

Villin (CWWB1): sc-58898

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 Ca²⁺-regulated and is the major structural component of the brush border of absorptive cells.

REFERENCES

- Weihing, R.R. 1988. Actin-binding and dimerization domains of HeLa cell Filamin. *Biochemistry* 27: 1865-1869.
- Marston, S., et al. 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.
- Maunoury, R., et al. 1992. Developmental regulation of Villin gene expression in the epithelial cell lineages of mouse digestive and urogenital tracts. *Development* 115: 717-728.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: VIL1 (human) mapping to 2q35; Vil1 (mouse) mapping to 1 C5.

SOURCE

Villin (CWWB1) is a mouse monoclonal antibody raised against full length Villin of human origin.

PRODUCT

Each vial contains 250 µl culture supernatant containing IgG₁ with < 0.1% sodium azide.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

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.

APPLICATIONS

Villin (CWWB1) is recommended for detection of Villin of mouse and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:500) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:30-1:3000).

Suitable for use as control antibody for Villin siRNA (h): sc-29521, Villin siRNA (m): sc-36818, Villin shRNA Plasmid (h): sc-29521-SH, Villin shRNA Plasmid (m): sc-36818-SH, Villin shRNA (h) Lentiviral Particles: sc-29521-V and Villin shRNA (m) Lentiviral Particles: sc-36818-V.

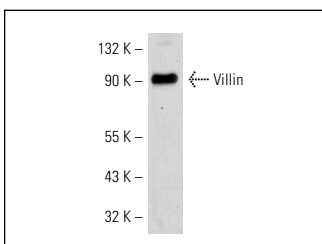
Molecular Weight of Villin: 93 kDa.

Positive Controls: human colon extract: sc-363757, mouse kidney extract: sc-2255 or Villin (m): 293T Lysate: sc-124565.

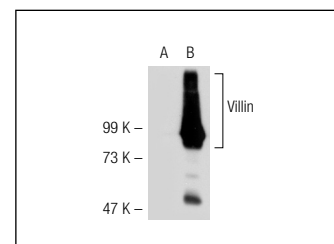
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

DATA



Villin (CWWB1): sc-58898. Western blot analysis of Villin expression in human colon tumor tissue extract.



Villin (CWWB1): sc-58898. Western blot analysis of Villin expression in non-transfected: sc-117752 (A) and mouse Villin transfected: sc-124565 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Azi, S., et al. 2011. Differentiation therapy: targeting human renal cancer stem cells with interleukin 15. *J. Natl. Cancer Inst.* 103: 1884-1898.