# CDH17 (M)

Prediluted Monoclonal Antibody

Control Number: 901-3111VP-092017

## VP Echelon™ Series

**Catalog Number:** **AVI 3111 G**

**Description:** 6.0 ml, prediluted

**Dilution:** Ready-to-use

**Intended Use:**

For In Vitro Diagnostic Use

CDH17 (M) [1H3] is a mouse monoclonal antibody that is intended for laboratory use in the qualitative identification of CDH17 protein by immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence should be complemented by morphological studies using proper controls and should be evaluated within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist.

**Summary and Explanation:**

CDH17 (Cadherin 17 or LI-cadherin) is a novel oncogene which is involved in tumor invasion and metastasis and is expressed in intestinal epithelium (1,2). CDH17 is a highly specific marker in colon cancer (99/99, 100%) and is a more sensitive marker than CDX2 (93/99, 94%) and CK20 (91/99, 92%) (3). Overexpression of CDH17 (and conversely, underexpression of CDX2) correlates to poor prognosis in patients with epithelial ovarian cancer (1). CDH17 may be helpful for early diagnosis of Barrett's esophagus (4). CDH17 has been shown to be a useful marker for distinguishing between primary urinary bladder adenocarcinoma and urothelial carcinoma with glandular differentiation (5). Note that it does not distinguish primary urinary bladder adenocarcinoma from colorectal adenocarcinoma secondarily involving the bladder (5).

**Principle of Procedure:**

Antigen detection in tissues and cells is a multi-step immunohistochemical process. The initial step binds the primary antibody to its specific epitope. After labeling the antigen with a primary antibody, an enzyme labeled polymer is added to bind to the primary antibody. The detection of the bound antibody is evidenced by a colorimetric reaction.

**Source:** Mouse monoclonal

**Species Reactivity:** Human; others not tested

**Clone:** 1H3

**Isotype:** IgG1/k

**Total Protein Concentration:** ~10 mg/ml. Call for lot specific Ig concentration.

**Epitope/Antigen:** CDH17

**Cellular Localization:** Cytoplasmic and cell membrane

**Positive Tissue Control:** Colon carcinoma

**Known Applications:**

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

**Supplied As:** Buffer with protein carrier and preservative

**Storage and Stability:**

Store at 2ºC to 8ºC. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user.

**Protocol Recommendations:**

Using ***ultra*VIEW Detection Kit**

**Pretreatment Solution (recommended):** CC1

**Pretreatment Protocol:** Mild

**Primary Antibody:** Incubate for 32 minutes at 37°C.

**Technical Note:**

Biocare's VP-Echelon Series of predilutes have been developed for use with Ventana® Medical Systems, BenchMark® XT Immunohistochemistry Staining System in combination with Ventana® Detection Kits and Ventana® Prep Kit Dispensers.

**Limitations:**

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Biocare products. Ultimately, it is the responsibility of the investigator to determine optimal conditions. The clinical interpretation of any positive or negative staining should be evaluated within the context of clinical presentation, morphology and other histopathological criteria by a qualified pathologist. The clinical interpretation of any positive or negative staining should be complemented by morphological studies using proper positive and negative internal and external controls as well as other diagnostic tests.

**Quality Control:**

Refer to CLSI Quality Standards for Design and Implementation of Immunohistochemistry Assays; Approved Guideline-Second edition (I/LA28-A2) CLSI Wayne, PA USA (www.clsi.org). 2011

**Precautions:**

1. This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide ($NaN_3$) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976) (6)
2. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water. (7)
3. Microbial contamination of reagents may result in an increase in nonspecific staining.
4. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
5. Do not use reagent after the expiration date printed on the vial.
6. The SDS is available upon request and is located at http://biocare.net/.

**Troubleshooting:**

Follow the antibody specific protocol recommendations according to data sheet provided. If atypical results occur, contact Biocare's Technical Support at 1-800-542-2002.

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**References:**

1. Huang LP, *et al.* Up-regulation of cadherin 17 and down-regulation of homeodomain protein CDX2 correlate with tumor progression and unfavorable prognosis in epithelial ovarian cancer. Int J Gynecol Cancer. 2012 Sep; 22(7):1170-6.
2. Panarelli NC, *et al.* Tissue-specific cadherin CDH17 is a useful marker of gastrointestinal adenocarcinomas with higher sensitivity than CDX2. Am J Clin Pathol. 2012 Aug; 138(2):211-22.
3. Tacha D, Zhou D. CDH17 is a highly specific marker and is a more sensitive marker than CDX2 and CK20 in colon cancers. Poster session presented at: CAP'14 The Pathologists' Meeting; 2014 Sep 7-10; Chicago, IL.
4. Mokrowiecka A, *et al.* Liver-intestine-cadherin is a sensitive marker of intestinal differentiation during Barrett's carcinogenesis. Dig Dis Sci. 2013 Mar; 58(3):699-705.
5. Rao Q, *et al.* Distinguishing primary adenocarcinoma of the urinary bladder from secondary involvement by colorectal adenocarcinoma: extended immunohistochemical profiles emphasizing novel markers. Mod Pathol. 2013 May; 26(5):725-32.
6. Center for Disease Control Manual. Guide: Safety Management, NO. CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts."
7. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.



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