SANTA CRUZ BIOTECHNOLOGY, INC.

Talin (TLN01 [TA205]): sc-59882

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

1. Burridge, K., et al. 1988. Focal adhesions: transmembrane junctions between the extracellular matrix and the cytoskeleton. Annu. Rev. Cell Biol. 4: 487-525.
2. Gilmore, A.P., et al. 1992. Further characterization of the Talin-binding site in the cytoskeletal protein vinculin. J. Cell Sci. 103: 719-731.
3. Wood, C.K., et al. 1994. Characterisation of the paxillin-binding site and the C-terminal focal adhesion targeting sequence in vinculin. J. Cell Sci. 107: 709-717.

CHROMOSOMAL LOCATION

Genetic locus: TLN2 (human) mapping to 15q22.2; Tln2 (mouse) mapping to 9 C.

SOURCE

Talin (TLN01 [TA205]) is a mouse monoclonal antibody raised against Talin isolated from platelets 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.

APPLICATIONS

Talin (TLN01 [TA205]) is recommended for detection of Talin of mouse, rat and human 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 to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Talin (TLN01 [TA205]) is also recommended for detection of Talin in additional species, including rabbit.

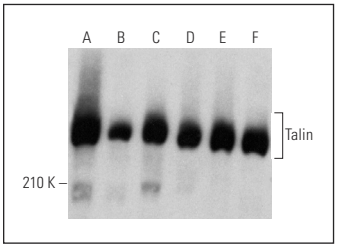
Molecular Weight of Talin: 230 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, K-562 whole cell lysate: sc-2203 or C32 whole cell lysate: sc-2205.

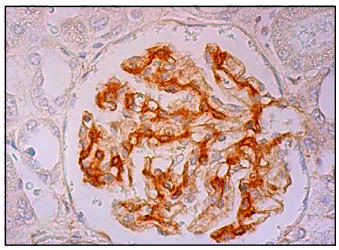
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Talin (TLN01 [TA205]): sc-59882. Western blot analysis of Talin expression in WI-38 (**A**), SHP-77 (**B**), AML-193 (**C**), CCRF-CEM (**D**), K-562 (**E**) and C32 (**F**) whole cell lysates.



Talin (TLN01 [TA205]): sc-59882. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining of cells in glomeruli.

SELECT PRODUCT CITATIONS

1. Zangiacomi, V., et al. 2009. Human cord blood-derived hematopoietic and neural-like stem/progenitor cells are attracted by the neurotransmitter GABA. Stem Cells Dev. 18: 1369-1378.
2. Mih, J.D., et al. 2012. Matrix stiffness reverses the effect of actomyosin tension on cell proliferation. J. Cell Sci. 125: 5974-5983.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **Talin (C-9): sc-365875** for Talin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.