

Anti-Vinculin antibody [EPR20407] ab219649

敲除验证 重组 RabMAb

7 References 11 图像

概述

产品名称	Anti-Vinculin抗体[EPR20407]
描述	兔单克隆抗体[EPR20407] to Vinculin
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: PC-3, HeLa, K562, C6, A431, and PC-12 whole cell lysates; Human fetal kidney, fetal heart, testis and fetal liver lysates; Mouse heart and spleen lysates; Rat heart, kidney and spleen lysates. IHC-P: Human breast, colon, gastric cancer and prostate cancer tissues; Mouse colon tissue; Rat stomach tissue.
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	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR20407

同种型	IgG	
应用		
The Abpromise guarantee Abpromise™ 承诺保证使用ab219649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		1/1000. Detects a band of approximately 123 kDa (predicted molecular weight: 124 kDa).
IHC-P		1/2000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
靶标		
功能	Actin filament (F-actin)-binding protein involved in cell-matrix adhesion and cell-cell adhesion. Regulates cell-surface E-cadherin expression and potentiates mechanosensing by the E-cadherin complex. May also play important roles in cell morphology and locomotion.	
组织特异性	Metavinculin is muscle-specific.	
疾病相关	Defects in VCL are the cause of cardiomyopathy dilated type 1W (CMD1W) [MIM:611407]. Dilated cardiomyopathy is a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death. Defects in VCL are the cause of cardiomyopathy familial hypertrophic type 15 (CMH15) [MIM:613255]. It is a hereditary heart disorder characterized by ventricular hypertrophy, which is usually asymmetric and often involves the interventricular septum. The symptoms include dyspnea, syncope, collapse, palpitations, and chest pain. They can be readily provoked by exercise. The disorder has inter- and intrafamilial variability ranging from benign to malignant forms with high risk of cardiac failure and sudden cardiac death.	
序列相似性	Belongs to the vinculin/alpha-catenin family.	
结构域	Exists in at least two conformations. When in the closed, 'inactive' conformation, extensive interactions between the head and tail domains prevent detectable binding to most of its ligands. It takes on an 'active' conformation after cooperative and simultaneous binding of two different ligands. This activation involves displacement of the head-tail interactions and leads to a significant accumulation of ternary complexes. The active form then binds a number of proteins that have both signaling and structural roles that are essential for cell adhesion. The N-terminal globular head (Vh) comprises of subdomains D1-D4. The C-terminal tail (Vt) binds F-actin and cross-links actin filaments into bundles. An intramolecular interaction between Vh and Vt masks the F-actin-binding domain located in Vt. The binding of talin and alpha-actinin to the D1 subdomain of vinculin induces a helical bundle conversion of this subdomain, leading to the disruption of the intramolecular interaction and the exposure of the cryptic F-actin-binding domain of Vt. Vt inhibits actin filament barbed end elongation without affecting the critical concentration of actin assembly.	
翻译后修饰	Phosphorylated; on serines, threonines and tyrosines. Phosphorylation on Tyr-1133 in activated platelets affects head-tail interactions and cell spreading but has no effect on actin binding nor on	

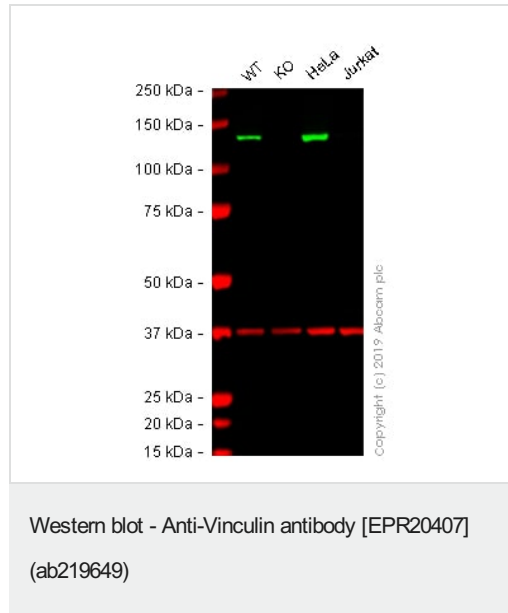
localization to focal adhesion plaques.

