

vinculin (N-19): sc-7649



The Power to Question

BACKGROUND

Focal adhesions were identified as areas within the plasma membrane of tissue culture cells that adhere tightly to the underlying substrate. *In vivo*, these regions are involved in the adhesion of cells to the extracellular matrix. Paxillin and vinculin are cytoskeletal, focal adhesion proteins that are components of a protein complex, which links the actin network to the plasma membrane. Vinculin binding sites have been identified on other cytoskeletal proteins, including talin and α -actinin. In addition, vinculin, talin and α -actinin each contain actin binding sites. Expression of vinculin and talin were shown to be affected by the level of actin expression. α -actinin has been shown to link actin to integrins in the plasma membrane through interactions with the vinculin and talin complex or by a direct interaction with integrin.

CHROMOSOMAL LOCATION

Genetic locus: VCL (human) mapping to 10q22.2; Vcl (mouse) mapping to 14 A3.

SOURCE

vinculin (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of vinculin of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7649 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

vinculin (N-19) is recommended for detection of vinculin of mouse, rat, human and *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

vinculin (N-19) is also recommended for detection of vinculin in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for vinculin siRNA (h): sc-29524, vinculin siRNA (m): sc-36819, vinculin shRNA Plasmid (h): sc-29524-SH, vinculin shRNA Plasmid (m): sc-36819-SH, vinculin shRNA (h) Lentiviral Particles: sc-29524-V and vinculin shRNA (m) Lentiviral Particles: sc-36819-V.

Molecular Weight of vinculin: 117 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HISM cell lysate: sc-2229 or vinculin (h): 293T Lysate: sc-113822.

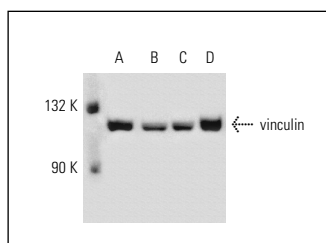
STORAGE

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

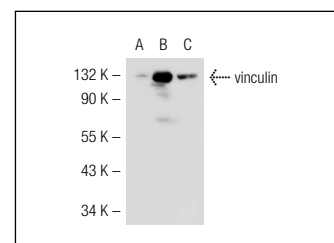
RESEARCH USE

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

DATA



vinculin (N-19): sc-7649. Western blot analysis of vinculin expression in HUVEC-C (A), HeLa (B), MDCK (C) and HISM (D) whole cell lysates.



vinculin (N-19): sc-7649. Western blot analysis of vinculin expression in non-transfected 293T: sc-117752 (A), human vinculin transfected 293T: sc-113822 (B) and HUVEC-C (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Palmer, H.G., et al. 2001. Vitamin D₃ promotes the differentiation of colon carcinoma cells by the induction of E-cadherin and the inhibition of β -catenin signaling. *J. Cell Biol.* 154: 369-387.
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- Van't Padje, S., et al. 2009. Reduction in fragile X related 1 protein causes cardiomyopathy and muscular dystrophy in zebrafish. *J. Exp. Biol.* 212: 2564-2570.
- Larriba, M.J., et al. 2009. Snail2 cooperates with Snail1 in the repression of vitamin D receptor in colon cancer. *Carcinogenesis* 30: 1459-1468.
- Nicoloso, M.S., et al. 2010. Single-nucleotide polymorphisms inside microRNA target sites influence tumor susceptibility. *Cancer Res.* 70: 2789-2798.
- Garamszegi, N., et al. 2010. Extracellular matrix-induced transforming growth factor- β receptor signaling dynamics. *Oncogene* 29: 2368-2380.
- Belletti, B., et al. 2010. p27^{Kip1} controls cell morphology and motility by regulating microtubule-dependent lipid raft recycling. *Mol. Cell. Biol.* 30: 2229-2240.
- Schiappacassi, M., et al. 2011. Role of T198 modification in the regulation of p27^{Kip1} protein stability and function. *PLoS ONE* 6: e17673.

Try **vinculin (7F9): sc-73614** or **vinculin (H-10): sc-25336**, our highly recommended monoclonal alternatives to vinculin (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **vinculin (7F9): sc-73614**.