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Product Information

Anti-Vinculin antibody, Mouse monoclonal
clone V284, purified from hybridoma cell culture

Catalog Number **SAB4200080**

Product Description

Monoclonal Anti-Vinculin (mouse IgG1 isotype) is derived from the hybridoma V284 produced by the fusion of mouse myeloma cells and splenocytes from mice immunized with purified human platelet vinculin.[1] The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-Vinculin recognizes human, monkey, dog, rabbit, chicken, rat, and mouse vinculin. The product may be used in several immunochemical techniques including immunoblotting (~117 kDa), immunoprecipitation, and immunocytochemistry.[1]

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.[2] It has been shown that a sequence of molecular interactions are involved in the transmembrane assembly of adhesion plaques.[3] 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 crosslinks 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.[2,4]

Reagent

Supplied as a solution in 0.01M phosphate buffered saline, 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 Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –20 °C. For continuous use, the product may be stored 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 0.005-0.01 μg/mL is recommended using HeLa total cell extracts.

Immunocytochemistry: a working antibody concentration of 4-8 μg/mL is recommended using HeLa or HS-68 human fibroblasts cells fixed with methanol:acetone.

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

References

1. Porter, R.M. et al., *J. Pathol.,* **170**, 435-440 (1993).
2. Ziefler, W.H. et al., *Trends Cell Biol.,* **16**, 453-560 (2006).
3. Geiger, B. et al., *J. Cell Sci. Suppl.*, **8**, 251-272 (1987).
4. Spinardi, L., and Marchisio, P.C., *Eur. J. Cell Biol.,* **85**, 191-194 (2006).

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