Aceylated; mainly by myristic acid but also small amount of palmitic acid.

细胞定位

Cytoplasm > cytoskeleton. Cell junction > adherens junction. Cell membrane. Cytoplasmic face of adhesion plaques. Recruitment to cell-cell junctions occurs in a myosin II-dependent manner. Interaction with CTNNB1 is necessary for its localization to the cell-cell junctions.

图片



All lanes : Anti-Vinculin antibody [EPR20407] (ab219649) at 1/1000 dilution

Lane 1 : Wild-type A-431 (Human epidermoid carcinoma cell line) whole cell lysate

Lane 2 : VCL knockout A-431 (Human epidermoid carcinoma cell line) whole cell lysate

Lane 3 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 4 : Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate

Lysates/proteins at 20 µg per lane.

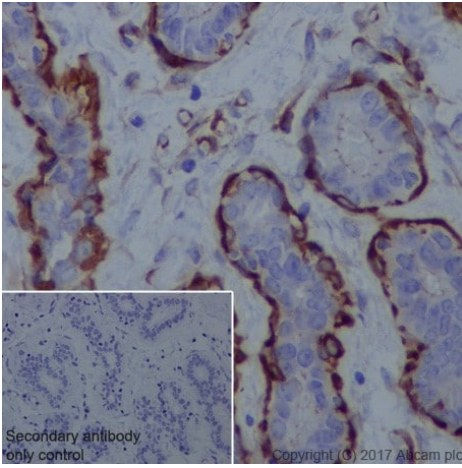
Performed under reducing conditions.

Predicted band size: 124 kDa

Observed band size: 124 kDa

Lanes 1 -4: Merged signal (red and green). Green - ab219649 observed at 124 kDa. Red - loading control, [ab8245](#) (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab219649 was shown to react with VCL in A431 wild-type cells in Western blot. Loss of signal was observed when VCL knockout sample was used. A431 wild-type and VCL knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% Milk in TBS-T (0.1% Tween®) before incubation with ab219649 and [ab8245](#) (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Vinculin antibody [EPR20407] (ab219649)

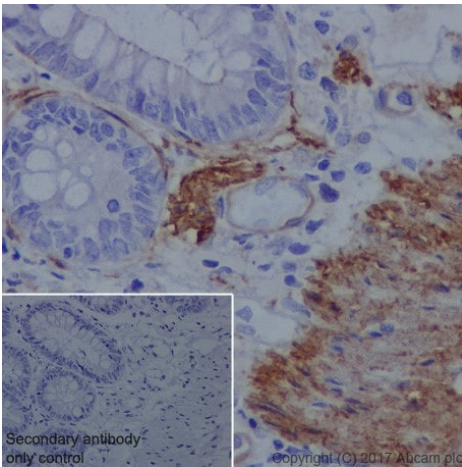
Immunohistochemical analysis of paraffin-embedded human breast tissue labeling Vinculin with ab219649 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Membranous staining on myoepithelium of human breast is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

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-Vinculin antibody [EPR20407] (ab219649)

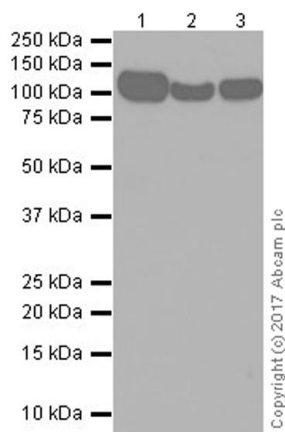
Immunohistochemical analysis of paraffin-embedded human colon tissue labeling Vinculin with ab219649 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Membranous and cytoplasmic staining on smooth muscle cells of human colon is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

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



Western blot - Anti-Vinculin antibody [EPR20407]
(ab219649)

