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Product Information

Anti-Vinculin
produced in rabbit, affinity isolated antibody

Catalog Number **V4139**

Product Description

Anti-Vinculin is produced in rabbit using a synthetic peptide corresponding to amino acid residues 691-705 of human vinculin with N-terminal added cysteine, conjugated to KLH as immunogen. This sequence is present also in metavinculin. The corresponding sequence is identical in mouse, rat and pig, and differs by one amino acid in chicken. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Vinculin recognizes human, rat, and mouse vinculin. Applications include the detection of vinculin by immunoblotting, immunoprecipitation, and immunofluorescence. Detection of the vinculin band (~116 kDa) by immunoblotting is specifically inhibited with the immunizing peptide.

Vinculin is a cytoskeletal protein associated with the cytoplasmic faces of both cell-cell and cell-extracellular matrix adherens-type junctions. It functions as one of several interacting proteins involved in anchoring F-actin to the membrane. Vinculin has been implicated in the control of adhesion and motility of several cell types.[2-4] The sequences of chicken, nematode, and human vinculin have been determined.[1] It has been shown that a sequence of molecular interactions may be involved in the transmembrane assembly of adhesion plaques.[5] In the assembly of adhesion plaques, the β-subunit of integrin binds to talin. Talin binds to vinculin that interacts with α-actinin and intramolecularly with itself. Vinculin also binds α-catenin as well as the vasodilator stimulated phosphoprotein (VASP) in focal contact assembly.[6,7] It transiently binds the ARP2/3 complex without colocalization in focal adhesions.[8] In muscle, vinculin is localized in the fascia adherens of the intercalated disk (cardiac muscle), myotendinous junctions (skeletal muscle), neuromuscular junctions, and the membrane-associated dense bodies of smooth muscle. In many cell types undergoing viral transformation, vinculin becomes redistributed to rosettes or podosomes.

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1 mg/ml

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration between 2.5–5 μg/ml is determined using whole cell extracts of cultured mouse NIH 3T3 cells and human hepatoma HepG2 cells, and a chemiluminescent detection reagent.

Indirect Immunofluorescence: a working concentration of 15–30 μg/ml is determined by staining of rat or human heart acetone-fixed frozen sections.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilutions by titration test.

References

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