

Talin (T-20): sc-31013

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.
- 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.
- Gluck, U., et al. 1994. Modulation of α -actinin levels affects cell motility and confers tumorigenicity on 3T3 cells. *J. Cell Sci.* 107: 1773-1782.
- Schevzov, G., et al. 1995. Impact of Actin gene expression on vinculin, Talin, cell spreading, and motility. *DNA Cell Biol.* 14: 689-700.
- Hemmings, L., et al. 1996. Talin contains three Actin-binding sites each of which is adjacent to a vinculin-binding site. *J. Cell Sci.* 109: 2715-2726.

CHROMOSOMAL LOCATION

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

SOURCE

Talin (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Talin-2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-31012 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Talin (T-20) is recommended for detection of Talin-1 and Talin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Talin (T-20) is also recommended for detection of Talin-1 and Talin-2 in additional species, including equine, canine, bovine and porcine.

Molecular Weight of Talin: 230 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263, Hs68 cell lysate: sc-2230 or NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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



Try **Talin (C-9): sc-365875** or **Talin (TA205): sc-59940**, our highly recommended monoclonal alternatives to Talin (T-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Talin (C-9): sc-365875**.