

Product datasheet

Anti-Vinculin (phospho Y100) antibody ab200812

1 Abreviews 1 Image

Overview

Product name	Anti-Vinculin (phospho Y100) antibody
Description	Rabbit polyclonal to Vinculin (phospho Y100)
Host species	Rabbit
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Chicken, Human Predicted to work with: Mouse 
Immunogen	Synthetic peptide corresponding to Human Vinculin (phospho Y100). derived from a region that contains tyrosine 100. Database link: P18206
Positive control	COS cells co-transfected with activated Src and His-tagged chicken Vinculin cDNA were treated with vanadate for 24 hr.

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	pH: 7.30 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab200812** 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 1/1000. Predicted molecular weight: 124 kDa.

Target

Function 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.

Tissue specificity Metavinculin is muscle-specific.

Involvement in disease 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.

Sequence similarities Belongs to the vinculin/alpha-catenin family.

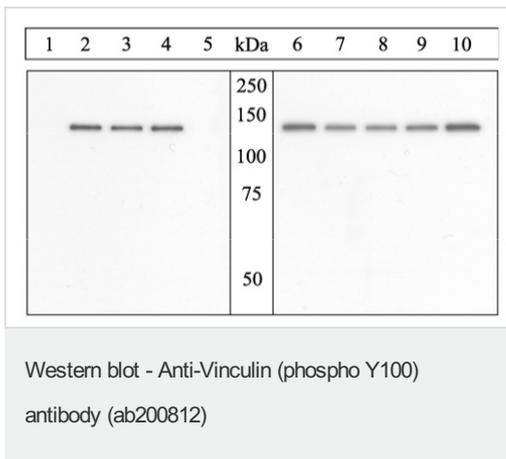
Domain Exists in at least two conformations. When in the closed, 'inactive' conformation, extensive interactions between the head and tail domains prevent detectable binding to most of its ligands. It takes on an 'active' conformation after cooperative and simultaneous binding of two different ligands. 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.

Post-translational modifications 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.

Cellular localization 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.

Images



Lanes 1-5 : Anti-Vinculin (phospho Y100) antibody (ab200812) at 1/1000 dilution

Lanes 6-10 : Anti-Vinculin pan antibody

Lane 1 : COS cells co-transfected with activated Src and His-tagged chicken Vinculin cDNA untreated

Lanes 2 & 7-10 : COS cells co-transfected with activated Src and His-tagged chicken Vinculin cDNA were treated with vanadate for 24 hr

Lane 3 : COS cells co-transfected with activated Src and His-tagged chicken Vinculin cDNA were treated with vanadate for 24 hr. with non-phosphopeptide corresponding to the immunogen

Lane 4 : COS cells co-transfected with activated Src and His-tagged chicken Vinculin cDNA were treated with vanadate for 24 hr with generic phosphotyrosine-containing peptide

Lane 5 : COS cells co-transfected with activated Src and His-tagged chicken Vinculin cDNA were treated with vanadate for 24 hr with phosphopeptide immunogen

Lane 6 : COS cells co-transfected with activated Src and His-tagged chicken Vinculin cDNA were untreated

Developed using the ECL technique.

Predicted band size: 124 kDa

Following immunoprecipitation of Vinculin with an anti-His monoclonal antibody, proteins were resolved by SDS-PAGE on an 8% polyacrylamide gel and transferred to PVDF.

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors