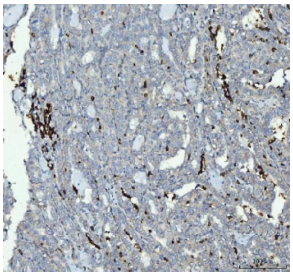
Integrin Beta 3 Antibody / GPIIIa Polyclonal Antibody (R30709)

Catalog No.	Formulation	Size
R30709	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

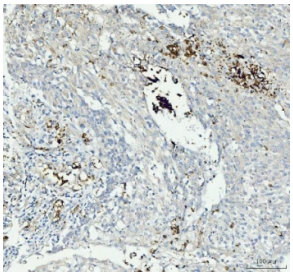
Citations (1)

Bulk quote request

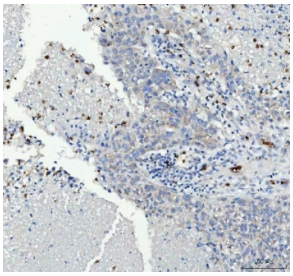
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P05106
RRID	AB_3756647
Localization	Cell surface, cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This Integrin Beta 3 Antibody / GPIIIa Polyclonal Antibody is available for research use only.



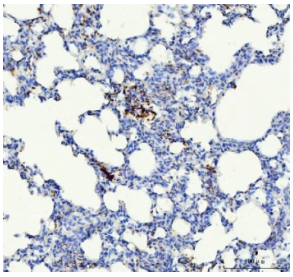
Integrin Beta 3 Antibody in Human Thyroid Cancer IHC. Immunohistochemistry staining of FFPE human thyroid cancer tissue with Integrin Beta 3 Antibody. HIER was performed by boiling tissue sections in pH 8 EDTA for 20 min followed by cooling before testing. Positive brown staining is visible within discrete cellular areas of the tissue, contrasting with the blue hematoxylin counterstain. The staining demonstrates detection of ITGB3 using the GPIIIa Polyclonal Antibody.



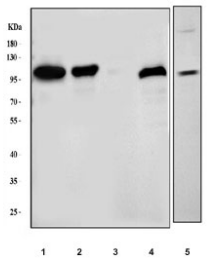
Integrin Beta 3 Antibody in Human Laryngeal Squamous Cell Carcinoma IHC. Immunohistochemistry staining of FFPE human laryngeal squamous cell carcinoma tissue with Integrin Beta 3 Antibody. HIER was performed by boiling tissue sections in pH 8 EDTA for 20 min followed by cooling before testing. Brown immunoreactivity is distributed heterogeneously through the section, with distinctly positive cellular regions readily visible against the counterstained tissue. This pattern demonstrates detection of ITGB3 with the GPIIIa Polyclonal Antibody.



Integrin Beta 3 Antibody in Human Liver Cancer IHC. Immunohistochemistry staining of FFPE human liver cancer tissue with Integrin Beta 3 Antibody. HIER was performed by boiling tissue sections in pH 8 EDTA for 20 min followed by cooling before testing. The section displays localized brown ITGB3 immunoreactivity rather than uniform staining throughout the tissue. Positive cellular structures are clearly distinguishable from surrounding counterstained areas, supporting tissue detection with the GPIIIa Polyclonal Antibody.



Integrin Beta 3 Antibody in Rat Lung IHC. Immunohistochemistry staining of FFPE rat lung tissue with Integrin Beta 3 Antibody. HIER was performed by boiling tissue sections in pH 8 EDTA for 20 min followed by cooling before testing. Brown staining is visible along cellular structures bordering multiple alveolar spaces, producing a distinct pattern against the blue hematoxylin counterstain. The result demonstrates cross-species detection of integrin beta 3 with the GPIIIa Polyclonal Antibody.



Integrin Beta 3 Antibody Western Blot of Human Cells and Rodent Spleen. Western blot testing of human U-87 MG (lane 1), human HEL (lane 2), human HeLa (lane 3), rat spleen (lane 4), and mouse spleen (lane 5) lysates with Integrin Beta 3 Antibody. A predominant band is detected within the expected 87-110 kDa range for glycosylated ITGB3 across the tested samples. The multi-species blot supports recognition of human, rat, and mouse integrin beta 3 by the GPIIIa Polyclonal Antibody.

Description

Integrin Beta 3 Antibody recognizes integrin beta 3, a transmembrane adhesion receptor subunit encoded by the ITGB3 gene and also known as CD61, GPIIIa, or glycoprotein IIIa. ITGB3 belongs to the integrin beta chain family and associates with specific alpha integrin subunits to form heterodimeric cell-surface receptors. Its major partners include integrin alpha IIb/CD41 and integrin alpha V/CD51, generating receptors with important functions in platelet biology, cell adhesion, and extracellular matrix interactions.

Association of integrin beta 3 with CD41 forms alpha IIb beta 3, historically known as the glycoprotein IIb/IIIa complex. This receptor has a central role in platelet aggregation. Following platelet activation, conformational changes increase its affinity for fibrinogen and other adhesive ligands, allowing alpha IIb beta 3 molecules on adjacent platelets to form adhesive bridges. The receptor also interacts with von Willebrand factor, fibronectin, vitronectin, and thrombospondin.

ITGB3 also associates with CD51 to form alpha V beta 3, commonly called the vitronectin receptor. This integrin recognizes extracellular matrix proteins containing RGD motifs and participates in cell adhesion, migration, survival, and signaling. Alpha V beta 3 has been extensively studied in endothelial cell function, angiogenesis, osteoclast-mediated bone remodeling, and tumor-associated cellular processes.

Beta 3 integrins participate in bidirectional signaling across the plasma membrane. Inside-out signaling regulates receptor conformation and ligand affinity, whereas ligand binding initiates outside-in signaling that influences cytoskeletal organization, cell spreading, migration, and survival. These coordinated signaling mechanisms allow beta 3-containing integrins to translate intracellular activation signals into adhesive responses and extracellular interactions into cellular responses.

Pathogenic alterations affecting ITGB3 can impair alpha IIb beta 3 function and contribute to Glanzmann thrombasthenia, an inherited bleeding disorder characterized by defective platelet aggregation. Beta 3 integrins are consequently studied

in hemostasis, thrombosis, vascular biology, angiogenesis, bone physiology, and cancer biology.

An Integrin Beta 3 Antibody can be used to investigate expression of the ITGB3-encoded beta 3 integrin subunit, while a GPIIIa Polyclonal Antibody provides an alternative reagent designation based on the protein's historically important platelet glycoprotein nomenclature.

For a broadly validated polyclonal reagent targeting this protein, see our CD61 Antibody / ITGB3 Polyclonal Antibody page.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the Integrin Beta 3 Antibody / GPIIIa Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the C-terminus of human Integrin beta 3 (EFAKFEEERARAKWDTANN) was used as the immunogen for this Integrin beta 3 antibody (100% homologous in human, mouse and rat).

Storage

After reconstitution, the Integrin beta 3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

ITGB3 antibody, CD61 antibody, GPIIIa antibody, Glycoprotein IIIa antibody, Platelet Glycoprotein IIIa antibody, Vitronectin Receptor Beta Chain antibody

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