

Anti-Integrin beta 1 antibody [EPR16895] ab179471

敲除验证 重组 RabMAb

★★★★★ [4 Abreviews](#) [67 References](#) [11 图像](#)

概述

| | |
|-------|--|
| 产品名称 | Anti-Integrin beta 1抗体[EPR16895] |
| 描述 | 兔单克隆抗体[EPR16895] to Integrin beta 1 |
| 宿主 | Rabbit |
| 经测试应用 | 适用于: WB, IHC-P |
| 种属反应性 | 与反应: Mouse, Rat, Human |
| 免疫原 | Recombinant fragment. This information is proprietary to Abcam and/or its suppliers. |
| 阳性对照 | WB: A431 and U-87 MG whole cell lysates; Human spleen lysate; Mouse heart and kidney; and Rat heart, kidney and spleen lysates. IHC-P: Human colon, Human hepatocellular carcinoma, rat stomach and mouse kidney tissues. |
| 常规说明 | <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> |

性能

| | |
|------|---|
| 形式 | Liquid |
| 存放说明 | 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. |
| 存储溶液 | Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA |
| 纯度 | Protein A purified |
| 克隆 | 单克隆 |
| 克隆编号 | EPR16895 |
| 同种型 | IgG |

应用

The Abpromise guarantee

Abpromise™承诺保证使用ab179471于以下的经测试应用

“应用说明”部分下显示的仅为推荐的起始稀释度；实际最佳的稀释度/浓度应由使用者检定。

| 应用 | Ab评论 | 说明 |
|-------|-----------|--|
| WB | ★★★★★ (2) | 1/2000. Detects a band of approximately 130-150 kDa (predicted molecular weight: 88 kDa). |
| IHC-P | ★★★★★ (2) | 1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. |

靶标

功能

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).

组织特异性

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).

序列相似性

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

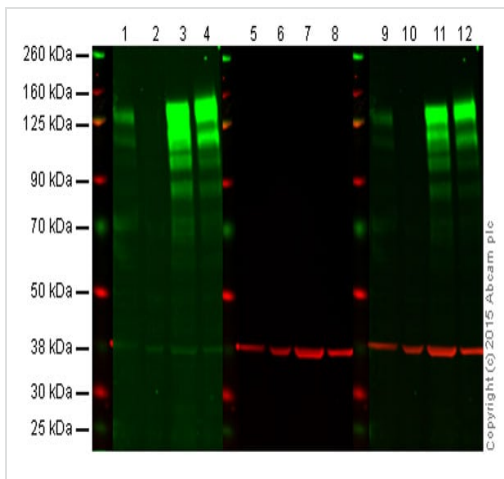
翻译后修饰

The cysteine residues are involved in intrachain disulfide bonds.

细胞定位

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.

图片



Western blot - Anti-Integrin beta 1 antibody
[EPR16895] (ab179471)

Lanes 1, 5 and 9: Wild-type HAP1 cell lysate (20 µg)

Lanes 2, 6 and 10: Integrin beta 1 knockout HAP1 cell lysate (20 µg)

Lanes 3, 7 and 11: U87-MG cell lysate (20 µg)

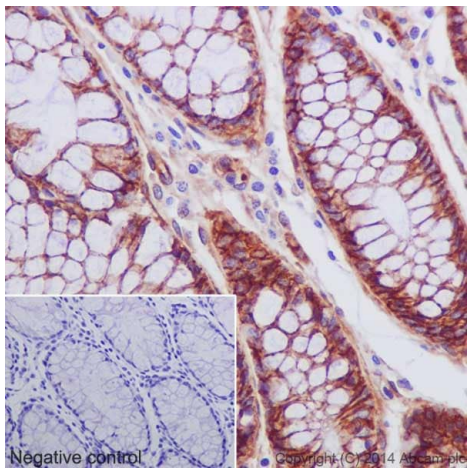
Lanes 4, 8 and 12: A431 cell lysate (20 µg)

Lanes 1, 2, 3 and 4: Green signal from target – ab179471
observed at 140 kDa

Lanes 5, 6, 7 and 8: Red signal from loading control – **ab8245**
observed at 37 kDa

Lanes 9, 10, 11 and 12: Merged (red and green) signal

ab179471 was shown to react with Integrin beta 1 in wild-type HAP1 cells as well as additional cross-reactive bands. No bands were observed when Integrin beta 1 knockout samples were examined. Wild-type and Integrin beta 1 knockout samples were subjected to SDS-PAGE. ab179471 and **ab8245** (loading control to GAPDH) were diluted 1/10,000 and 1/2000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/10,000 dilution for 1hr at room temperature before imaging.

