Technical Data Sheet

Purified Mouse Anti-Human Villin

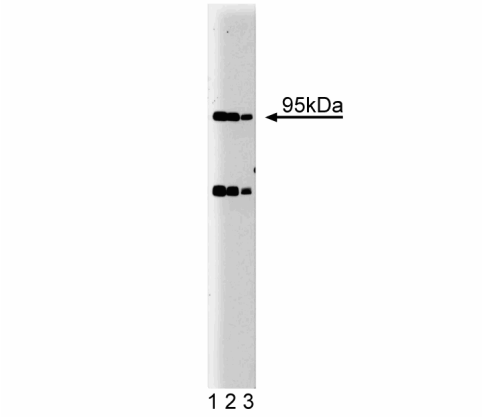
Product Information

Material Number:	**610359**
Size:	150 µg
Concentration:	250 µg/ml
Clone:	12/Villin
Immunogen:	Cow Villin aa. 1-827
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	95 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

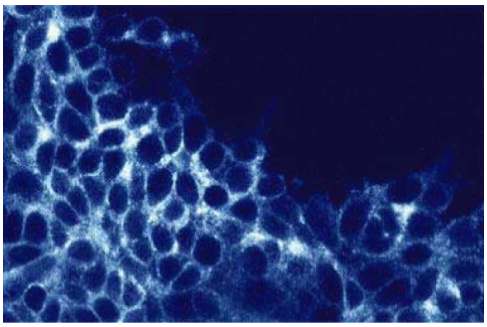
Description

The isolated intestinal microvillus cytoskeleton (core) consists of four major proteins: actin, villin, fimbrin, and brush border myosin-I. These proteins can assemble in vitro into structures resembling native microvillus cores. Of these components, villin, and brush border myosin-I show tissue-specific expression, so they may be involved in the morphogenesis of intestinal microvilli. Found in association with the microvillar actin bundles of the intestinal brush border, villin is a 95 kDa protein composed of two very similar domains of approximately 44 kDa each, the core, and a C-terminal domain of 8 kDa, the headpiece. The core has been shown to contain villin's Ca[2+] regulated capping, nucleating, and severing activities, but it cannot induce the formation of microfilament bundles without the headpiece. Villin is a useful differentiation marker of early embryogenesis and may be useful in diagnosis and follow-up of colorectal cancers. It has been demonstrated that villin is necessary for both the cytoskeletal and membrane protein organization of a functional brush border.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of Villin on HCT-8 lysate. *Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of anti-Villin antibody.*



Immunofluorescent staining of HCT-8 cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

BD Biosciences
bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit bdbiosciences.com/how_to_order/

BD Biosciences

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunohistochemistry	Tested During Development
Immunoprecipitation	Not Recommended

Suggested Companion Products

Catalog Number	Name	Size	Clone
611474	HCT-8 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Friederich E, Pringault E, Arpin M, Louvard D. From the structure to the function of villin, an actin-binding protein of the brush border. *Bioessays.* 1990; 12(9):403-408.(Biology)

Friederich E, Vancompernolle K, Huet C, et al. An actin-binding site containing a conserved motif of charged amino acid residues is essential for the morphogenic effect of villin. *Cell.* 1992; 70(1):81-92.(Biology)

McSwine RL, Musch MW, Bookstein C, Xie Y, Rao M, Chang EB. Regulation of apical membrane Na+/H+ exchangers NHE2 and NHE3 in intestinal epithelial cell line C2/bbe. *Am J Physiol.* 1998; 275(3):C693-C701.(Clone-specific: Western blot)

Nies AT, Konig J, Cui Y, Brom M, Spring H, Keppler D. Structural requirements for the apical sorting of human multidrug resistance protein 2 (ABCC2). *Eur J Biochem.* 2002; 269(7):1866-1876.(Clone-specific: Immunofluorescence)

Zhai L, Zhao P, Panebra A, Guerrerio AL, Khurana S. Tyrosine phosphorylation of villin regulates the organization of the actin cytoskeleton. *J Biol Chem.* 2001; 276(39):36163-36167.(Clone-specific: Western blot)