

Product datasheet

Anti-Integrin beta 1 (phospho Y783) antibody  
[EP974(2)Y] ab62337

RabMAb

2 Images

Overview

<b>Product name</b>	Anti-Integrin beta 1 (phospho Y783) antibody [EP974(2)Y]
<b>Description</b>	Rabbit monoclonal [EP974(2)Y] to Integrin beta 1 (phospho Y783)
<b>Host species</b>	Rabbit
<b>Specificity</b>	ab62337 recognises Integrin beta 1 phosphorylated at Tyrosine 783.
<b>Tested applications</b>	<b>Suitable for:</b> WB, Dot blot <b>Unsuitable for:</b> Flow Cyt, ICC, IHC-P or IP
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide (the amino acid sequence is considered to be commercially sensitive) corresponding to Human Integrin beta 1 (phospho Y783).
<b>Positive control</b>	WB: U937 cell lysates treated with pervanadate.
<b>General notes</b>	Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMAb<sup>®</sup> patents](#).

Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
<b>Purity</b>	Tissue culture supernatant
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EP974(2)Y

Isotype

IgG

## Applications

Our [Abpromise guarantee](#) covers the use of **ab62337** 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		1/50000 - 1/100000. Detects a band of approximately 140 kDa (predicted molecular weight: 88 kDa).
Dot blot		1/1000.

## Application notes

Is unsuitable for Flow Cyt, ICC, IHC-P or IP.

## Target

### Function

Integrins alpha-1/beta-1, alpha-2/beta-1, alpha-10/beta-1 and alpha-11/beta-1 are receptors for collagen. Integrins alpha-1/beta-1 and alpha-2/beta-2 recognize the proline-hydroxylated sequence G-F-P-G-E-R in collagen. Integrins alpha-2/beta-1, alpha-3/beta-1, alpha-4/beta-1, alpha-5/beta-1, alpha-8/beta-1, alpha-10/beta-1, alpha-11/beta-1 and alpha-V/beta-1 are receptors for fibronectin. Alpha-4/beta-1 recognizes one or more domains within the alternatively spliced CS-1 and CS-5 regions of fibronectin. Integrin alpha-5/beta-1 is a receptor for fibrinogen. Integrin alpha-1/beta-1, alpha-2/beta-1, alpha-6/beta-1 and alpha-7/beta-1 are receptors for laminin. Integrin alpha-4/beta-1 is a receptor for VCAM1. It recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-9/beta-1 is a receptor for VCAM1, cytotactin and osteopontin. It recognizes the sequence A-E-I-D-G-I-E-L in cytotactin. Integrin alpha-3/beta-1 is a receptor for epiligrin, thrombospondin and CSPG4. Alpha-3/beta-1 may mediate with LGALS3 the stimulation by CSPG4 of endothelial cells migration. Integrin alpha-V/beta-1 is a receptor for vitronectin. Beta-1 integrins recognize the sequence R-G-D in a wide array of ligands. Isoform 2 interferes with isoform 1 resulting in a dominant negative effect on cell adhesion and migration (in vitro). When associated with alpha-7/beta-1 integrin, regulates cell adhesion and laminin matrix deposition. Involved in promoting endothelial cell motility and angiogenesis. Involved in osteoblast compaction through the fibronectin fibrillogenesis cell-mediated matrix assembly process and the formation of mineralized bone nodules. May be involved in up-regulation of the activity of kinases such as PKC via binding to KRT1. Together with KRT1 and RACK1, serves as a platform for SRC activation or inactivation. Plays a mechanistic adhesive role during telophase, required for the successful completion of cytokinesis. Integrin alpha-3/beta-1 provides a docking site for FAP (seprase) at invadopodia plasma membranes in a collagen-dependent manner and hence may participate in the adhesion, formation of invadopodia and matrix degradation processes, promoting cell invasion. ITGA4:ITGB1 binds to fractalkine (CX3CL1) and may act as its coreceptor in CX3CR1-dependent fractalkine signaling (PubMed:23125415, PubMed:24789099). ITGA4:ITGB1 and ITGA5:ITGB1 bind 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). ITGA5:ITGB1 acts as a receptor for fibrillin-1 (FBN1) and mediates R-G-D-dependent cell adhesion to FBN1 (PubMed:12807887, PubMed:17158881). Isoform 5: Isoform 5 displaces isoform 1 in striated muscles. (Microbial infection) Integrin ITGA2:ITGB1 acts as a receptor for human echoviruses 1 and 8 (PubMed:8411387). Acts as a receptor for cytomegalovirus/HHV-5 (PubMed:20660204). Acts as

a receptor for Epstein-Barr virus/HHV-4 (PubMed:17945327). Integrin ITGA5:ITGB1 acts as a receptor for human parvovirus B19 (PubMed:12907437). Integrin ITGA2:ITGB1 acts as a receptor for human rotavirus (PubMed:12941907). Acts as a receptor for mammalian reovirus (PubMed:16501085). In case of HIV-1 infection, integrin ITGA5:ITGB1 binding to extracellular viral Tat protein seems to enhance angiogenesis in Kaposi's sarcoma lesions (PubMed:10397733).

