

# vezatin (A-3): sc-271369

## BACKGROUND

Vezatin is a single transmembrane domain containing mammalian adhesion protein that is ubiquitously expressed at adherens cell-cell junctions. Adherens junctions (zonula adherens) are cell-cell junctions that host microfilaments and/or intermediate filaments, which can coordinate with focal adhesion proteins and mediate tissue organization and morphogenesis. Vezatin interacts with actin filamentous networks and anchors myosin VIIA to cadherin complexes, thereby creating a network between adherens junctions and the actin cytoskeleton. This may enhance cell-cell adhesion characteristics and influence cadherin-based signals. Vezatin is concentrated in the fibrillar links interconnecting the bases of adjacent stereocilia in the inner ear sensory hair cells and may mediate proper positioning of hair cell stereocilia. Loss of a functional vezatin-myosin VIIA complex at both the adherent junctions and the base of the stereocilia is likely to account for the splaying out of the stereocilia observed in *Myo7a*<sup>-/-</sup> animals. Vezatin recruitment to adherens junctions implicates the C-terminal region of  $\alpha$ -catenin.

## REFERENCES

- Kemler, R. 1993. From cadherins to catenins: cytoplasmic protein interactions and regulation of cell adhesion. *Trends Genet.* 9: 317-321.
- Kussel-Andermann, P., et al. 2000. Vezatin, a novel transmembrane protein, bridges myosin VIIA to the cadherin-catenins complex. *EMBO J.* 19: 6020-6029.
- Ko, K.S., et al. 2001. Cadherins mediate intercellular mechanical signaling in fibroblasts by activation of stretch-sensitive calcium permeable channels. *J. Biol. Chem.* 276: 35967-35977.
- Li, G., et al. 2001. N-cadherin-mediated intercellular interactions promote survival and migration of melanoma cells. *Cancer Res.* 61: 3819-3825.
- Blaschuk, O.W., et al. 2002. Plasma membrane components of adherens junctions (review). *Mol. Membr. Biol.* 19: 75-80.
- Geisbrecht, E.R. and Montell, D.J. 2002. Myosin VI is required for E-cadherin-mediated border cell migration. *Nat. Cell Biol.* 4: 616-620.
- Sousa, S., et al. 2004. Unconventional myosin VIIa and vezatin, two proteins crucial for *Listeria* entry into epithelial cells. *J. Cell Sci.* 117: 2121-2130.

## CHROMOSOMAL LOCATION

Genetic locus: VEZT (human) mapping to 12q22; Vezt (mouse) mapping to 10 C2.

## SOURCE

vezatin (A-3) is a mouse monoclonal antibody raised against amino acids 1-160 mapping within an N-terminal extracellular domain of vezatin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

vezatin (A-3) is recommended for detection of vezatin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for vezatin siRNA (h): sc-43199, vezatin siRNA (m): sc-60019, vezatin shRNA Plasmid (h): sc-43199-SH, vezatin shRNA Plasmid (m): sc-60019-SH, vezatin shRNA (h) Lentiviral Particles: sc-43199-V and vezatin shRNA (m) Lentiviral Particles: sc-60019-V.

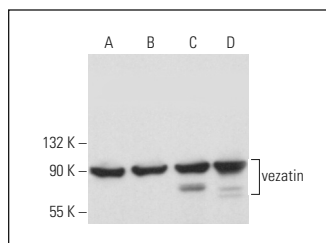
Molecular Weight of vezatin: 89 kDa.

Positive Controls: vezatin (h): 293T Lysate: sc-117118, MCF7 whole cell lysate: sc-2206 or NIH/3T3 whole cell lysate: sc-2210.

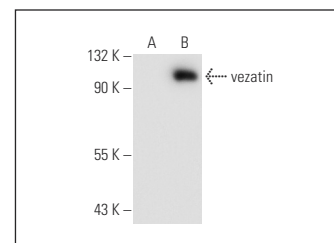
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



vezatin (A-3): sc-271369. Western blot analysis of vezatin expression in MCF7 (A), PC-3 (B), NIH/3T3 (C) and L6 (D) whole cell lysates.



vezatin (A-3): sc-271369. Western blot analysis of vezatin expression in non-transfected: sc-117752 (A) and human vezatin transfected: sc-117118 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Holdsworth-Carson, S.J., et al. 2016. Endometrial vezatin and its association with endometriosis risk. *Hum. Reprod.* 31: 999-1013.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.