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Anti-Villin/VIL1 Antibody Picoband™

Catalog Number: PB9457

About VIL1

Villin is known as VIL1. This gene encodes a member of a family of calcium-regulated actin-binding proteins. This protein represents a dominant part of the brush border cytoskeleton which functions in the capping, severing, and bundling of actin filaments. Two mRNAs of 2.7 kb and 3.5 kb have been observed; they result from utilization of alternate poly-adenylation signals present in the terminal exon. In vertebrates, the villin proteins help to support the microfilaments of the microvilli of the brush border. It may play a role in cell plasticity through F-actin severing.

Overview

Product Name	Anti-Villin/VIL1 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Villin/VIL1 Antibody Picoband™ catalog # PB9457. Tested in Flow Cytometry, IF, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IF, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P09327

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Villin, different from the related mouse sequence by three amino acids.
Predicted Reactive Species	Hamster
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Immunofluorescence, 2ug/ml, Human, Mouse, Rat Flow Cytometry, 1-3ug/1x10^6 cells, Human

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Anti-Villin/VIL1 Antibody Picoband™ (PB9457) Images

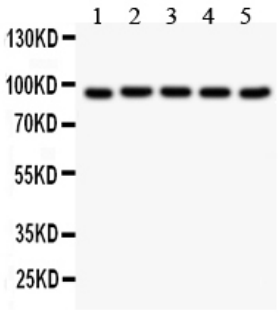

Figure 1. Western blot analysis of Villin using anti-Villin antibody (PB9457).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
Lane 1: Rat Intestine Tissue Lysate at 50ug
Lane 2: Mouse Kidney Tissue Lysate at 50ug
Lane 3: RH35 Whole Cell Lysate at 40ug
Lane 4: HEPG2 Whole Cell Lysate at 40ug,
Lane 5: MCF-7 Whole Cell Lysate at 40ug.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Villin antigen affinity purified polyclonal antibody (Catalog # PB9457) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Villin at approximately 93 kDa. The expected band size for Villin is at 93 kDa.

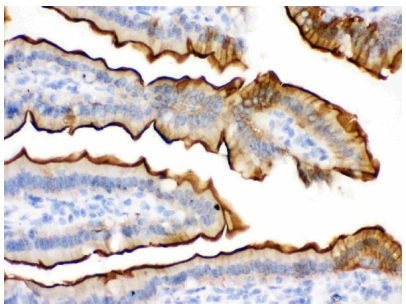

Figure 2. IHC analysis of Villin using anti-Villin antibody (PB9457).
Villin was detected in a paraffin-embedded section of mouse intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Villin Antibody (PB9457) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

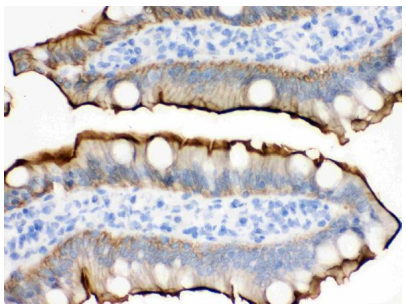

Figure 3. IHC analysis of Villin using anti-Villin antibody (PB9457).
Villin was detected in a paraffin-embedded section of rat intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Villin Antibody (PB9457) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

Figure 4. IHC analysis of Villin using anti-Villin antibody (PB9457).
Villin was detected in a paraffin-embedded section of human

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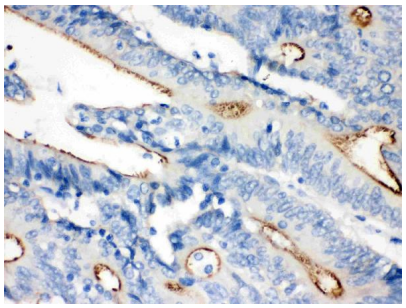

intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Villin Antibody (PB9457) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

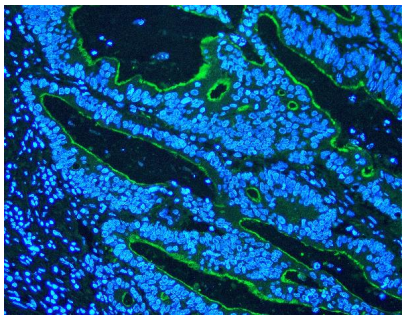

Figure 5. IF analysis of Villi using anti-Villi antibody (PB9457)
Villi was detected in paraffin-embedded section of human rectal cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/mL rabbit anti-Villi Antibody (PB9457) overnight at 4°C. DyLight488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

