10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Anti-Villin Picoband Antibody

**Catalog # ABO12146**

## Specification

### Anti-Villin Picoband Antibody - Product Information

| | |
|---|---|
| Application | **WB, IHC** |
| Primary Accession | P09327 |
| Host | **Rabbit** |
| Reactivity | **Human, Mouse, Rat** |
| Clonality | **Polyclonal** |
| Format | **Lyophilized** |

**Description**
Rabbit IgG polyclonal antibody for Villin-1(VIL1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

### Anti-Villin Picoband Antibody - Additional Information

**Gene ID** 7429

**Other Names**
Villin-1, VIL1, VIL

**Calculated MW**
92695 MW KDa

**Application Details**
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**
Cytoplasm, cytoskeleton. Cell projection, lamellipodium. Cell projection, ruffle. Cell projection, microvillus. Cell projection, filopodium tip . Cell projection, filopodium . Relocalized in the tip of cellular protrusions and filipodial extensions upon infection with S.flexneri in primary intestinal epithelial cells (IEC) and in the tail-like structures forming the actin comets of S.flexneri. Redistributed to the leading edge of hepatocyte growth factor (HGF)-induced lamellipodia (By similarity). Rapidly redistributed to ruffles and lamellipodia structures in response to autotaxin, lysophosphatidic acid (LPA) and epidermal growth factor (EGF) treatment. .

**Tissue Specificity**
Specifically expressed in epithelial cells. Major component of microvilli of intestinal epithelial cells and kidney proximal tubule cells. Expressed in canalicular microvilli of hepatocytes (at protein level). .

**Protein Name**
Villin-1

**Contents**
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

**Immunogen**
A synthetic peptide corresponding to a sequence at the C-terminus of human Villin (770-799 aa EQLVNKPVEELPEGVDPSRKEEHLSIEDFT), different from the related mouse sequence by three amino acids.

**Purification**
Immunogen affinity purified.

**Cross Reactivity**
No cross reactivity with other proteins

Storage

**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

**Sequence Similarities**
Belongs to the villin/gelsolin family.

## Anti-Villin Picoband Antibody - Protein Information

**Name** VIL1

**Synonyms** VIL

**Function**
Epithelial cell-specific Ca(2+)-regulated actin-modifying protein that modulates the reorganization of microvillar actin filaments. Plays a role in the actin nucleation, actin filament bundle assembly, actin filament capping and severing. Binds phosphatidylinositol 4,5-bisphosphate (PIP2) and lysophosphatidic acid (LPA); binds LPA with higher affinity than PIP2. Binding to LPA increases its phosphorylation by SRC and inhibits all actin-modifying activities. Binding to PIP2 inhibits actin-capping and -severing activities but enhances actin-bundling activity. Regulates the intestinal epithelial cell morphology, cell invasion, cell migration and apoptosis. Protects against apoptosis induced by dextran sodium sulfate (DSS) in the gastrointestinal epithelium. Appears to regulate cell death by maintaining mitochondrial integrity. Enhances hepatocyte growth factor (HGF)-induced epithelial cell motility, chemotaxis and wound repair. Upon S.flexneri cell infection, its actin-severing activity enhances actin-based motility of the bacteria and plays a role during the dissemination.

**Cellular Location**
Cytoplasm, cytoskeleton. Cell projection, lamellipodium. Cell projection, ruffle. Cell projection, microvillus Cell projection, filopodium tip. Cell projection, filopodium. Note=Relocalized in the tip of cellular protrusions and filipodial extensions upon infection with S.flexneri in primary intestinal epithelial cells (IEC) and in the tail-like structures forming the actin comets of S.flexneri. Redistributed to the leading edge of hepatocyte growth factor (HGF)-induced lamellipodia (By similarity). Rapidly redistributed to ruffles and lamellipodia structures in response to autotaxin, lysophosphatidic acid (LPA) and epidermal growth factor (EGF) treatment.