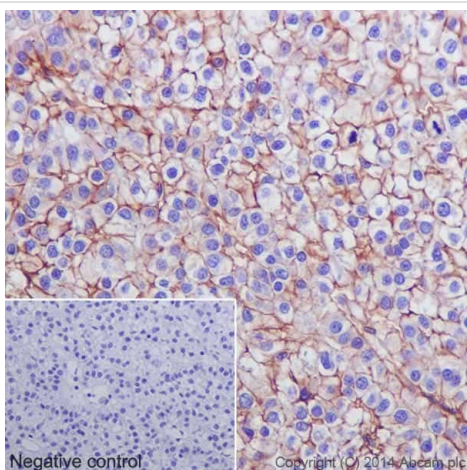


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 1 antibody [EPR16895] (ab179471)

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling Integrin beta 1 with ab179471 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) secondary antibody at 1/500 dilution. Membrane staining on epithelial cells of Human colon is observed. Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

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

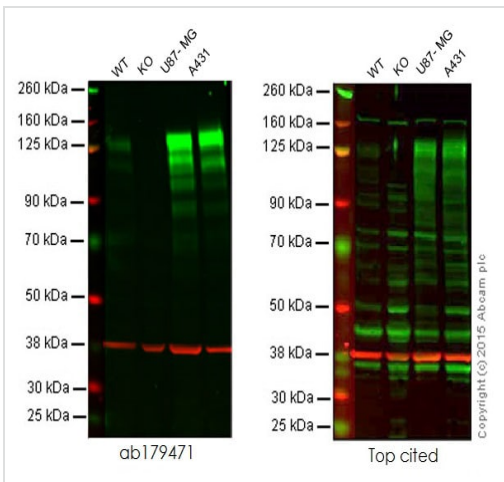


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 1 antibody [EPR16895] (ab179471)

Immunohistochemical analysis of paraffin-embedded Human hepatocellular carcinoma tissue labeling Integrin beta 1 with ab179471 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) secondary antibody at 1/500 dilution. Membrane staining on tumor cells of Human hepatocellular carcinoma is observed. Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

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



Western blot - Anti-Integrin beta 1 antibody
[EPR16895] (ab179471)

Lane 1: Wild-type HAP1 cell lysate (20 µg)

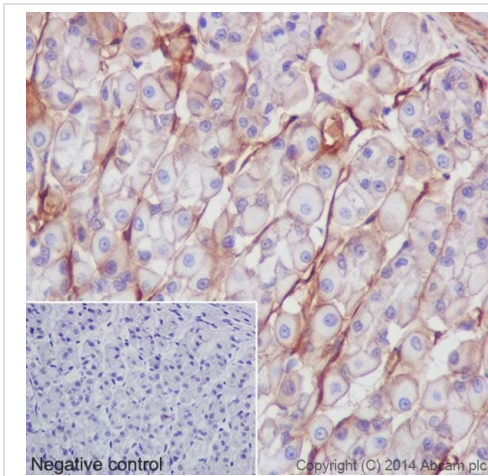
Lane 2: Integrin beta 1 knockout HAP1 cell lysate (20 µg)

Lane 3: U87-MG cell lysate (20 µg)

Lane 4: A431 cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab179471 observed at 140 kDa. Red signal from loading control – **ab8245** observed at 37 kDa.

This western blot image is a comparison between ab179471 and a competitor's top cited rabbit polyclonal antibody.

