Anti– human CK18 Mouse Monoclonal Primary Antibody

Clone: UMAB50

**Intended use**

Anti-human CK18 (Clone: UMAB50) Mouse Monoclonal Primary Antibody is intended for detection of keratin 18 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**

The type I intermediate filament chain keratin 18 is encoded by the gene KRT18. Keratin 18, together with its filament partner keratin 8, are perhaps the most commonly found members of the intermediate filament gene family. They are expressed in single layer epithelial tissues of the body. Mutations in the gene have been linked to cryptogenic cirrhosis.

Alternative names: CYK18, K18, KRT18

**Reagent provided**

Anti-human CK18 Mouse Monoclonal Primary Antibody (Clone: UMAB50) 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 IgG1. The protein concentration is approximately 0.4 +/- 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**

Human recombinant protein fragment corresponding to amino acids 69-372 of human KRT18 (NP_000215) produced in E.coli.

**Specificity**

The specificity of the anti-human CK18 Mouse Monoclonal Primary Antibody was established on human colon cancer, breast cancer, normal human placenta, spleen and tonsil tissue. The anti- CK18 presented no staining on normal human spleen and tonsil. Positive staining was shown on normal human breast, placenta, human colon cancer and human breast cancer.
tissues using immunohistochemical (IHC) test methods.

**Materials Required but Not Supplied**
Antibody diluent, HIER solution, Antibody detection kits, Chromogen, Substrate, negative and positive tissue control slides are not included.

**Precautions**
1. For use by trained professionals only.
2. This product contains sodium azide (NaN₃), a chemical highly toxic in pure form. At product concentrations, though not classified as hazardous, NaN₃ 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 CK18 Mouse Monoclonal Primary Antibody can be used on paraffin-embedded tissue sections at a working dilution of 1:100 to 1:200. We recommend 20 minutes of pretreatment with Heat Induced Epitope Retrieval (HIER) using Citrate pH 6.0 buffer from GBI Labs (B05C-100). 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 incubating the slides in Citrate pH 6.0 buffer [GBI Labs B05C-100] at 95-100°C for 20 minutes or using the pressure cooker at high pressure for 2 minutes.
4. Wash with PBS buffer 3 times, 2 minutes each before staining. Apply serum blocking solution.[Optional]
5. Apply primary antibody and incubate for 30-60 minutes at room temperature. After incubation wash with PBS-T 3 times, 2 minutes each.
6. Apply secondary antibody and incubate according to the data sheet of the detection system. Wash with PBS-T 3 times, 2 minutes each.
7. Apply enzyme conjugate and incubate according to data sheet of detection system. Wash with PBS-T 3 times, 2 minutes each.
8. Apply chromogen and incubate 5-10 minutes and rinse with distilled water.

**Staining interpretation**
The cellular staining pattern for Anti-human CK18 Mouse Monoclonal Primary Antibody is membranous.

**Performance Characteristics**
Normal human spleen tissues were shown to be negative for this antibody.

Anti-human CK18 Mouse Monoclonal Primary Antibody (Clone: UMAB50) produced membranous staining when screened on human colon cancer.
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