

VIL1 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1970a

Specification

VIL1 Antibody - Product Information

| | |
|-------------------|---------------------------|
| Application | E, WB, IF, FC, IHC |
| Primary Accession | P09327 |
| Reactivity | Human |
| Host | Mouse |
| Clonality | Monoclonal |
| Isotype | IgG1 |
| Calculated MW | 92.7kDa KDa |

Description

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.

Immunogen

Purified recombinant fragment of human VIL1 (AA: 1-209) expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide.

VIL1 Antibody - Additional Information

Gene ID 7429

Other Names

Villin-1, VIL1, VIL

Dilution

E~~1/10000
WB~~1/500 - 1/2000
IF~~1/200 - 1/1000
FC~~1/200 - 1/400
IHC~~1/200 - 1/1000

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

VIL1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

VIL1 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.

Tissue Location

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).

VIL1 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 Cytometry](#)
- [Cell Culture](#)