

Product datasheet

Anti-Integrin beta 3 antibody [ERP17507] ab179473

Recombinant RabMAb

★★★★★ [2 Abreviews](#) [6 References](#) [7 Images](#)

Overview

Product name	Anti-Integrin beta 3 antibody [ERP17507]
Description	Rabbit monoclonal [ERP17507] to Integrin beta 3
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P Unsuitable for: IP
Species reactivity	Reacts with: Mouse, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HT-29, HEK-293, HUVEC, HeLa and HEL 92.1.7 whole cell lysates; Human spleen lysate; Human plasma. IHC-P: Human spleen, osteosarcomas and thyroid cancer tissues. IP: HUVEC whole cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	ERP17507

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab179473 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (1)	1/1000. Detects a band of approximately 130, 97 kDa (predicted molecular weight: 87 kDa).
IHC-P		1/800. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Application notes

Is unsuitable for IP.

Target

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 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. 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.

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.

Involvement in 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. It is an autosomal recessive disorder 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/beta-3 complexes at their surface and lack fibrinogen and clot retraction capability. In type II, the platelets express the glycoprotein IIb/beta-3 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.

Sequence similarities

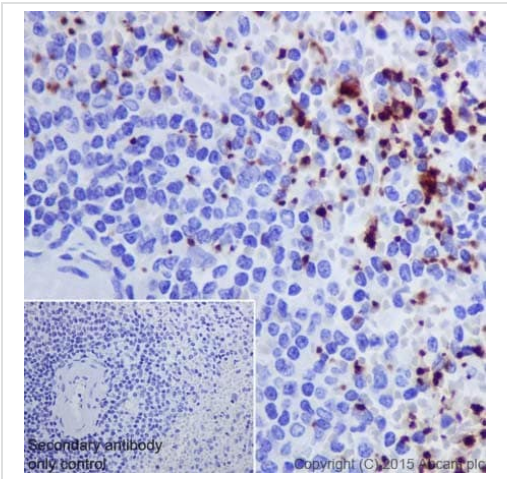
Belongs to the integrin beta chain family.
Contains 1 VWFA domain.

Post-translational modifications

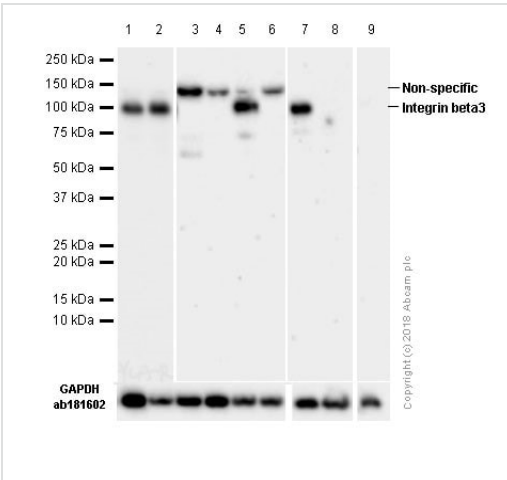
Phosphorylated on tyrosine residues in response to thrombin-induced platelet aggregation. Probably involved in outside-in signaling. A peptide (AA 740-762) is capable of binding GRB2 only when both Tyr-773 and Tyr-785 are phosphorylated. Phosphorylation of Thr-779 inhibits SHC binding.

Cellular localization

Membrane.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 3 antibody [ERP17507] (ab179473)



Western blot - Anti-Integrin beta 3 antibody [ERP17507] (ab179473)

Immunohistochemical analysis of paraffin-embedded Human spleen tissue labeling Integrin beta 3 with ab179473 at 1/800 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

Positive staining on platelets (PMID: 25356112) of Human spleen is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [ab97051](#) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

All lanes : Anti-Integrin beta 3 antibody [ERP17507] (ab179473) at 1/500 dilution

Lane 1 : U-87MG (Human glioblastoma-astrocytoma epithelial cell) whole cell lysates with 5% NFDM/TBST

Lane 2 : HEL (Human Erythroleukemia erythroblast) whole cell lysates with 5% NFDM/TBST

Lane 3 : LnCaP (Human prostate carcinoma epithelial cell) whole cell lysates with 5% NFDM/TBST

Lane 4 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates with 5% NFDM/TBST

Lane 5 : HUVEC (Human umbilical vein endothelial cell) whole cell lysates with 5% NFDM/TBST

Lane 6 : PC-3 (Human prostate adenocarcinoma epithelial cell) whole cell lysates with 5% NFDM/TBST

Lane 7 : C2C12 (Mouse myoblasts myoblast) whole cell lysates with 5% NFDM/TBST

Lane 8 : Raw264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysates with 5% NFDM/TBST

Lane 9 : Mouse brain lysates with 5% NFDM/TBST

Lysates/proteins at 20 µg per lane.

