

Villin-1 (VIL1/1325)

Mouse anti-human Villin-1 Monoclonal Antibody (Clone VIL1/1325)

REFERENCES AND PRESENTATIONS¹

- **ready-to-use (manual or LabVision AutoStainer)**
MAD-000198QD-3
MAD-000198QD-7
MAD-000198QD-12
- **Ready-to-use (MD-Stainer)²**
MAD-000198QD-3/V
MAD-000198QD/V
- **concentrated**
MAD-000198Q - 1:50 recommended dilution

COMPOSITION

Anti-human Villin-1 mouse monoclonal antibody purified from serum and prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide

INTENDED USE : Immunohistochemistry (IHC) on paraffin embedded tissues. Not tested on frozen tissues or Western-Blotting

CLONE: 1325

Ig ISOTYPE: Mouse IgG1, kappa

IMMUNOGEN: Recombinant fragment of human villin protein.

SPECIES REACTIVITY: In vitro diagnostics in humans. Not tested in other species

DESCRIPTION AND APPLICATIONS:

Villin is a tissue-specific protein with a molecular mass of 95.5 kDa. Of all proteins belonging to the gelsolin family, it is the only one capable of assembling and disassembling actin filaments through three specific binding domains, two of them Ca²⁺-dependent. Villin is essential for the assembling of the cell brush border cytoskeleton and the organization of the actin filament bundle forming the core of microvilli. In addition, it has been proposed that this protein, due to its dependence on cell activation via phosphatidylinositol, is essential for the control of cell polarity during embryonic development of tissues

containing it, as well as to facilitate epithelial plasticity in response to cell injury and immune

system cell elements migration through the intestinal barrier.

Anti-villin monoclonal antibody (VIL1/1325 clone) against the human antigen has a sensitivity of almost 100% and high specificity; thus, immunostaining is fully reproducible using standard amplification and development procedures performed as part of automated immunostaining systems.

Villin is expressed in the brush border of enterocytes and kidney proximal tubule cells.

In addition to allowing immunohistochemical identification of villin in normal human tissues, this antibody is a highly specific marker of gastrointestinal tumours and pancreatic cancer. Although with less sensitivity, renal, hepatic and pulmonary neoplasms, especially carcinoid tumours, neuroendocrine tumours and signet-ring cell carcinomas or carcinomas with microlumens filled with microvilli, as well as some breast and ovarian tumours, are also stained.

IHC POSITIVE CONTROL: Small intestine villi and kidney proximal tubules cell lining.

VISUALIZATION: Cytoplasmic.

IHC RECOMMENDED PROCEDURE:

- 4µm thick section should be taken on charged slides; dry overnight at 60°C
- Deparaffinise, rehydrate and HIER (heat induced epitope retrieval) – boil tissue in the Pt Module using Vitro S.A EDTA buffer pH8³ for 20 min at 95°C. Upon completion rinse with 3-5 changes of distilled or deionised water followed by cooling at RT for 20 min
- Endogenous peroxidase block - Blocking for 10 minutes at room temperature using peroxidase solution (ref. MAD-021540Q-125)
- Primary antibody: incubate for 10 minutes [The antibody dilution (when concentrated) and protocol may vary depending on the specimen preparation and specific application. Optimal conditions should be determined by the individual laboratory]
- For detection use Master Polymer Plus Detection System (HRP) (DAB included; ref. MAD-000237QK)
- Counterstaining with haematoxylin and final mounting of the slide

¹ These references are for presentation in vials of Low Density Polyethylene (LDPE) dropper. In case the products are used in automated stainers, a special reference is assigned as follows:
- / L: Cylindrical screw-cap vials (QD-3 / L, QD-7 / L, QD-12 / L).
- / N: Polygonal screw-cap vials (QD-3 / N, QD-7 / N, QD-12 / N).
For different presentations (references / volumes) please contact the supplier.

² For Technical specifications for MD-Stainer, please contact your distributor.

³ Ref: MAD-004072R/D



STORAGE AND STABILITY:  Stored at 2-8°C. Do not freeze.  Once the packaging has been opened it can be stored until the expiration date of the reagent indicated on the label. If the reagent has been stored under other conditions to those indicated in this document, the user must first check its correct performance taking into account the product warranty is no longer valid.

WARNINGS AND PRECAUTIONS:

1. Avoid contact of reagents with eyes and mucous membranes. If reagents come into contact with sensitive areas, wash with copious amounts of water.
2. This product is harmful if swallowed.
3. Consult local or state authorities with regard to recommended method of disposal.
4. Avoid microbial contamination of reagents.

SAFETY RECOMMENDATIONS

This product is intended for laboratory professional use only. The product is NOT intended to be used as a drug or for domestic purposes. The current version of the Safety Data Sheet for this product can be downloaded by searching the reference number at www.vitro.bio or can be requested at regulatory@vitro.bio.

BIBLIOGRAPHY

1. Bacchi CE, Gown AM: Distribution and pattern of expression of villin, a gastrointestinal-associated cytoskeletal protein, in human carcinomas: a study employing paraffin-embedded tissue. *Lab Invest.* 64:418-24 (1991).
2. Toyoshima K, Seta Y, Takeda S, Harada H: Identification of Merkel cells by an antibody to villin. *J Histochem Cytochem.* 46:1329-34 (1998).
3. Merchant SH, Amin MB, Tamboli P, Ro J, Ordonez NG, Ayala AG, Czerniak BA, Ro JY: Primary signet-ring cell carcinoma of lung: immunohistochemical study and comparison with non-pulmonary signet-ring cell carcinomas. *Am J Surg Pathol.* 25:1515-9 (2001).
4. Rouzier R, Bourstyn E, Grozier F, Berger A, Louvard D, Robine S: Immunocytochemical detection of bone marrow micrometastases in colorectal carcinoma patients, using a monoclonal antibody to villin. *Cytometry.* 46:281-9 (2001).
5. Athman R, Louvard D, Robine S: The epithelial cell cytoskeleton and intracellular trafficking. III. How is villin involved in the actin cytoskeleton dynamics in intestinal cells?. *Am J Physiol Gastrointest Liver Physiol.* 283:G496-502 (2002).
6. Tamboli P, Mohsin SK, Hailemariam S, Amin MB: Colonic adenocarcinoma metastatic to the urinary tract versus primary tumors of the urinary tract with glandular differentiation: a report of 7 cases and

investigation using a limited immunohistochemical panel. *Pathol Lab Med.* 126:1057-63 (2002).

7. Lau SK, Prakash S, Geller SA, Alsabeh R: Immunohistochemical profile of hepatocellular carcinoma, cholangiocarcinoma, and metastatic adenocarcinoma. *Hum Pathol.* 33:1175-81 (2002).

LABEL AND BOX SYMBOLS

Explanation of the symbols of the product label and box:

	Expiration date
	Temperature limit
	Manufacturer
	Sufficient content for <n> assays
	Catalog number
	Lot code
	Refer to the instructions of use
	Medical product for <i>in vitro</i> diagnosis.
	Material safety data sheet