}

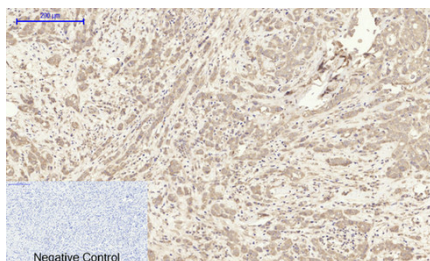
#### Tissue Location

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

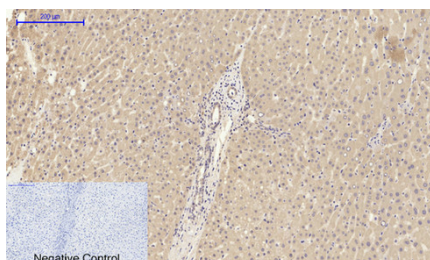
## Background

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-A-K-Q-A-G-D-V in fibrinogen gamma chain. Following activation integrin alpha- IIb/beta-3 brings about platelet/platelet interaction through binding of soluble fibrinogen. 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](#)).

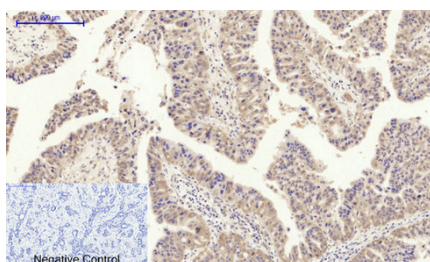
## Images



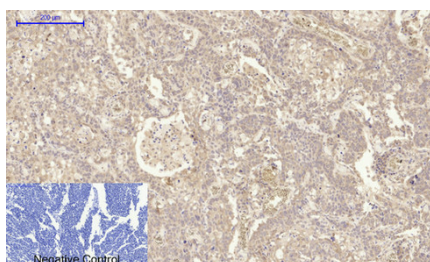
Human-breast-cancer tissue. 1,Integrin  $\beta 3$  Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



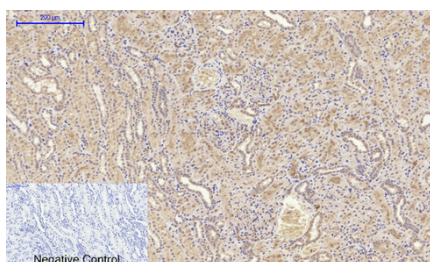
Immunohistochemical analysis of paraffin-embedded Human-liver tissue. 1,Integrin  $\beta 3$  Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



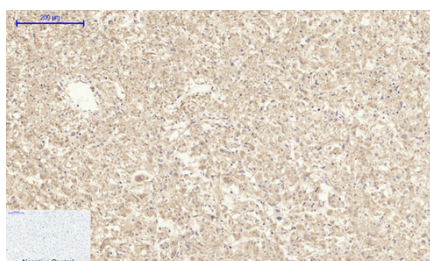
Immunohistochemical analysis of paraffin-embedded Human-liver-cancer tissue. 1,Integrin  $\beta 3$  Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Immunohistochemical analysis of paraffin-embedded Human-lung-cancer tissue. 1,Integrin  $\beta 3$  Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

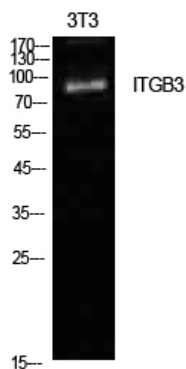


Immunohistochemical analysis of paraffin-embedded Human-kidney tissue. 1,Integrin  $\beta 3$  Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

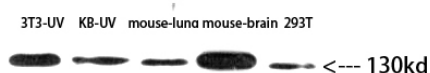
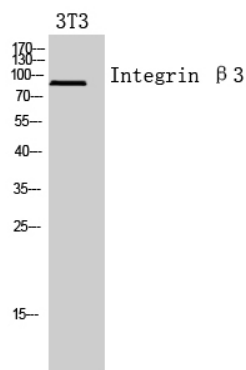


Immunohistochemical analysis of paraffin-embedded Human-kidney-cancer tissue. 1,Integrin  $\beta 3$  Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

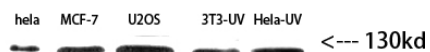
Western Blot analysis of NIH-3T3 cells using Integrin  $\beta 3$  Polyclonal Antibody. Antibody was diluted at 1:2000. Secondary antibody was diluted at 1:20000



Western Blot analysis of 3T3 cells using Integrin  $\beta$ 3 Polyclonal Antibody diluted at 1 : 2000. Secondary antibody was diluted at 1:20000



Western Blot analysis of hela MCF-7 U2OS 3T3-UV Hela-UV using Integrin  $\beta$ 3 Polyclonal Antibody diluted at 1:2000. Secondary antibody was diluted at 1:20000



Western Blot analysis of 3T3-UV KB-UV mouse-lung mouse-brain 293T using Integrin  $\beta$ 3 Polyclonal Antibody diluted at 1:2000. Secondary antibody was diluted at 1:20000

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