Secondary

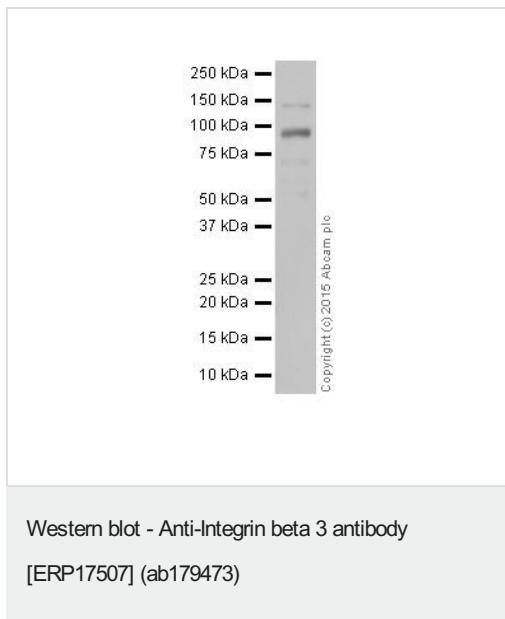
All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Predicted band size: 87 kDa

Observed band size: 110 kDa

Exposure time: 10 seconds

LnCaP, HeLa and PC-3 are low expression controls.



Anti-Integrin beta 3 antibody [ERP17507] (ab179473) at 1000 cells + HEL 92.1.7 (Human bone marrow erythroleukemia cell line) whole cell lysate at 10 μ g

Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

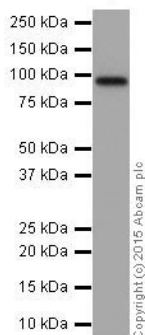
Predicted band size: 87 kDa

Observed band size: 97 kDa

Exposure time: 5 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

The molecular weight observed is consistent with the description in the literature (PMID: 1710517).



Western blot - Anti-Integrin beta 3 antibody
[ERP17507] (ab179473)

Anti-Integrin beta 3 antibody [ERP17507] (ab179473) at 1/5000 dilution + Human plasma at 10 µg

Secondary

Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

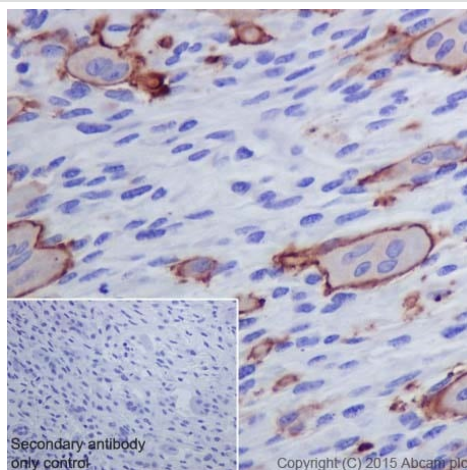
Predicted band size: 87 kDa

Observed band size: 97 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.

The molecular weight observed is consistent with the description in the literature (PMID: 1710517).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 3 antibody
[ERP17507] (ab179473)

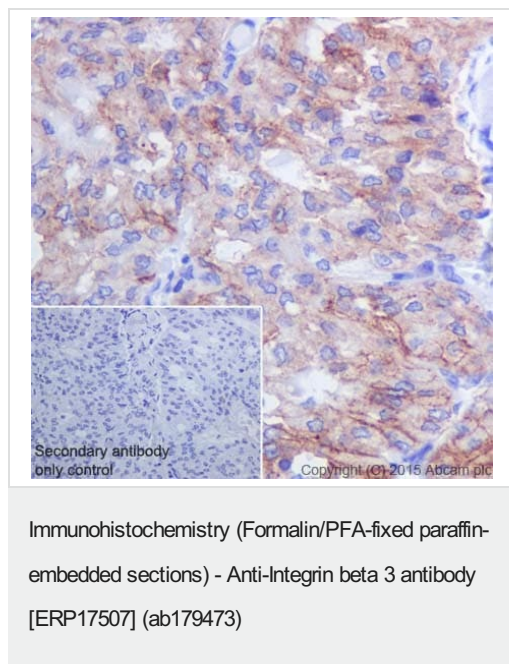
Immunohistochemical analysis of paraffin-embedded Human osteosarcomas tissue labeling Integrin beta 3 with ab179473 at 1/800 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

Membrane staining on cells of Human osteosarcomas is observed; several multinucleated osteoclasts are positively stained (PMID: 15692727; PMID: 25534583).

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [ab97051](#) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemical analysis of paraffin-embedded Human thyroid cancer tissue labeling Integrin beta 3 with ab179473 at 1/800 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.





Membrane or cytoplasmic staining on tumor cells of Human thyroid cancer is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [ab97051](#) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-Integrin beta 3 antibody [ERP17507] (ab179473)

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