



# Anti- human Beta-Catenin Mouse Monoclonal Primary Antibody

Clone: UMAB15

**IVD**

**REF** CE00014

## CATALOG NUMBER

C0014MA01-MA 0.1 mL  
C0014MA05-MA 0.5 mL  
C0014MA10-MA 1.0 mL

## ENGLISH

### Intended use

Anti-human Beta-Catenin (Clone: UMAB15) Mouse Monoclonal Primary Antibody is intended for detection of Beta-Catenin protein expression in frozen or formalin fixed human tissues and cells. The clinical interpretation of any positive staining or its absence should be complemented by morphological and histological studies with proper controls. Evaluations should be made within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist. The antibody is intended for *in vitro* diagnostic (IVD) use.

### Background

Beta-Catenin is part of a complex of proteins that constitute adherens junctions (AJs). AJs are necessary for the creation and maintenance of epithelial cell layers by regulating cell growth and adhesion between cells. Beta-Catenin also anchors the actin cytoskeleton and may be responsible for transmitting the contact inhibition signal that causes cells to stop dividing once the epithelial sheet is complete. Finally, this protein binds to the product of the APC gene, which is mutated in adenomatous polyposis of the colon. Mutations in this protein are a cause of colorectal cancer (CRC), pilomatixoma (PTR), medulloblastoma (MDB), and ovarian cancer.

Alternative names: CTNNB1

### Reagent provided

Anti-human Beta-Catenin Mouse Monoclonal Primary Antibody (Clone: UMAB15) is provided in liquid form in 20mM Sodium phosphate, 150mM Sodium chloride, 0.2% BSA, 0.09% Sodium azide, pH 7.4. The isotype of the antibody is IgG2a. The protein concentration is approximately 0.2 +/- 0.05 mg/mL.

For immunohistochemistry, the primary antibody may be used at a working dilution of 1:100 – 1:200 for formalin-fixed, paraffin-embedded human tissue. It can be dependent upon the detection system used. These are guidelines only, and optimal dilutions should be determined by the individual laboratory.

### Immunogen

Full length human recombinant protein of human CTNNB1 (NP\_001895) produced in HEK293T cell.

## Specificity

The specificity of the anti-human Beta-Catenin Mouse Monoclonal Primary Antibody was established on known human colon cancer and human spleen. The anti-Beta-Catenin presented no staining on the white and red pulp of human spleen and positive staining on human colon cancer tissue using immunohistochemical (IHC) test methods.

## Materials Required but Not Supplied

Antibody diluent, HIER solution, Antibody detection kits, Chromogen, Staining reagents, negative and positive tissue control slides are not included.

## Precautions

1. For use by trained professionals only.
2. This product contains sodium azide ( $\text{NaN}_3$ ), a chemical highly toxic in pure form. At product concentrations, though not classified as hazardous,  $\text{NaN}_3$  may react with lead and copper plumbing to form highly explosive build-ups of metal azides. Upon disposal, flush with large volumes of water to prevent metal azide build-up in plumbing.
3. Wear appropriate Personal Protective Equipment to avoid contact with eyes and skin.
4. Unused reagents should be disposed of according to local, State, and Federal regulations.

## Storage

Store at 2-8°C. Do not use the product past the expiration date indicated on the label. If reagents are stored under any other conditions, the end user must verify the acceptability of those conditions. There are no obvious signs to indicate instability of this product therefore, positive and negative controls should be run simultaneously with patient specimens.

## Specimen Preparation

### Paraffin Sections

Anti-human Beta-Catenin Mouse Monoclonal Primary Antibody can be used on paraffin-embedded tissue sections at a working dilution of 1:100 to 1:200. Anti-human Beta-Catenin Mouse Monoclonal Primary Antibody (Clone: UMAB15) working dilution requires 20 minutes of pretreatment with Heat Induced Epitope Retrieval (HIER) for staining. We recommend using HIER Citrate Buffer pH 6.0, which showed optimal staining at a dilution of 1:200 on positive human colon cancer and negative staining on the red and white pulp of human spleen. The dilutions are estimates; the actual staining results may vary due to reagents and detection protocols used. Validation of antibody performance and final protocol are the responsibility of the end user.

## Staining procedure

### Manual Staining Procedure

1. Deparaffinize slides.
2. Submerge slides in 3% peroxidase quenching solution for ~10 minutes and rinse with distilled water 2 times, 2 minutes each.
3. Heat Induced Epitope Retrieval is required for this antibody. We recommend Citrate at pH 6.0.
4. Wash with PBS buffer 3 times, 2 minutes each before staining. Apply primary antibody and incubate for 30-60 minutes at room temperature. After incubation wash with PBS-T 3 times, 3 minutes each.
5. Apply secondary antibody and incubate according to the data sheet of the detection system. Wash with PBS-T 3 times, 2 minutes each.
6. Apply enzyme conjugate and incubate according to data sheet of detection system. Wash with PBS-T 3 times, 2 minutes each.
7. Apply chromogen and incubate 5-10 minutes and rinse with distilled water.

## Staining interpretation

The cellular staining pattern for Anti-human Beta-Catenin Mouse Monoclonal Primary Antibody is cytoplasmic and membranous.

## Performance Characteristics

### Predicted Staining in Normal Tissue/Cells

The red and white pulp of normal human spleen was shown to be negative for this antibody.

### Predictive Staining in Tumor

Anti-human Beta-Catenin Mouse Monoclonal Primary Antibody (Clone: UMAB15) produced strong cytoplasmic and membranous staining when screened on human colon cancer.

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