

Product Information

Anti-Vinculin antibody, Mouse monoclonal
clone hVIN-1, purified from hybridoma cell culture

Product Number **V9264**

Product Description

Anti-Vinculin antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the hVIN-1 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with vinculin purified from human uterus. The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2.

Monoclonal Anti-Vinculin recognizes human, bovine, chicken, dog, rat, mouse, turkey, and *Xenopus* vinculin. It shows cross reactivity with smooth muscle metavinculin. The antibody may be used in various immunochemical techniques including ELISA, immunoblotting (~116 kDa), immunocytochemistry,¹⁻² and immunohistochemistry.³⁻⁴

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.⁵ It has been shown that a sequence of molecular interactions might be involved in the transmembrane assembly of adhesion plaques.⁶ In the assembly of adhesion plaques, the β -subunit of integrin binds to talin. Talin binds to vinculin that interacts with α -actinin and possibly with itself. Since α -actinin binds to and cross-links actin filaments, vinculin represents a key element in the transmembrane linkage of the extracellular matrix to the cytoplasmic microfilament system. 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.^{5,7}

Reagent

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

Antibody concentration: ~1.0 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 at -20 °C 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 antibody concentration of 0.05-0.1 μ g/mL is recommended using HS-68 total cell extract.

Immunocytochemistry: a working antibody concentration of 5-10 μ g/mL is recommended using HS-68 human fibroblast cell culture.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

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4. Brinck, U., et al., *Int. J. Cardiol.*, **59**, 125-132 (1997).
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6. Geiger, B., et al., *J. Cell Sci. Suppl.*, **8**, 251-272 (1987).
7. Spinardi, L., and Marchisio, P. C., *Eur. J. Cell Biol.*, **85**, 191-194 (2006).

DS,PHC 02/17-1