SANTA CRUZ BIOTECHNOLOGY, INC.

Villin (H-60): sc-28283

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Caldesmon, Filamin 1, Nebulin and Villin are differentially expressed and regulated Actin binding proteins. Both muscular (CDh) and non-muscular (CDl) 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 CDl 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.

CHROMOSOMAL LOCATION

Genetic locus: VIL1 (human) mapping to 2q35; Vil1 (mouse) mapping to 1 C3.

SOURCE

Villin (H-60) is a rabbit polyclonal antibody raised against amino acids 721-780 mapping near the C-terminus of Villin of human origin.

PRODUCT

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

APPLICATIONS

Villin (H-60) is recommended for detection of Villin 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 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, 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: mouse kidney extract: sc-2255, HCT-8 cell lysate: sc-24675 or human colon extract: sc-363757.

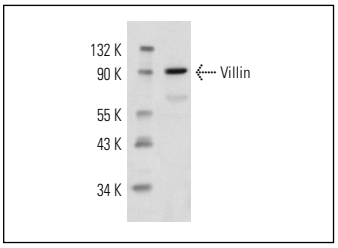
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

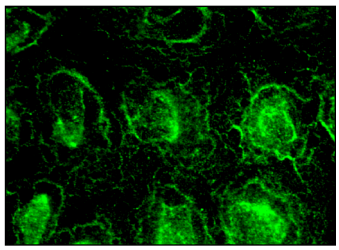
STORAGE

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

DATA



Villin (H-60): sc-28283. Western blot analysis of Villin expression in mouse kidney tissue extract.



Villin (H-60): sc-28283. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Michlig, S., et al. 2007. Claudin-based permeability barriers in taste buds. J. Comp. Neurol. 502: 1003-1011.
2. Dahan, A., et al. 2009. Multiple efflux pumps are involved in the trans-epithelial transport of colchicine: combined effect of p-glycoprotein and multidrug resistance-associated protein 2 leads to decreased intestinal absorption throughout the entire small intestine. Drug Metab. Dispos. 37: 2028-2036.
3. Roth, U., et al. 2010. Differential expression proteomics of human colorectal cancer based on a syngeneic cellular model for the progression of adenoma to carcinoma. Proteomics 10: 194-202.
4. Chen, M., et al. 2010. Loss of PDZ-adaptor protein NHERF2 affects membrane localization and cGMP- and Ca^{2+}- but not cAMP-dependent regulation of Na^{+}/H^{+} exchanger 3 in murine intestine. J. Physiol. 588: 5049-5063.
5. Bolling, B.W., et al. 2011. Microsomal quercetin glucuronidation in rat small intestine depends on age and segment. Drug Metab. Dispos. 39: 1406-1414.
6. Holm, R., et al. 2012. Rectal absorption of vigabatrin, a substrate of the proton coupled amino acid transporter (PAT1, Slc36a1), in rats. Pharm. Res. 29: 1134-1142.

RESEARCH USE

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