

## Integrin $\beta 3$ (ANT0045R) Rabbit mAb

CatalogNo: ANT8284 **Recombinant** 

Formulation: PBS,50%glycerol,0.05%Proclin 300,0.05%BSA  
Quantity : 100 ug/vial

### Host Species

- Rabbit
- Human,Mouse,Rat,

### Reactivity

- WB,IHC,IF,IP,ELISA

### Applications

### MW

- 87kD (Calculated)
- 100kD (Observed)

### Isotype

- IgG,Kappa

## Recommended Dilution Ratios

IHC 1:1000-1:4000

WB 1:500-1:2000

IF 1:200-1:1000

ELISA 1:5000-1:20000

IP 1:50-1:200

## Storage

**Storage\*** -15°C to -25°C/1 year(Do not lower than -25°C)

## Basic Information

**Clonality** Monoclonal

**Clone Number** ANT0045R

## Target Information

Endogenous

Gene name	ITGB3 GP3A		
Protein Name	Integrin beta-3 (Platelet membrane glycoprotein IIIa) (GPIIIa) (CD antigen CD61)		
	Organism	Gene ID	UniProt ID
	Human	<a href="#">3690</a> ;	<a href="#">P05106</a> ;
	Mouse	<a href="#">16416</a> ;	<a href="#">Q54890</a> ;
Cellular Localization	Membrane		
Tissue specificity	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.		

## Function

Disease: Defects in ITGB3 are a cause of Glanzmann thrombasthenia (GT) [MIM:273800]; also known as thrombasthenia of Glanzmann and Naegeli. GT is the most common inherited disease of platelets. Its inheritance is autosomal recessive. It is characterized by mucocutaneous bleeding of mild-to-moderate severity and the inability of this integrin to recognize macromolecular or synthetic peptide ligands. GT has been classified clinically into types I and II. In type I, platelets show absence of the glycoprotein IIb-IIIa complexes at their surface and lack fibrinogen and clot retraction capability. In type II, the platelets express the GPIIb-IIIa complex at reduced levels (5-20% controls), have detectable amounts of fibrinogen, and have low or moderate clot retraction capability. The platelets of GT variants have normal or near normal (60-100%) expression of dysfunctional receptors.

Function: Integrin alpha-V/beta-3 is a receptor for cytotactin, fibronectin, laminin, matrix metalloproteinase-2, osteopontin, osteomodulin, prothrombin, thrombospondin, vitronectin and von Willebrand factor. Integrin alpha-IIb/beta-3 is a receptor for fibronectin, fibrinogen, plasminogen, prothrombin, thrombospondin and vitronectin. Integrins alphaIIb/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. 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. In case of HIV-1 infection, the interaction with extracellular viral Tat protein seems to enhance angiogenesis in Kaposi's sarcoma lesions.

online information: The Singapore human mutation and polymorphism database, polymorphism: Position 169 is associated with platelet-specific alloantigen HPA-4 (PEN or YUK). HPA-4A/PEN(A)/YUK(A) has Arg-169 and HPA-4B/PEN(B)/YUK(B) has Gln-169. HPA-4B is involved in neonatal alloimmune thrombocytopenia (NAIT or NATP).

polymorphism: Position 433 is associated with platelet-specific alloantigen MO. MO(-) has Pro-433 and MO(+) has Ala-433. MO(+) is involved in NAIT.

polymorphism: Position 515 is associated with platelet-specific alloantigen CA/TU. CA(-)/TU(-) has Arg-515 and CA(+)/TU(+) has Gln-515. CA(+) is involved in NAIT.

polymorphism: Position 59 is associated with platelet-specific alloantigen HPA-1 (ZW or PL(A)). HPA-1A/ZW(A)/PL(A1) has Leu-59 and HPA-1B/ZW(B)/PL(A2) has Pro-59.

polymorphism: Position 662 is associated with platelet-specific alloantigen SR(A). SR(A)(-) has Arg-662 and SR(A)(+) has Cys-662.

ANTM: Phosphorylated on tyrosine residues in response to thrombin-induced platelet aggregation. Probably involved in outside-in signaling. A peptide (AA 740-762) is capable of binding GRB2 only when both Tyr-773 and Tyr-785 are phosphorylated. Phosphorylation of Thr-779 inhibits SHC binding.

similarity: Belongs to the integrin beta chain family.

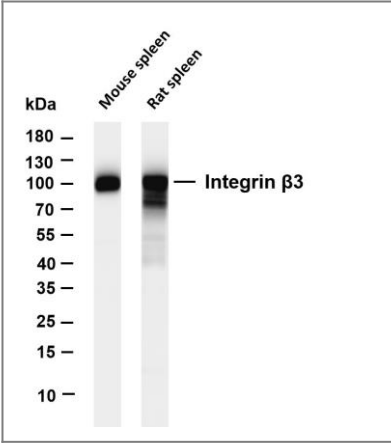
similarity: Contains 1 VWFA domain.

subunit: Heterodimer of an alpha and a beta subunit. Beta-3 associates with either alpha-IIb or alpha-V. Isoform Beta-3C interacts with FLNB. Interacts with HIV-1 Tat.

tissue specificity: 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.

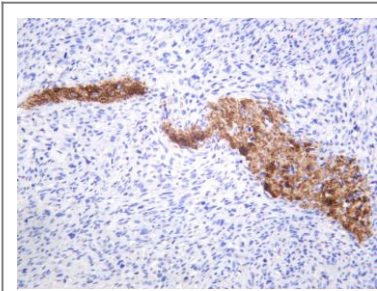
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# Validation Data

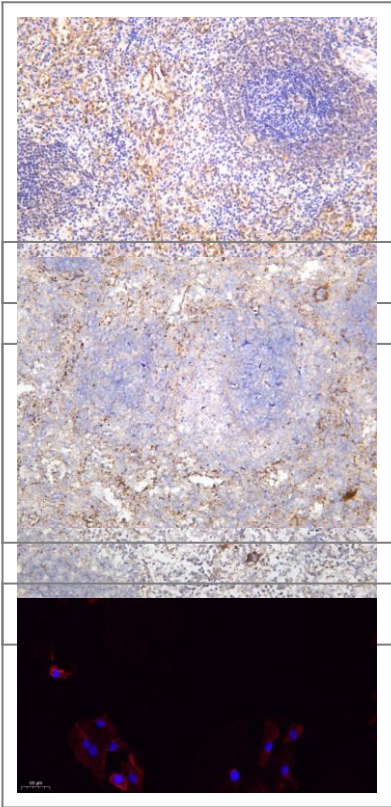


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-Integrin  $\beta 3$  (ANT0045R) antibody. The HRPconjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: Mouse spleen Lane 2: Rat spleen Predicted band size: 87kDa Observed band size: 100kDa

Human osteosarcomas was stained with anti-Integrin  $\beta 3$  (ANT0045R) rabbit antibody



Human spleen was stained with anti-Integrin  $\beta 3$  (ANT0045R) rabbit antibody



Mouse spleen was stained with anti-Integrin  $\beta 3$  (ANT0045R) rabbit antibody Rat spleen was stained with anti-Integrin  $\beta 3$  (ANT0045R) rabbit antibody

Immunofluorescence analysis of A549. 1,primary Antibody(red) was diluted at 1:200(4°C overnight). 2, Goat Anti Rabbit IgG (H&L) - Alexa Fluor 594 Secondary antibody was diluted at 1:1000(room temperature, 50min).3, Picture B: DAPI(blue) 10min.

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