All lanes : Anti-Vinculin antibody [EPR20407] (ab219649) at
1/1000 dilution

Lane 1 : PC-3 (Human prostate adenocarcinoma cell line) whole
cell lysate

Lane 2 : HeLa (Human epithelial cell line from cervix
adenocarcinoma) whole cell lysate

Lane 3 : K562 (Human chronic myelogenous leukemia cell line
from bone marrow) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

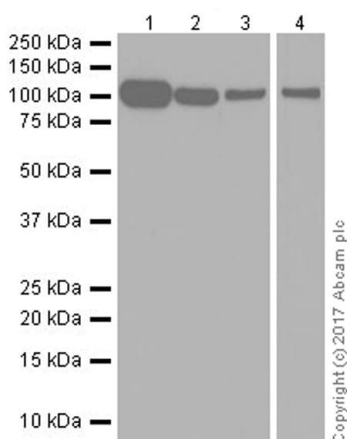
All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at
1/100000 dilution

Predicted band size: 124 kDa

Observed band size: 123 kDa

Exposure time: 15 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-Vinculin antibody [EPR20407]
(ab219649)

All lanes : Anti-Vinculin antibody [EPR20407] (ab219649) at
1/1000 dilution

Lane 1 : Human fetal kidney lysate

Lane 2 : Human fetal heart lysate

Lane 3 : Human testis lysate

Lane 4 : Human fetal liver lysate

Lysates/proteins at 20 µg per lane.

Secondary

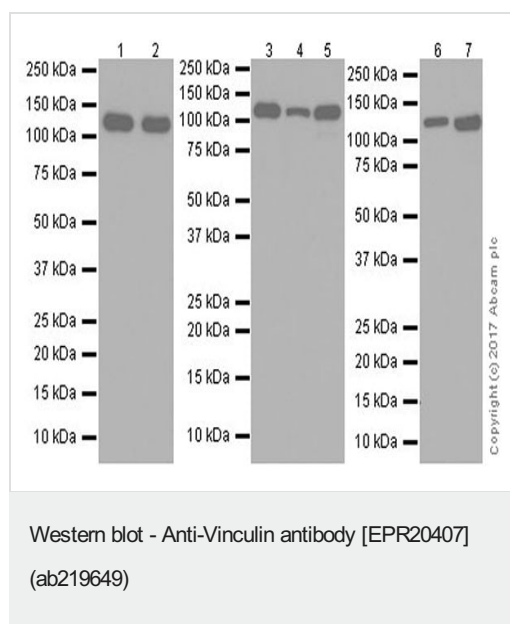
All lanes : VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) at
1/4000 dilution

Predicted band size: 124 kDa

Observed band size: 123 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1-3: 15 seconds; Lane 4: 30 seconds.



All lanes : Anti-Vinculin antibody [EPR20407] (ab219649) at 1/1000 dilution

Lane 1 : Mouse heart lysate

Lane 2 : Mouse spleen lysate

Lane 3 : Rat heart lysate

Lane 4 : Rat kidney lysate

Lane 5 : Rat spleen lysate

Lane 6 : C6 (Rat glial tumor cell line) whole cell lysate

Lane 7 : PC-12 (Rat adrenal gland pheochromocytoma cell line) whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

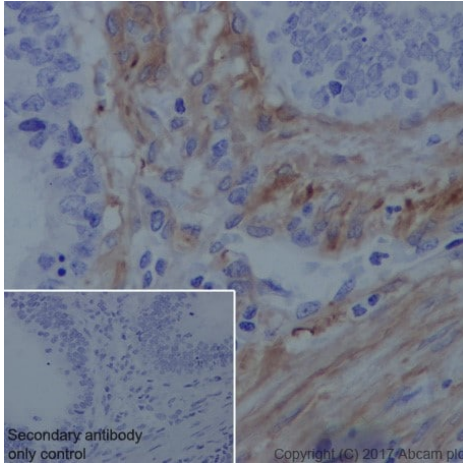
All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Predicted band size: 124 kDa

