

Rabbit Vinculin Polyclonal Antibody | anti-Vinculin antibody

Phospho-Vinculin (Tyr1133/Tyr1065) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329894	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Horse (100%), Sheep (100%), Rabbit (100%), Chicken (100%), Xenopus (100%)	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

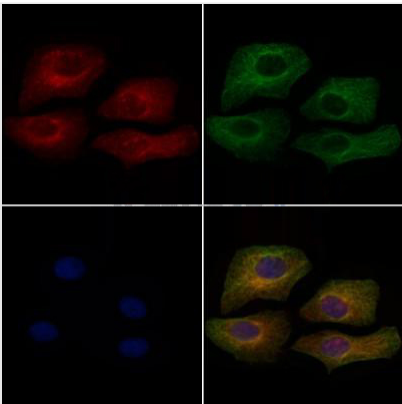
Vinculin; Polyclonal Antibody; Phospho-Vinculin (Tyr1133/Tyr1065) Antibody; CMD1W; CMH15; Epididymis luminal protein 114; HEL114; Metavinculin; MV; MVCL; OTTHUMP00000019861; OTTHUMP00000019862; VCL; VINC; VINC_HUMAN; anti-Vinculin antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Horse (100%), Sheep (100%), Rabbit (100%), Chicken (100%), Xenopus (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-Vinculin (Tyr1133/Tyr1065) Antibody detects endogenous levels of Vinculin only when phosphorylated at Tyr1133 (Isoform1,P18206-2) or Tyr1065 (Isoform2,P18206-1). Tissue Specificity: Metavinculin is muscle-specific.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-Vinculin antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Vinculin around the phosphorylation site of Tyr1133/1065.
Conjugation	Unconjugated
Fragment	Fab fragment
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 (By similarity). Acetylated; mainly by myristic acid but also by a small amount of palmitic acid.
Subunit Structure	Exhibits self-association properties. Interacts with APBB1IP and NRAP (By similarity). Interacts with TLN1. Interacts with CTNNB1 and this interaction is necessary for its localization to the cell-cell junctions and for its function in regulating cell surface expression of E-cadherin (By similarity). Interacts with SYNM. Interacts with SORBS1 (By similarity). Interacts with CTNNA1. Binds to ACTN4; this interaction triggers conformational changes.

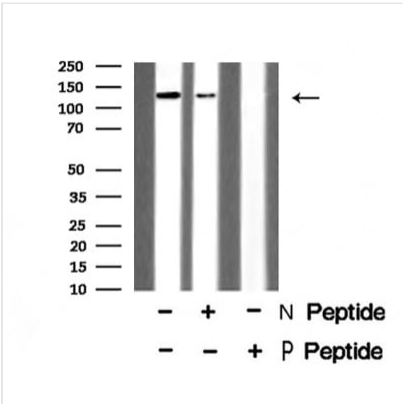
Similarity	Exists in at least two conformations. When in the closed, 'inactive' conformation, extensive interactions between the head and tail domains prevent detectable binding to most of its ligands. It takes on an 'active' conformation after cooperative and simultaneous binding of two different ligands. 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. In isoform 2 (metavinculin) a 68 residue insertion in the tail domain promotes actin severing instead of bundling. 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. Belongs to the vinculin/alpha-catenin family.
Subcellular Location	Cell membrane>Peripheral membrane protein>Cytoplasmic side. Cell junction>Adherens junction. Cell junction>Focal adhesion. Cytoplasm>Cytoskeleton. Cell membrane>Sarcolemma>Peripheral membrane protein>Cytoplasmic side. Note: 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.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

Staining HeLa cells(4h of LPS treatment) by IF/ICC. The samples were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25 degree C. Samples were then incubated with primary Ab(AF8406 1:200) and mouse anti-beta tubulin Ab(T0023 1:200) for 1 hour at 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody.The nuclear counter stain is DAPI(blue).



WB (Western Blot)

Western blot analysis of VCL (Phospho-Tyr1133/1065) using EGF treated HepG2 whole cell lysates. -/+ means absence or presence of N peptide(¼ non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-Vinculin antibody	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.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4507877
NCBI GeneID	7414
NCBI Accession #	NP_003364.1
NCBI GenBank Nucleotide #	NM_003373.3
UniProt Accession #	P18206; Q16450; Q5SWX2; Q7Z3B8; Q8IXU7
Molecular Weight	123,799 Da

NCBI Official Full Name	vinculin isoform VCL
NCBI Official Synonym Full Names	vinculin
NCBI Official Symbol	VCL
NCBI Official Synonym Symbols	MV; MVCL; CMD1W; CMH15
NCBI Protein Information	vinculin; metavinculin
UniProt Protein Name	Vinculin
UniProt Gene Name	VCL
UniProt Synonym Gene Names	MV
UniProt Entry Name	VINC_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/vinculin-antibody-peptide-elisa-immunocytochemistry-immunofluorescence-western-blot-elisa/329894>