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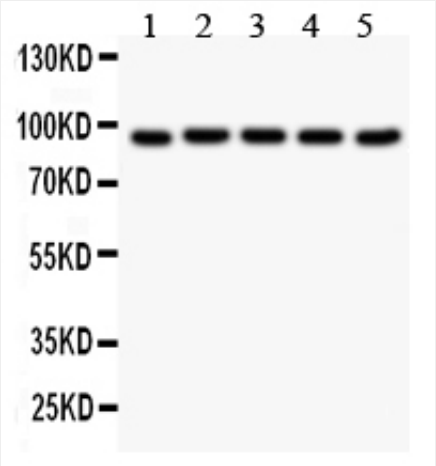
## Anti-Villin Picoband Antibody - Protocols

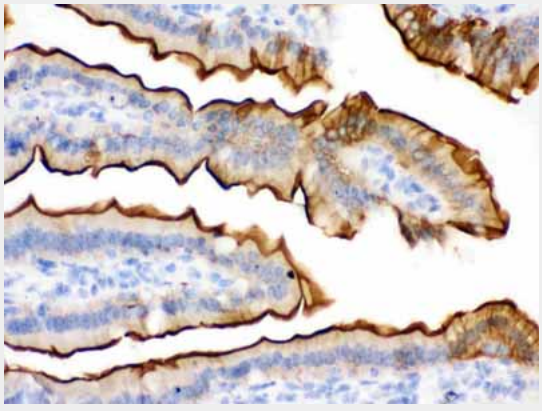
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## Anti-Villin Picoband Antibody - Images




Anti- Villin Picoband antibody, ABO12146, Western blottingAll lanes: Anti Villin (ABO12146) at 0.5ug/mlLane 1: Rat Intestine Tissue Lysate at 50ugLane 2: Mouse Kidney Tissue Lysate at 50ugLane 3: RH35 Whole Cell Lysate at 40ugLane 4: HEPG2 Whole Cell Lysate at 40ugLane 5: MCF-7 Whole Cell Lysate at 40ugPredicted bind size: 93KDObserved bind size: 93KD



Anti- Villin Picoband antibody, ABO12146,IHC(P)IHC(P): Mouse Intestine Tissue

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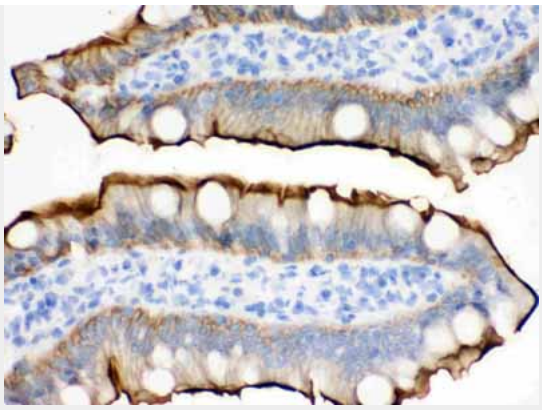
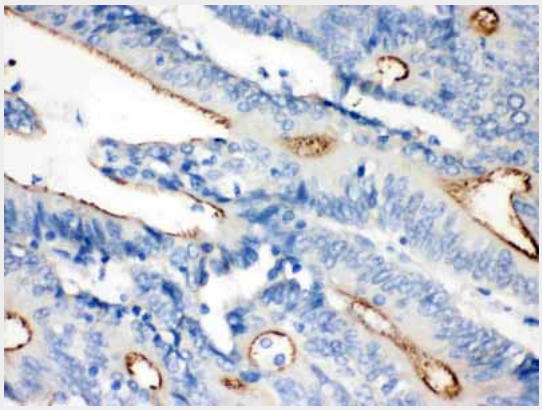


Anti- Villin Picoband antibody, ABO12146,IHC(P)IHC(P): Rat Intestine Tissue



Anti- Villin Picoband antibody, ABO12146,IHC(P)IHC(P): Human Intestinal Cancer Tissue

**Anti-Villin Picoband Antibody - Background**

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.