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Vinculin Antibody
Catalog # ASC11704

Specification

Vinculin Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	P18206
Other Accession	NP_003364, 4507877
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 117 kDa** **Observed: 120kDa KDa**
Application Notes	**Vinculin antibody can be used for detection of Vinculin by Western blot at 1 - 2 µg/ml.**

Vinculin Antibody - Additional Information

Gene ID **7414**

Target/Specificity
VCL; Vinculin antibody is human, mouse and rat specific. At least three isoforms of Vinculin are known to exist.

Reconstitution & Storage
Vinculin antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
Vinculin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Vinculin Antibody - Protein Information

Name VCL

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.

Cellular Location
Cell membrane {ECO:0000250|UniProtKB:P12003}; Peripheral membrane protein {ECO:0000250|UniProtKB:P12003}; Cytoplasmic side {ECO:0000250|UniProtKB:P12003}. Cell junction, adherens junction {ECO:0000250|UniProtKB:P12003}. Cell junction, focal adhesion {ECO:0000250|UniProtKB:P12003}. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P85972}. Cell membrane, sarcolemma {ECO:0000250|UniProtKB:Q64727}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q64727}; Cytoplasmic side {ECO:0000250|UniProtKB:Q64727}. Cell projection, podosome {ECO:0000250|UniProtKB:Q64727}. 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 {ECO:0000250|UniProtKB:P12003}

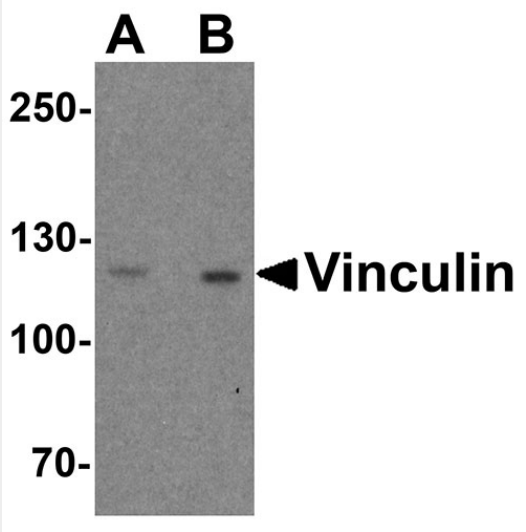
Tissue Location
Metavinculin is muscle-specific.

Vinculin Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

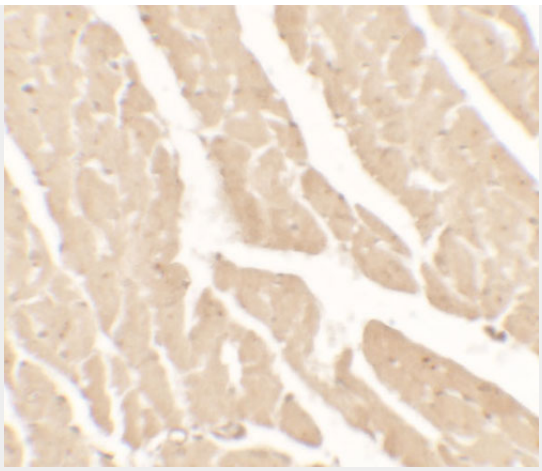
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Vinculin Antibody - Images

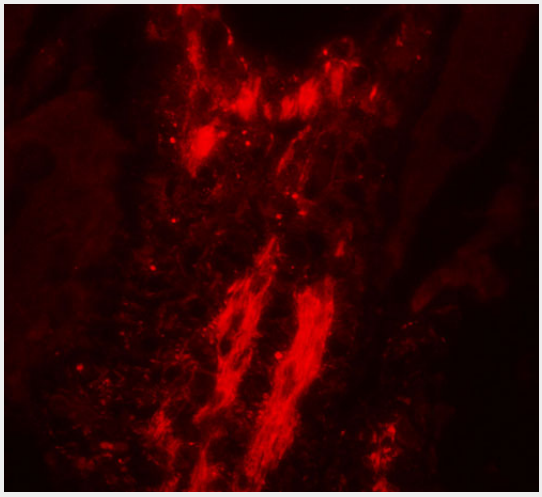


Western blot analysis of Vinculin in PC-3 cell lysate with Vinculin antibody at (A) 1 and (B) 2 µg/ml.

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Immunohistochemistry of Vinculin in rat small intestine tissue with Vinculin antibody at 5 µg/mL.



Immunofluorescence of Vinculin in rat small intestine tissue with Vinculin antibody at 20 µg/mL.

Vinculin Antibody - Background

Vinculin is a cytoskeletal protein that plays an important role in the regulation of focal adhesions and embryonic development (1). Three structural vinculin domains include an amino-terminal head, a short flexible proline-rich region and a carboxy-terminal tail (2). Expression of vinculin were shown to be affected by the level of actin expression (2,3). Vinculin deficiencies are associated with a decrease in cell adhesion and an increase in cell motility, suggesting a possible role in metastatic growth (4). Defects in VCL are the cause of cardiomyopathy dilated type 1W (CMD1W) (5).

Vinculin Antibody - References

Burridge K, Fath K, Kelly T, et al. Focal adhesions: transmembrane junctions between the extracellular matrix and the cytoskeleton. Annu. Rev. Cell Biol.1988; 4:487-525.
Gilmore AP, Jackson P, Waites GT, et al. Further characterization of the talin-binding site in the cytoskeletal protein vinculin. J. Cell Sci. 1992; 103:719-31.
Deakin NO, Ballestrem C, and Turner CE. Paxillin and Hic-5 interaction with vinculin is differentially regulated by Rac1 and RhoA. PLoS One 2012; 7:e37990.
Goldmann WH, Auernheimer V, Thievessen I, et al. Vinculin, cell mechanics and tumour cell invasion. Cell Biol. Int. 2013; Feb 1.