SANTA CRUZ BIOTECHNOLOGY, INC.

vinculin (7F9): sc-73614

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Focal adhesions are 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 have been 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 (7F9) is a mouse monoclonal antibody raised against vinculin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

vinculin (7F9) is available conjugated to agarose (sc-73614 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-73614 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-73614 PE), fluorescein (sc-73614 FITC), Alexa Fluor® 488 (sc-73614 AF488), Alexa Fluor® 546 (sc-73614 AF546), Alexa Fluor® 594 (sc-73614 AF594) or Alexa Fluor® 647 (sc-73614 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-73614 AF680) or Alexa Fluor® 790 (sc-73614 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

vinculin (7F9) is recommended for detection of vinculin of mouse, rat, human and avian origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for vinculin siRNA (h): sc-29524, vinculin siRNA (m): sc-36819, vinculin siRNA (r): sc-270542, vinculin shRNA Plasmid (h): sc-29524-SH, vinculin shRNA Plasmid (m): sc-36819-SH, vinculin shRNA Plasmid (r): sc-270542-SH, vinculin shRNA (h) Lentiviral Particles: sc-29524-V, vinculin shRNA (m) Lentiviral Particles: sc-36819-V and vinculin shRNA (r) Lentiviral Particles: sc-270542-V.

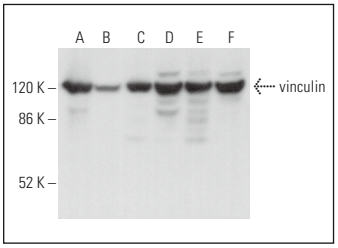
Molecular Weight of vinculin: 117 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HUV-EC-C whole cell lysate: sc-364180 or K-562 whole cell lysate: sc-2203.

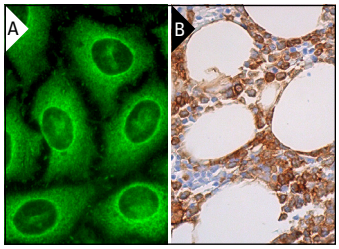
STORAGE

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

DATA



vinculin (7F9): sc-73614. Western blot analysis of vinculin expression in HeLa (**A**), K-562 (**B**), PC-3 (**C**), HUV-EC-C (**D**), ECV304 (**E**) and 3T3-L1 (**F**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



vinculin (7F9): sc-73614. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic staining of hematopoietic cells (**B**).

SELECT PRODUCT CITATIONS

1. Korshunov, A., et al. 2000. Immunohistochemical markers for intracranial ependymoma recurrence. An analysis of 88 cases. J. Neurol. Sci. 177: 72-82.
2. Hoppe-Seyler, K., et al. 2017. Induction of dormancy in hypoxic human papillomavirus-positive cancer cells. Proc. Natl. Acad. Sci. USA 114: E990-E998.
3. Avolio, R., et al. 2018. Protein Syndesmos is a novel RNA-binding protein that regulates primary cilia formation. Nucleic Acids Res. 46: 12067-12086.
4. Schnack, L., et al. 2019. Mechanisms of trained innate immunity in oxLDL primed human coronary smooth muscle cells. Front. Immunol. 10: 13.
5. Ballabio, C., et al. 2020. Modeling medulloblastoma *in vivo* and with human cerebellar organoids. Nat. Commun. 11: 583.
6. Hollenbach, M., et al. 2021. Pitfalls in AR42J-model of cerulein-induced acute pancreatitis. PLoS ONE 16: e0242706.
7. Yockteng-Melgar, J., et al. 2022. G_1/S cell cycle induction by Epstein-Barr virus BORF2 is mediated by P53 and APOBEC3B. J. Virol. 96: e0066022.
8. Bohn, P., et al. 2023. A dsRNA-binding mutant reveals only a minor role of exonuclease activity in interferon antagonism by the arenavirus nucleoprotein. PLoS Pathog. 19: e1011049.
9. Russo, M., et al. 2024. Acetyl-CoA production by mediator-bound 2-ketoacid dehydrogenases boosts de novo histone acetylation and is regulated by nitric oxide. Mol. Cell 84: 967-980.e10.
10. Marañón, P., et al. 2025. BMP6 participates in the molecular mechanisms involved in APAP hepatotoxicity. Arch. Toxicol. 99: 1187-1202.

RESEARCH USE

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