abcam

Product datasheet

Anti-Vinculin antibody [EPR19579] ab207440

敲除验证 重组 RabMAb

3 References 6 图像

概述

产品名称	Anti-Vinculin抗体[EPR19579]
描述	兔单克隆抗体[EPR19579] to Vinculin
宿主	Rabbit
经测试应用	**适用于:** WB
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: K562, HeLa, HEK-293T, HUVEC, MCF7, PC-3, C6, PC-12, A431, and NIH/3T3 whole cell lysates; human testis, fetal heart and fetal kidney lysates; mouse heart, kidney and spleen lysates; rat kidney and spleen lysates.
常规说明	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR19579

同种型	IgG

应用

The Abpromise guarantee Abpromise™承诺保证使用ab207440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。

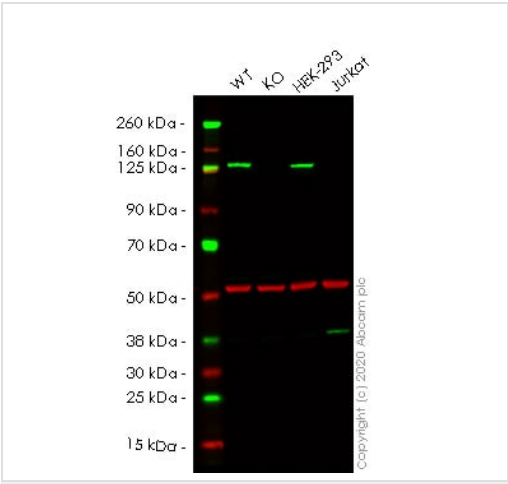
应用	Ab评论	说明
WB		1/1000. Detects a band of approximately 124 kDa (predicted molecular weight: 124 kDa).

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



Western blot - Anti-Vinculin antibody [EPR19579] (ab207440)

All lanes : Anti-Vinculin antibody [EPR19579] (ab207440) at 1/1000 dilution

Lane 1 : Wild-type HeLa cell lysate
Lane 2 : Vinculin knockout HeLa cell lysate
Lane 3 : HEK-293 cell lysate
Lane 4 : Jurkat cell lysate

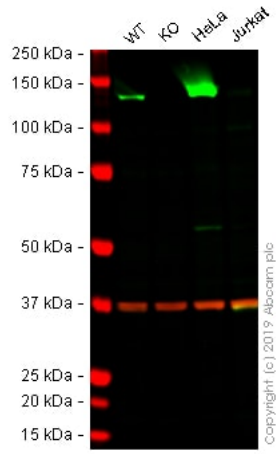
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 124 kDa

Lanes 1-4: Merged signal (red and green). Green - ab207440 observed at 124 kDa. Red - loading control **ab7291** observed at 50 kDa.

ab207440 Anti-Vinculin antibody [EPR19579] was shown to specifically react with Vinculin in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab265580** (knockout cell lysate **ab257795**) was used. Wild-type and Vinculin knockout samples were subjected to SDS-PAGE. ab207440 and Anti-alpha Tubulin antibody [DM1A] - Loading Control (**ab7291**) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. 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 in 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Vinculin antibody [EPR19579] (ab207440)

All lanes : Anti-Vinculin antibody [EPR19579] (ab207440) 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

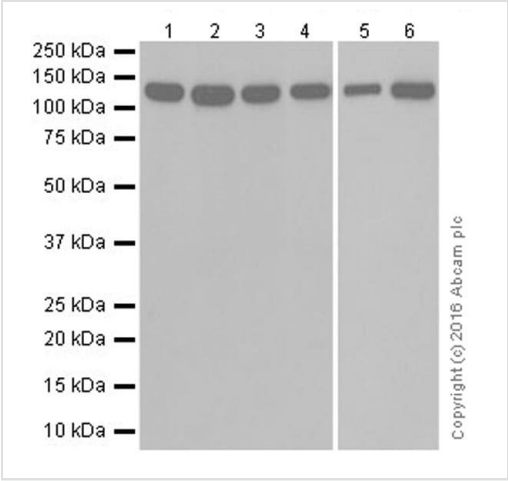
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 124 kDa
Observed band size: 124 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab207440 observed at 124 kDa. Red - loading control, **ab8245** (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab207440 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 ab207440 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.