### **Tissue specificity**

Isoform 1 is widely expressed, other isoforms are generally coexpressed with a more restricted distribution. Isoform 2 is expressed in skin, liver, skeletal muscle, cardiac muscle, placenta, umbilical vein endothelial cells, neuroblastoma cells, lymphoma cells, hepatoma cells and astrocytoma cells. Isoform 3 and isoform 4 are expressed in muscle, kidney, liver, placenta, cervical epithelium, umbilical vein endothelial cells, fibroblast cells, embryonal kidney cells, platelets and several blood cell lines. Isoform 4, rather than isoform 3, is selectively expressed in peripheral T-cells. Isoform 3 is expressed in non-proliferating and differentiated prostate gland epithelial cells and in platelets, on the surface of erythroleukemia cells and in various hematopoietic cell lines. Isoform 5 is expressed specifically in striated muscle (skeletal and cardiac muscle).

### **Sequence similarities**

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

### **Post-translational modifications**

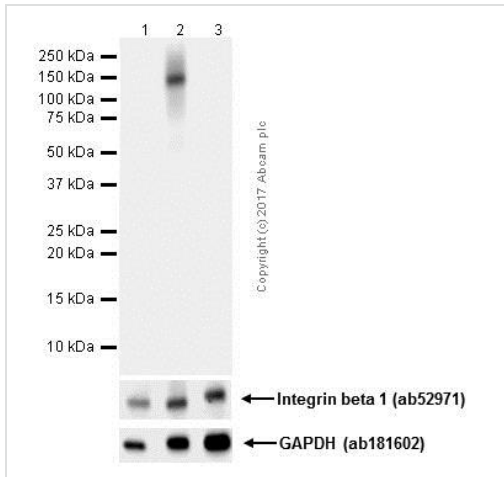
The cysteine residues are involved in intrachain disulfide bonds.

### **Cellular localization**

Cell membrane, sarcolemma. Cell junction. In cardiac muscle, isoform 5 is found in costameres and intercalated disks and Cell membrane. Cell projection, invadopodium membrane. Cell projection, ruffle membrane. Recycling endosome. Melanosome. Cleavage furrow. Cell projection, lamellipodium. Cell projection, ruffle. Cell junction, focal adhesion. Cell surface. Isoform 2 does not localize to focal adhesions. Highly enriched in stage I melanosomes. Located on plasma membrane of neuroblastoma NMB7 cells. In a lung cancer cell line, in prometaphase and metaphase, localizes diffusely at the membrane and in a few intracellular vesicles. In early telophase, detected mainly on the matrix-facing side of the cells. By mid-telophase, concentrated to the ingressing cleavage furrow, mainly to the basal side of the furrow. In late telophase, concentrated to the extending protrusions formed at the opposite ends of the spreading daughter cells, in vesicles at the base of the lamellipodia formed by the separating daughter cells. Colocalizes with ITGB1BP1 and metastatic suppressor protein NME2 at the edge or peripheral ruffles and lamellipodia during the early stages of cell spreading on fibronectin or collagen. Translocates from peripheral focal adhesions sites to fibrillar adhesions in a ITGB1BP1-dependent manner. Enriched preferentially at invadopodia, cell membrane protrusions that correspond to sites of cell invasion, in a collagen-dependent manner. Localized at plasma and ruffle membranes in a collagen-independent manner.

### **Images**

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Western blot - Anti-Integrin beta 1 (phospho Y783) antibody [EP974(2)Y] (ab62337)

**All lanes :** Anti-Integrin beta 1 (phospho Y783) antibody [EP974(2)Y] (ab62337) at 1/1000 dilution

**Lane 1 :** U937 whole cell lysate

**Lane 2 :** U937 treated with 10mM pervanadate for 15min whole cell lysate

**Lane 3 :** U937 treated with 10mM pervanadate for 15min whole cell lysate, the membrane was incubated with alkaline phosphatase

Lysates/proteins at 10 µg per lane.

### Secondary

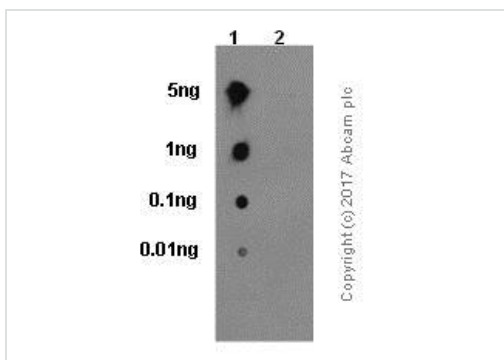
**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

**Predicted band size:** 88 kDa

**Observed band size:** 140 kDa

[why is the actual band size different from the predicted?](#)

Blocking and dilution buffer: 5% NFDM/TBST.



Dot Blot - Anti-Integrin beta 1 (phospho Y783) antibody [EP974(2)Y] (ab62337)

Dot blot analysis of Integrin beta 1 (phospho Y783) peptide (Lane 1) and Integrin beta 1 non-phospho peptide (Lane 2) labelling Integrin beta 1 (phospho Y783) with ab62337 at a dilution of 1/1000 dilution. A goat anti-rabbit IgG, (H+L), peroxidase conjugated (ab97051) was used as the secondary antibody at a dilution of 1/100,000 dilution.

**Blocking buffer:** 5% NFDM/TBST.

**Dilution buffer:** 5% NFDM /TBST .

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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