

Villin (m): 293T Lysate: sc-124565

BACKGROUND

Caldesmon, Filamin 1, Nebulin and Villin are differentially expressed and regulated Actin binding proteins. Both muscular (CDh) and non-muscular (CDI) forms of Caldesmon have been identified and each has been shown to bind to Actin as well as to calmodulin and myosin. CDh is expressed predominantly on thin filaments in smooth muscle, whereas CDI is widely expressed in non-muscle tissues and cells. Filamin 1, which is ubiquitously expressed and exists as a homodimer, functions to crosslink Actin to filaments. Nebulin is a large filamentous protein specific to muscle tissue that may function as a ruler for filament length. Several isoforms of Nebulin are produced by alternative exon usage. Villin is Ca^{2+} -regulated and is the major structural component of the brush border of absorptive cells.

REFERENCES

1. Weihing, R.R. 1988. Actin-binding and dimerization domains of HeLa cell Filamin. *Biochemistry* 27: 1865-1869.
2. Marston, S., Pinter, K. and Bennett, P. 1992. Caldesmon binds to smooth muscle Myosin and Myosin ROD and crosslink thick filaments to Actin filaments. *J. Muscle Res. Cell Motil.* 13: 206-218.
3. Maunoury, R., Robine, S., Pringault, E., Leonard, N., Gaillard, J.A. and Louvard, D. 1992. Developmental regulation of Villin gene expression in the epithelial cell lineages of mouse digestive and urogenital tracts. *Development* 115: 717-728.
4. Labeit, S. and Kolmerer, B. 1995. The complete primary structure of human Nebulin and its correlation to muscle structure. *J. Mol. Biol.* 248: 308-315.
5. Huber, P.A., El-Mezgueldi, M., Grabarek, Z., Slatter, D.A., Levine, B.A. and Marston, S.B. 1996. Multiple-sited interaction of caldesmon with Ca^{2+} -Calmodulin. *Biochem. J.* 316: 413-420.
6. Zhang, J.Q., Luo, G., Herrera, A.H., Paterson, B. and Horowitz, R. 1996. cDNA cloning of mouse Nebulin. Evidence that the Nebulin-coding sequence is highly conserved among vertebrates. *Eur. J. Biochem.* 239: 835-841.

CHROMOSOMAL LOCATION

Genetic locus: Vil1 (mouse) mapping to 1 C3.

PRODUCT

Villin (m): 293T Lysate represents a lysate of mouse Villin transfected 293T cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

APPLICATIONS

Villin (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Villin antibodies. Recommended use: 10-20 μl per lane.

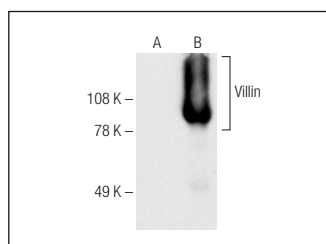
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Villin (E-12): sc-374350 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Villin expression in Villin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

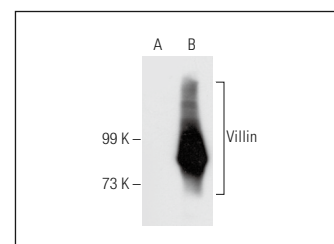
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



Villin (E-12): sc-374350. Western blot analysis of Villin expression in non-transfected: sc-117752 (A) and mouse Villin transfected: sc-124565 (B) 293T whole cell lysates.



Villin (BDID2C3): sc-66022. Western blot analysis of Villin expression in non-transfected: sc-117752 (A) and mouse Villin transfected: sc-124565 (B) 293T whole cell lysates.

STORAGE

Store at -20°C . Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.