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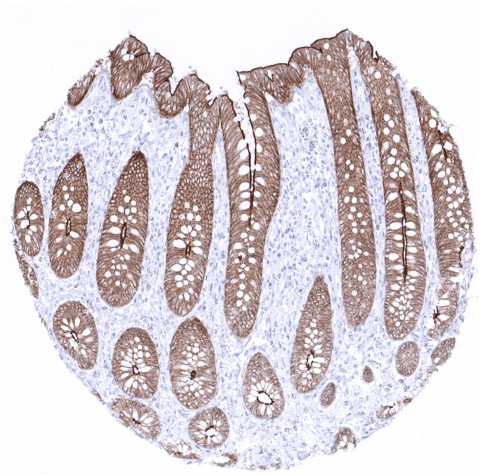
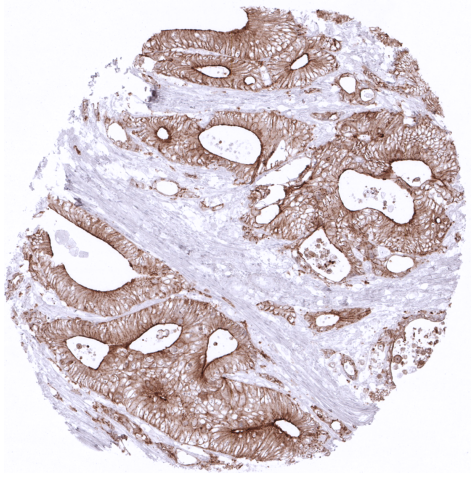
Anti- Villin Antibody
MSVA-459R / Recombinant Rabbit monoclonal

Human SwissProt	P09327
Human Gene Symbol	VIL1
Synonyms	VIL1; Villin-1; Villin1
Specificity	Villin
Immunogen	Recombinant fragment of human Villin protein
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cell Surface and Cytoplasmic

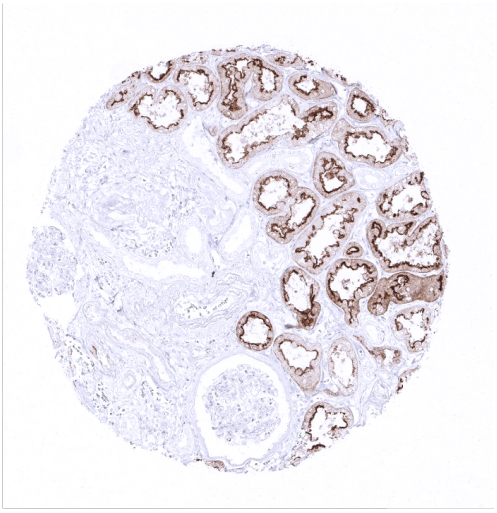
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Colon: a moderate to strong staining with predominance of the apical membrane should be seen in all epithelial cells. Liver: a weak to moderate staining of the apical pole of hepatocytes should be seen.
Negative Control	Colon: villin staining should be absent in all non-epithelial cells.



In the appendix, villin immunostaining is predominantly membranous but also cytoplasmic and often shows a strong focus on apical/luminal membranes.



Strong villin immunostaining in all cells of a colorectal adenocarcinoma



A strong villin positivity is seen in proximal tubuli of the kidney but not in distal tubuli or glomeruli

Biology

Villin is a 92.5 kDa protein, coded by Villin 1 gene at 2q35. The protein is mainly localized in the microvilli of the brush border of the normal epithelium lining of various cell types. It is an actin-binding protein connected to the actin core bundle of the brush border. Villin has actin modifying functions and is involved in the nucleation, crosslinking, capping and splitting of actin filaments. Amongst others, the actin modifying functions are regulated by calcium and phosphorylation of the villin protein. Elevated expression of villin results in changes in actin distribution, cell morphology, cell migration, and cell death. In normal tissues, villin immunostaining is predominantly membranous but also cytoplasmic and often shows a strong focus on the apical/luminal membranes. A strong villin expression can be seen in all epithelial cells of the colorectum, appendix, small intestine, duodenum, pancreatic excretion ducts, and in proximal tubuli of the kidney. A weak to moderate villin expression can be seen in the surface epithelium of the stomach (intensity gradually declines towards the base of the glands which are villin negative), in ciliated columnar cells of the epididymis (cauda), at the apical pole of hepatocytes (zonal variability in the expression level), and in pancreatic acinar cells. In carcinomas, villin expression is predominantly cytoplasmic. Villin positivity is most commonly seen in colorectal cancer. Tumors that were described to also show villin expression in a variable fraction of cases for example include gastric, duodenal and esophageal carcinoma, gastrointestinal neuroendocrine tumors, endometrial carcinoma, hepatocellular carcinoma, and pulmonary adenocarcinoma.

Potential Research Applications

The clinical/prognostic significance of villin expression in individual tumor types is unknown.

Protocol Suggestions

Dilution: 1:150 ; pH 7,8 is optimal. Freshly cut sections should be used (less than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.