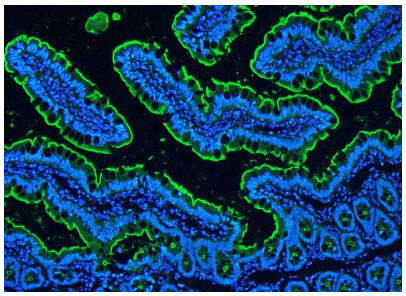

Figure 6. IF analysis of Villi using anti-Villi antibody (PB9457)
Villi was detected in paraffin-embedded section of rat intestine tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/mL rabbit anti-Villi Antibody (PB9457) overnight at 4°C. DyLight488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

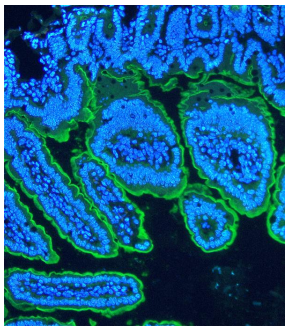

Figure 7. IF analysis of Villi using anti-Villi antibody (PB9457)
Villi was detected in paraffin-embedded section of mouse intestine tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/mL rabbit anti-Villi Antibody (PB9457) overnight at 4°C. DyLight488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Figure 8. IF analysis of Villin using anti-Villin antibody (PB9457).
Villin was detected in paraffin-embedded section of human ileum tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins.

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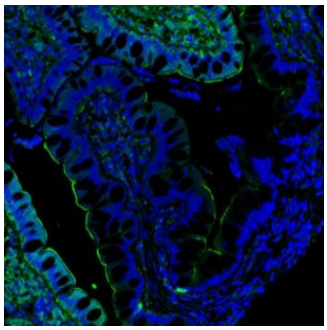

The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-Villin Antibody (PB9457) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

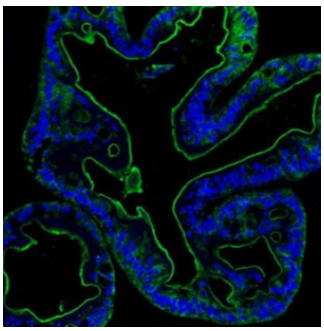

Figure 9. IF analysis of Villin using anti-Villin antibody (PB9457).
Villin was detected in paraffin-embedded section of human colon organoid tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-Villin Antibody (PB9457) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

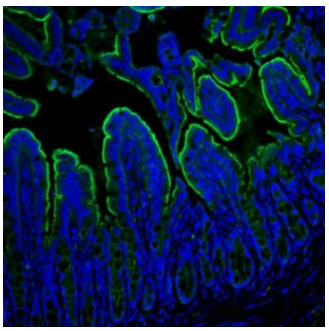

Figure 10. IF analysis of Villin using anti-Villin antibody (PB9457).
Villin was detected in paraffin-embedded section of mouse ileum tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-Villin Antibody (PB9457) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

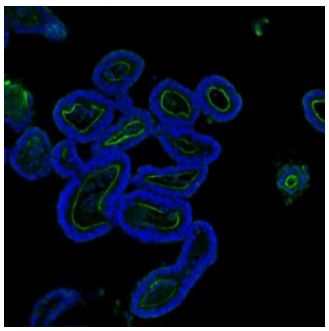

Figure 11. IF analysis of Villin using anti-Villin antibody (PB9457).
Villin was detected in paraffin-embedded section of mouse ileum organoid tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-Villin Antibody (PB9457) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Figure 12. Flow Cytometry analysis of CACO-2 cells using anti-Villin antibody (PB9457).

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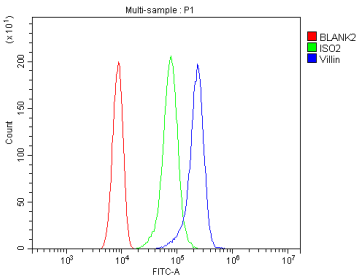

Overlay histogram showing CACO-2 cells stained with PB9457 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Villin Antibody (PB9457, 1 ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

2 Publications Citing This Product

1. PubMed ID: 10.3389/fmicb.2020.622354, Prevention and Alleviation of Dextran Sulfate Sodium Salt-Induced Inflammatory Bowel Disease in Mice With Bacillus subtilis-Fermented Milk via Inhibition of the Inflammatory Responses and Regulation of the Intestinal Flora

2. PubMed ID: 10.1080/00365520902998661, Acid and bile salt up-regulate BMP4 expression in human esophageal epithelium cells

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