Observed band size: 123 kDa

Exposure time: 4 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Vinculin antibody [EPR20407] (ab219649)

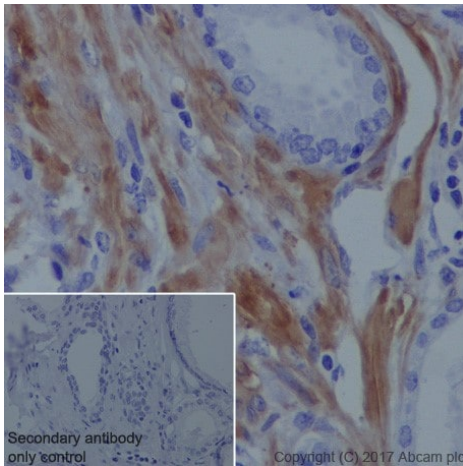
Immunohistochemical analysis of paraffin-embedded human gastric cancer tissue labeling Vinculin with ab219649 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Membranous and cytoplasmic staining on smooth muscle cells of human gastric cancer is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

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-Vinculin antibody [EPR20407] (ab219649)

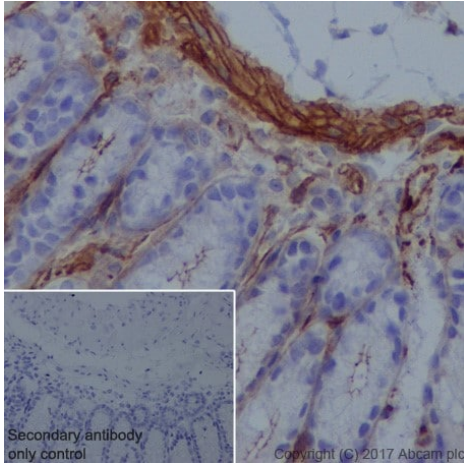
Immunohistochemical analysis of paraffin-embedded human prostate cancer tissue labeling Vinculin with ab219649 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Membranous and cytoplasmic staining on smooth muscle cells of human prostate cancer is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

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-Vinculin antibody [EPR20407] (ab219649)

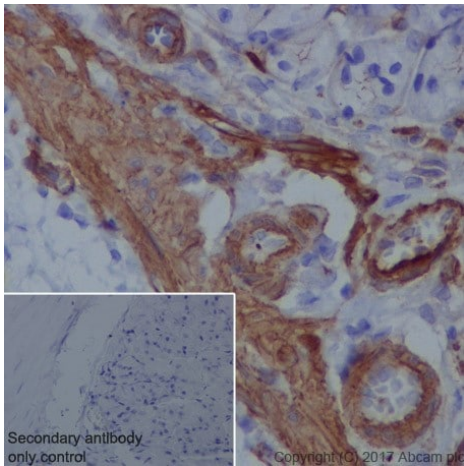
Immunohistochemical analysis of paraffin-embedded mouse colon tissue labeling Vinculin with ab219649 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Membranous and cytoplasmic staining on smooth muscle cells of mouse colon is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

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-Vinculin antibody [EPR20407] (ab219649)

Immunohistochemical analysis of paraffin-embedded rat stomach tissue labeling Vinculin with ab219649 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

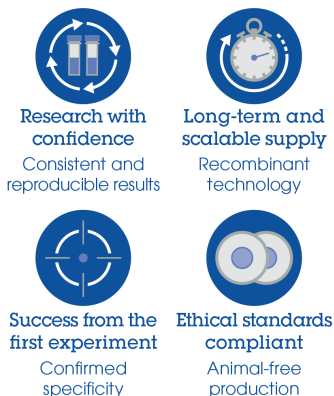
Membranous and cytoplasmic staining on smooth muscle cells of rat stomach is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

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

Why choose a recombinant antibody?



Anti-Vinculin antibody [EPR20407] (ab219649)

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

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