Western blot - Anti-Vinculin antibody [EPR19579] (ab207440)

All lanes : Anti-Vinculin antibody [EPR19579] (ab207440) at 1/2000 dilution

Lane 1 : K562 (Human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate
Lane 2 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 3 : HUVEC (Human umbilical vein endothelial cell line) whole cell lysate
Lane 4 : MCF7 (Human breast adenocarcinoma cell line) whole cell lysate
Lane 5 : PC-3 (Human prostate adenocarcinoma cell line) whole cell lysate
Lane 6 : Human testis lysate

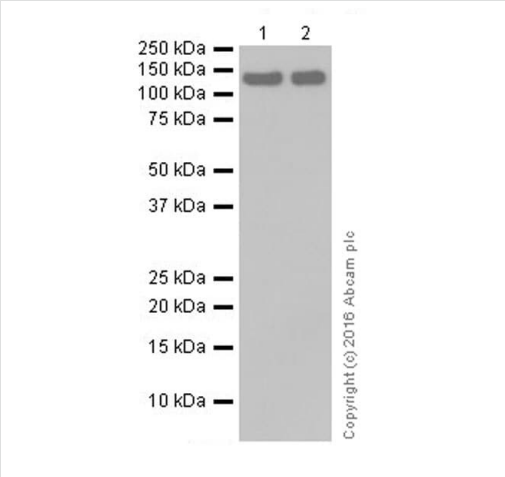
Lysates/proteins at 10 µg per lane.

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

Predicted band size: 124 kDa
Observed band size: 124 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1-4: 3 minutes; Lane 5/6: 5 seconds.



Western blot - Anti-Vinculin antibody [EPR19579] (ab207440)

All lanes : Anti-Vinculin antibody [EPR19579] (ab207440) at 1/1000 dilution

Lane 1 : Human fetal heart lysate
Lane 2 : Human fetal kidney lysate

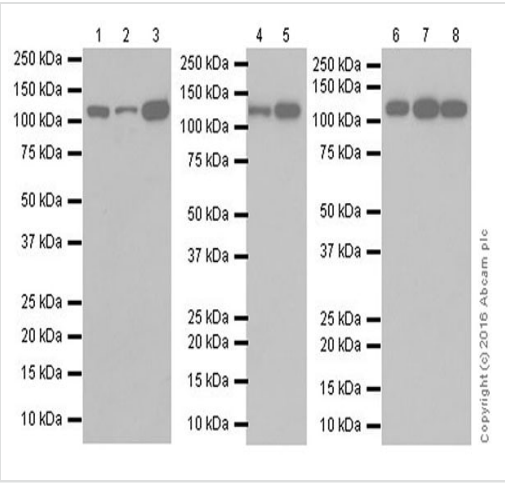
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 124 kDa
Observed band size: 124 kDa

Exposure time: 30 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-Vinculin antibody [EPR19579] (ab207440)

All lanes : Anti-Vinculin antibody [EPR19579] (ab207440) at 1/1000 dilution

Lane 1 : Mouse heart lysate
Lane 2 : Mouse kidney lysate
Lane 3 : Mouse spleen 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
Lane 8 : NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate

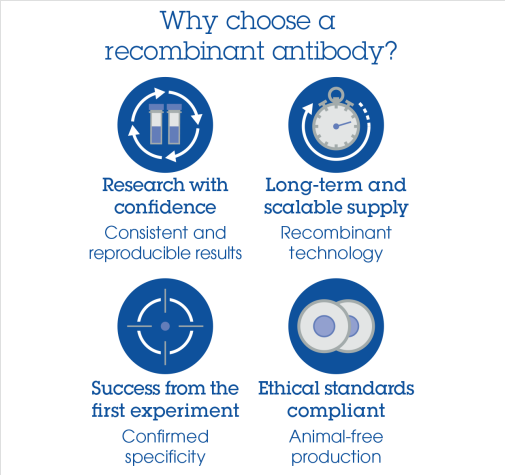
Lysates/proteins at 10 µg per lane.

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

Predicted band size: 124 kDa
Observed band size: 124 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure times: Lane 1-3: 30 seconds; Lane 4-8: 10 seconds.



Anti-Vinculin antibody [EPR19579] (ab207440)

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