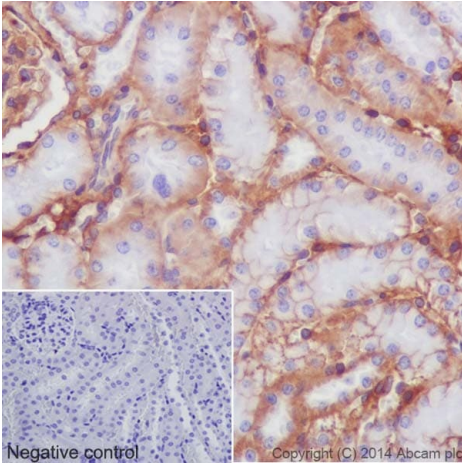


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 1 antibody
[EPR16895] (ab179471)

Immunohistochemical analysis of paraffin-embedded Rat stomach tissue labeling Integrin beta 1 with ab179471 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) secondary antibody at 1/500 dilution. Membrane staining on epithelial cells of rat stomach is observed. Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

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

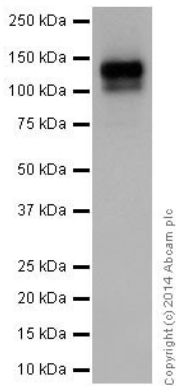


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 1 antibody [EPR16895] (ab179471)

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling Integrin beta 1 with ab179471 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) secondary antibody at 1/500 dilution. Membrane and cytoplasmic staining on mouse kidney is observed. Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution.

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



Western blot - Anti-Integrin beta 1 antibody [EPR16895] (ab179471)

Anti-Integrin beta 1 antibody [EPR16895] (ab179471) at 1/20000 dilution + A431 (Human epidermoid carcinoma) whole cell lysates at 10 μ g

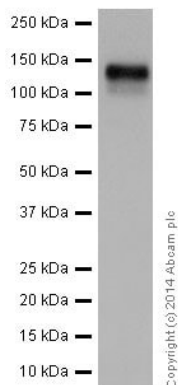
Secondary

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

Predicted band size: 88 kDa

Observed band size: 130-150 kDa

Blocking/Dilution buffer: 5% NFDm/TBST.



Western blot - Anti-Integrin beta 1 antibody
[EPR16895] (ab179471)

Anti-Integrin beta 1 antibody [EPR16895] (ab179471) at 1/20000 dilution + U-87 MG (Human glioblastoma-astrocytoma epithelial cell line) whole cell lysates at 10 µg

Secondary

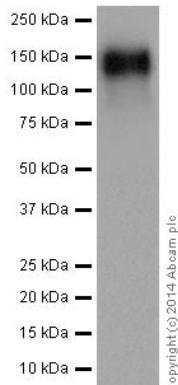
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 88 kDa

Observed band size: 130-150 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time = 1 minute



Western blot - Anti-Integrin beta 1 antibody
[EPR16895] (ab179471)

Anti-Integrin beta 1 antibody [EPR16895] (ab179471) at 1/2000 dilution + Human spleen lysates at 10 µg

Secondary

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

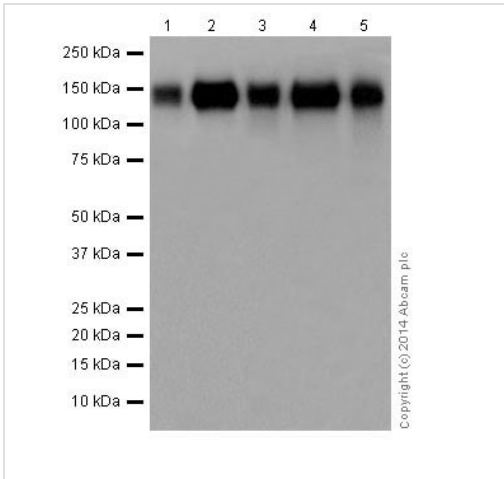
Predicted band size: 88 kDa

Observed band size: 130-150 kDa

Exposure time: 1 minute

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time = 1 minute



Western blot - Anti-Integrin beta 1 antibody [EPR16895] (ab179471)

All lanes : Anti-Integrin beta 1 antibody [EPR16895] (ab179471) at 1/2000 dilution

Lane 1 : Mouse heart lysates

Lane 2 : Mouse kidney lysates

Lane 3 : Rat heart lysates

Lane 4 : Rat kidney lysates

Lane 5 : Rat spleen lysates

Lysates/proteins at 10 µg per lane.

Secondary

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





Predicted band size: 88 kDa

Observed band size: 130-150 kDa

Exposure time: 1 minute

Blocking/Dilution buffer: 5% NFD/MTBST.

Why choose a recombinant antibody?

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

Anti-Integrin beta 1 antibody [EPR16895] (ab179471)

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