bsm-54212R **[Primary Antibody]**

villin Recombinant Rabbit mAb

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DATASHEET

Host: Rabbit
Isotype: IgG
Clonality: Recombinant
CloneNo.: 6G2
GeneID: 7429
SWISS: P09327
Target: villin
Purification: affinity purified by Protein A
Concentration: 1mg/ml
Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: Villin can cap, nucleate, sever and bundle actin in a calcium and phosphoinositide regulated manner. It is associated with the microvillar actin core bundle of intestinal and renal brush border implicated in adsorption. Villin is composed of six repeats, each containing 150 residues that together constitute the core domain followed by the carboxyl terminal headpiece domain of 87 residues. The core domain retains the calcium dependent capping nucleating and severing activity, whereas the headpiece domain contributes towards actin filament bundling and binding F actin, independently of Calcium. 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.

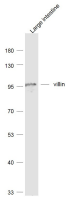
Applications: **WB** (1:500-1000)
IHC-P (1:20-200)
IHC-F (1:20-200)
IF (1:50-200)

Reactivity: Human, Mouse, Rat

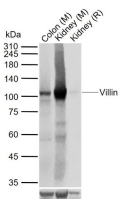
Predicted MW.: 93 kDa

Subcellular Location: Cytoplasm

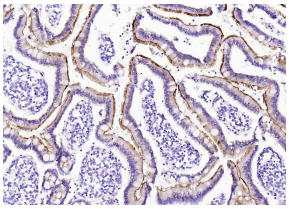
VALIDATION IMAGES



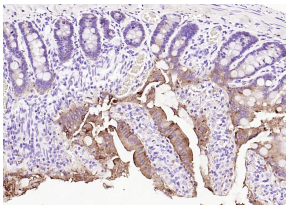
Sample: Large intestine (Mouse) Lysate at 40 ug Primary: Anti-villin (bsm-54212R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 93 kD Observed band size: 93 kD



Sample: Lane 1: Mouse Colon tissue lysates Lane 2: Mouse Kidney tissue lysates Lane 3: Rat Kidney tissue lysates Primary: Anti-Villin (bsm-60340R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 93 kDa Observed band size: 95 kDa



Paraformaldehyde-fixed, paraffin embedded (Human duodenum); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Incubation with (villin) Monoclonal Antibody, Unconjugated (bsm-54212R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (rat intestine); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Incubation with (villin) Monoclonal Antibody, Unconjugated (bsm-54212R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SELECTED CITATIONS

- **[IF=14.957]** Cynthia Bülck. et al. Proteolytic processing of galectin-3 by meprin metalloproteases is crucial for host-microbiome homeostasis. SCI ADV. 2023 Mar;9(13) IF ;Mouse. 37000885