

Vinculin Antibody Catalog # ASC12055

Specification

Vinculin Antibody - Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P18206
Other Accession	4507877 , NP_003364 , 7414
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	Vinculin antibody can be used for detection of Vinculin by Western blot at 0.5 - 1 µg/ml. Antibody can also be used for immunocytochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.

Vinculin Antibody - Additional Information

Other Names

CMD1W, CMH15, Metavinculin, MVCL

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}. Cytoplasm, perinuclear region {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

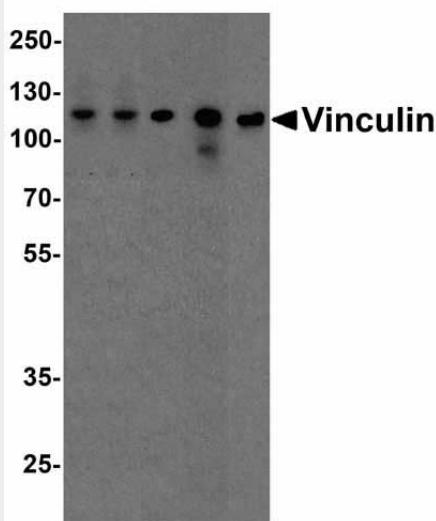
Metavinculin is muscle-specific.

Vinculin Antibody - Protocols

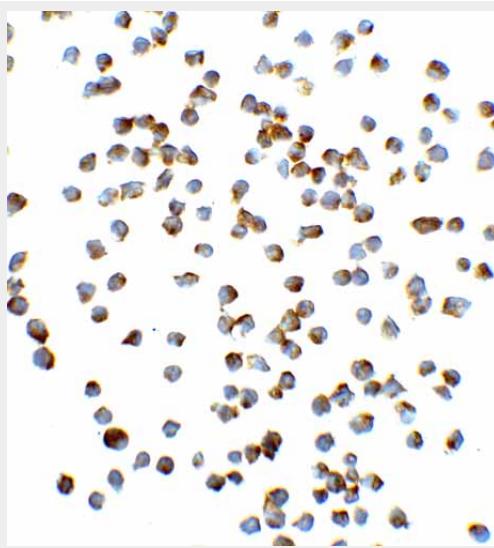
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

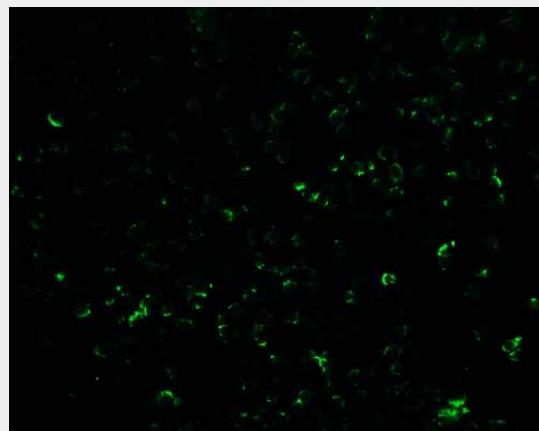
Vinculin Antibody - Images



Western blot analysis of Vinculin in A431, Daudi, Jurkat, Raji, and THP-1 cell lysate with Vinculin antibody at 1 µg/ml.



Immunocytochemistry of Vinculin in Jurkat cells with Vinculin antibody at 5 µg/ml.



Immunofluorescence of Vinculin in Jurkat cells 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 [removed]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.