

vinculin (H-10): sc-25336



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 (H-10) 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 (H-10) is available conjugated to agarose (sc-25336 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-25336 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25336 PE), fluorescein (sc-25336 FITC), Alexa Fluor[®] 488 (sc-25336 AF488), Alexa Fluor[®] 546 (sc-25336 AF546), Alexa Fluor[®] 594 (sc-25336 AF594) or Alexa Fluor[®] 647 (sc-25336 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-25336 AF680) or Alexa Fluor[®] 790 (sc-25336 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

vinculin (H-10) is recommended for detection of vinculin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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).

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.

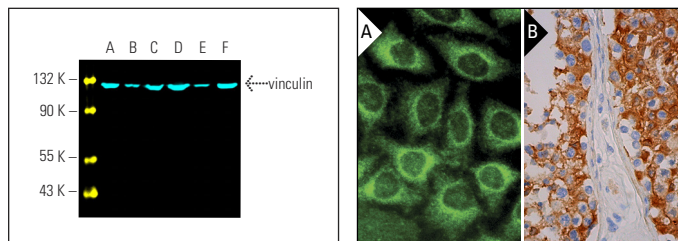
Molecular Weight of vinculin: 117 kDa.

Positive Controls: A-10 cell lysate: sc-3806, Sol8 cell lysate: sc-2249 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 (H-10) Alexa Fluor[®] 647: sc-25336 AF647. Direct fluorescent western blot analysis of vinculin expression in Sol8 (A), A-10 (B), K-562 (C), PC-3 (D), HEL 92.1.7 (E) and BC₂H1 (F) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Cruz Marker[™] Molecular Weight Standards detected with Cruz Marker[™] MW Tag-Alexa Fluor[®] 488: sc-516790.

vinculin (H-10): sc-25336. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts (B).

SELECT PRODUCT CITATIONS

- Liu, M., et al. 2005. Gene transfer of vasostatin, a calreticulin fragment, into neuroendocrine tumor cells results in enhanced malignant behavior. *Neuroendocrinology* 82: 1-10.
- Cron, K.R., et al. 2013. Proteasome inhibitors block DNA repair and radiosensitize non-small cell lung cancer. *PLoS ONE* 8: e73710.
- Pecot, C.V., et al. 2014. Therapeutic silencing of KRAS using systemically delivered siRNAs. *Mol. Cancer Ther.* 13: 2876-2885.
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- Tsang, Y.H., et al. 2016. Functional annotation of rare gene aberration drivers of pancreatic cancer. *Nat. Commun.* 7: 10500.
- Winter, G.E., et al. 2017. BET bromodomain proteins function as master transcription elongation factors independent of CDK9 recruitment. *Mol. Cell* 67: 5-18.e19.
- Zeid, R., et al. 2018. Enhancer invasion shapes MYCN-dependent transcriptional amplification in neuroblastoma. *Nat. Genet.* 50: 515-523.
- Xiong, L., et al. 2019. Aberrant enhancer hypomethylation contributes to hepatic carcinogenesis through global transcriptional reprogramming. *Nat. Commun.* 10: 335.
- Cheung, E.C., et al. 2020. Dynamic ROS control by TIGAR regulates the initiation and progression of pancreatic cancer. *Cancer Cell* 37: 168-182.e4.
- Rodríguez, A., et al. 2021. MYC promotes bone marrow stem cell dysfunction in Fanconi anemia. *Cell Stem Cell* 28: 33-47.e8.

RESEARCH USE

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

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