

vinculin (G-11): sc-55465

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 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 (G-11) is a mouse monoclonal antibody raised against amino acids 1-300 of vinculin of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

vinculin (G-11) is available conjugated to agarose (sc-55465 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55465 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55465 PE), fluorescein (sc-55465 FITC), Alexa Fluor® 488 (sc-55465 AF488), Alexa Fluor® 546 (sc-55465 AF546), Alexa Fluor® 594 (sc-55465 AF594) or Alexa Fluor® 647 (sc-55465 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-55465 AF680) or Alexa Fluor® 790 (sc-55465 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

vinculin (G-11) is recommended for detection of vinculin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 (G-11) is also recommended for detection of vinculin in additional species, including equine.

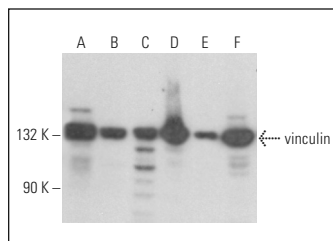
Suitable for use as control antibody for vinculin siRNA (h): sc-29524, vinculin siRNA (m): sc-36819, vinculin siRNA (r): sc-270542, vinculin shRNA Plasmid (h): sc-29524-SH, vinculin shRNA Plasmid (m): sc-36819-SH, vinculin shRNA Plasmid (r): sc-270542-SH, vinculin shRNA (h) Lentiviral Particles: sc-29524-V,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

Molecular Weight of vinculin: 117 kDa.

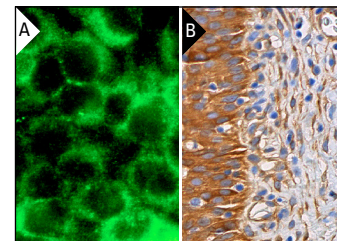
STORAGE

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

DATA



vinculin (G-11): sc-55465. Western blot analysis of vinculin expression in NTERA-2 cl.D1 (A), K-562 (B), U-937 (C), PC-3 (D), Hep G2 (E) and ECV304 (F) whole cell lysates.



vinculin (G-11): sc-55465. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of urothelial cells (B).

SELECT PRODUCT CITATIONS

- Salerno, S., et al. 2009. Improved functions of human hepatocytes on NH3 plasma-grafted PEEK-WC-PU membranes. *Biomaterials* 39: 4348-4356.
- Pathania, S., et al. 2014. BRCA1 haploinsufficiency for replication stress suppression in primary cells. *Nat. Commun.* 5: 5496.
- Zhang, J., et al. 2015. Promotion of dental pulp cell migration and pulp repair by a bioceramic putty involving FGFR-mediated signaling pathways. *J. Dent. Res.* 94: 853-862.
- Prudent, J., et al. 2016. Mitochondrial Ca²⁺ uptake controls Actin cytoskeleton dynamics during cell migration. *Sci. Rep.* 6: 36570.
- Engel, N., et al. 2017. Synergistic action of genistein and calcitriol in immature osteosarcoma MG-63 cells by SGPL1 up-regulation. *PLoS ONE* 12: e0169742.
- Deygas, M., et al. 2018. Redox regulation of EGFR steers migration of hypoxic mammary cells towards oxygen. *Nat. Commun.* 9: 4545.
- Lionnard, L., et al. 2019. TRIM17 and TRIM28 antagonistically regulate the ubiquitination and anti-apoptotic activity of BCL2A1. *Cell Death Differ.* 26: 902-917.
- Bessou, M., et al. 2020. The apoptosis inhibitor Bcl-x_L controls breast cancer cell migration through mitochondria-dependent reactive oxygen species production. *Oncogene* 39: 3056-3074.
- Arslanhan, M.D., et al. 2021. Aurora kinase A proximity map reveals centriolar satellites as regulators of its ciliary function. *EMBO Rep.* 22: e51902.
- Tiryaki, F., et al. 2022. ENKD1 is a centrosomal and ciliary microtubule-associated protein important for primary cilium content regulation. *FEBS J.* E-published.

RESEARCH USE

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

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