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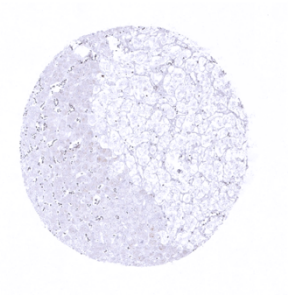
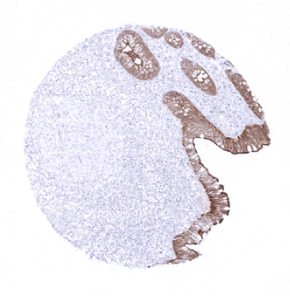
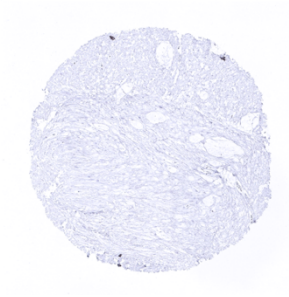


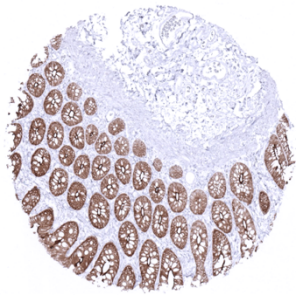
Adrenal gland



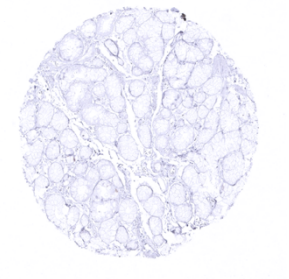
Appendix, mucosa - Villin immunostaining is predominantly membranous but also cytoplasmic and often shows a strong focus on the apical/luminal membranes



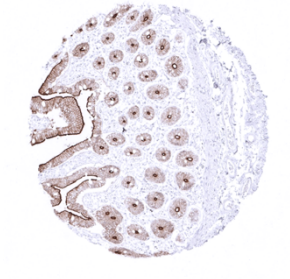
Appendix, muscular wall



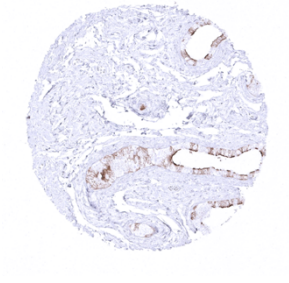
Colon descendens, mucosa



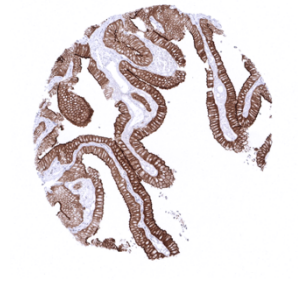
Duodenum, Brunner gland



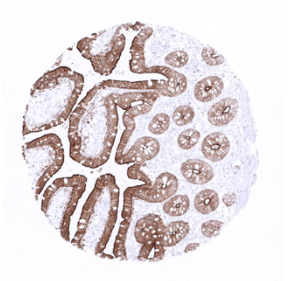
Duodenum, mucosa - Villin immunostaining is predominantly membranous but also cytoplasmic and often shows a strong focus on the apical/luminal membranes



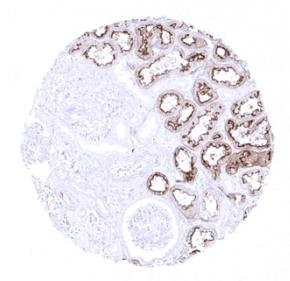
Epididymis - A moderate villin staining is seen in ciliated columnar cells in the epididymis



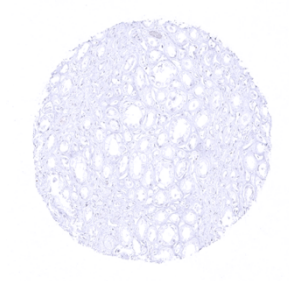
Gallbladder, epithelium



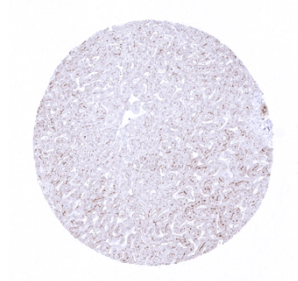
Ileum, mucosa - Villin immunostaining is predominantly membranous but also cytoplasmic and often shows a strong focus on the apical/luminal membranes



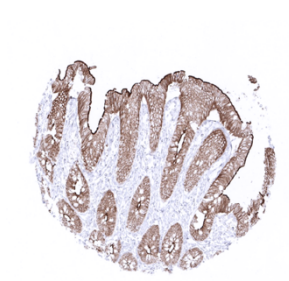
Kidney cortex - A strong villin positivity is seen in proximal tubuli of the kidney but not in distal tubuli or glomeruli



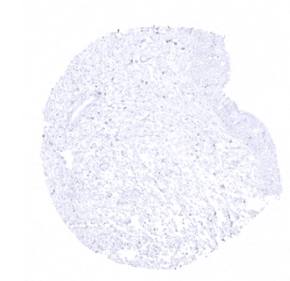
Kidney, medulla - Absence of villin immunostaining in collecting ducts of the kidney



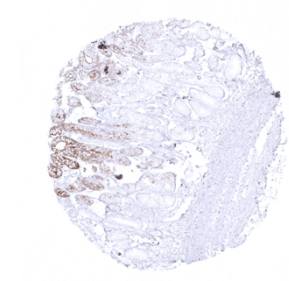
Liver - In the liver a weak to moderate villin staining is seen at the apical pole of hepatocytes. The expression level exhibits a zonal variability



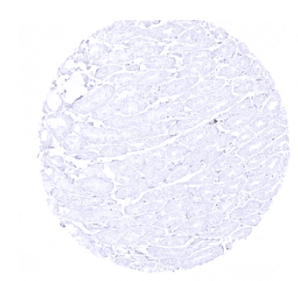
Rectum, mucosa



Sinus paranasales



Stomach, antrum - The surface epithelium of the stomach shows a weak, sometimes moderate villin immunostaining with decreasing intensity towards the base of the glands (which are villin negative)



Stomach, corpus - Villin negative gastric corpus glands