

Talin (C-9): sc-365875

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 that links the Actin network to the plasma membrane. Vinculin binding sites have been identified on other cytoskeletal proteins, including Talin-1 and α -actinin. In addition, vinculin, Talin-1, Talin-2 and α -actinin each contain Actin binding sites. Expression of vinculin, Talin-1 and Talin-2 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. Talin-2 is similar to Talin-1 but shows distinct patterns of expression and cannot compensate for the loss of Talin-1.

REFERENCES

- Burridge, K., et al. 1988. Focal adhesions: transmembrane junctions between the extracellular matrix and the cytoskeleton. *Annu. Rev. Cell Biol.* 4: 487-525.
- Gilmore, A.P., et al. 1992. Further characterization of the Talin-binding site in the cytoskeletal protein vinculin. *J. Cell Sci.* 103: 719-731.

CHROMOSOMAL LOCATION

Genetic locus: TLN1 (human) mapping to 9p13.3, TLN2 (human) mapping to 15q22.2; Tln1 (mouse) mapping to 4 B1, Tln2 (mouse) mapping to 9 C.

SOURCE

Talin (C-9) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Talin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Talin (C-9) is available conjugated to agarose (sc-365875 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365875 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-365875 PE), fluorescein (sc-365875 FITC) or Alexa Fluor[®] 488 (sc-365875 AF488) or Alexa Fluor[®] 647 (sc-365875 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Talin (C-9) is recommended for detection of Talin-1 and Talin-2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

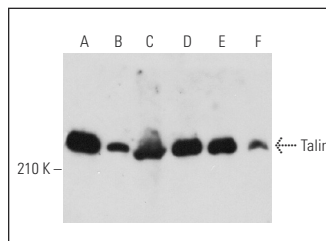
Molecular Weight of Talin: 230 kDa.

Positive Controls: C2C12 whole cell lysate: sc-364188, SHP-77 whole cell lysate: sc-364258 or LADMAC whole cell lysate: sc-364189.

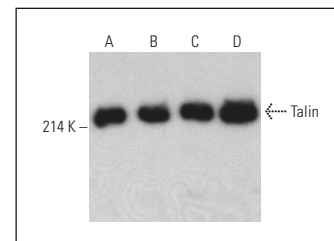
STORAGE

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

DATA



Talin (C-9): sc-365875. Western blot analysis of Talin expression in WI-38 (A), SHP-77 (B), C2C12 (C), LADMAC (D), H19-7/IGF-IR (E) and L8 (F) whole cell lysates.



Talin (C-9): sc-365875. Western blot analysis of Talin expression in LADMAC (A), C2C12 (B), RAW 264.7 (C) and H19-7/IGF-IR (D) whole cell lysates. Detection reagent used: m-IgG₃ BP-HRP: sc-533670.

SELECT PRODUCT CITATIONS

- Huang, Z., et al. 2018. Talin is a substrate for SUMOylation in migrating cancer cells. *Exp. Cell Res.* 370: 417-425.
- Soto-Acosta, R., et al. 2018. Fragile X mental retardation protein is a Zika virus restriction factor that is antagonized by subgenomic flaviviral RNA. *Elife* 7: e39023.
- Sim, H., et al. 2020. Quantitative proteomic analysis of primitive neural stem cells from LRRK2 G2019S-associated Parkinson's disease patient-derived iPSCs. *Life* 10: 331.
- Skinider, M.A., et al. 2021. An atlas of protein-protein interactions across mouse tissues. *Cell* 184: 4073-4089.e17.
- Shologu, N., et al. 2022. Macromolecular crowding in the development of a three-dimensional organotypic human breast cancer model. *Biomaterials* 287: 121642.
- Chau, T.C.Y., et al. 2022. Dynamically regulated focal adhesions coordinate endothelial cell remodelling in developing vasculature. *Development* 149: dev200454.
- Riffo, E., et al. 2022. The Sall2 transcription factor promotes cell migration regulating focal adhesion turnover and Integrin β 1 expression. *Front. Cell Dev. Biol.* 10: 1031262.
- Vallejos, P.A., et al. 2023. Exosomal proteins as a source of biomarkers in colon cancer-derived peritoneal carcinomatosis—a pilot study. *Proteomics Clin. Appl.* 17: e2100085.
- Williams, J.N., et al. 2023. Osteocyte-derived CaMKK2 regulates osteoclasts and bone mass in a Sex-dependent manner through secreted calpastatin. *Int. J. Mol. Sci.* 24: 4718.

RESEARCH USE

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

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