

# Talin (A-11): sc-365460

## 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  $\alpha$ -actinin. In addition, vinculin, Talin-1, Talin-2 and  $\alpha$ -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.  $\alpha$ -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.

## 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 (A-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2517-2540 at the C-terminus of Talin-2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365460 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

Talin (A-11) 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  $\mu$ g per 100-500  $\mu$ 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).

Talin (A-11) is also recommended for detection of Talin-1 and Talin-2 in additional species, including equine, canine and bovine.

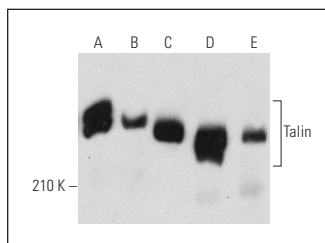
Molecular Weight of Talin: 230 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260, LADMAC whole cell lysate: sc-364189 or SHP-77 whole cell lysate: sc-364258.

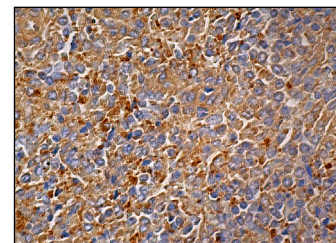
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Talin (A-11): sc-365460. Western blot analysis of Talin expression in WI-38 (A), SHP-77 (B), LADMAC (C), H19-7/IGF-IR (D) and L8 (E) whole cell lysates.



Talin (A-11): sc-365460. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in red and white pulps.

## SELECT PRODUCT CITATIONS

- Peng, Z.M., et al. 2014. A four Actin-binding protein signature model for poor prognosis of patients with esophageal squamous cell carcinoma. *Int. J. Clin. Exp. Pathol.* 7: 5950-5959.
- Šemeláková, M., et al. 2018. The potential of hypericin and hyperforin for antiadhesion therapy to prevent metastasis of parental and oxaliplatin-resistant human adenocarcinoma cells (HT-29). *Anticancer Drugs* 29: 983-994.
- Cai, J., et al. 2022. TLN2 functions as a tumor suppressor in clear cell renal cell carcinoma via inactivation of the Wnt/ $\beta$ -catenin signaling pathway. *Transl. Androl. Urol.* 11: 39-52.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



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.