Anti- human CK20/Keratin-20 Mouse Monoclonal Primary Antibody

Clone: UMAB167

**Intended use**
Anti- human CK20/Keratin-20 (Clone: UMAB167) Mouse Monoclonal Primary Antibody is intended for detection of CK20/Keratin-20 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**
The protein encoded by this gene is a member of the keratin family. The keratins are intermediate filament proteins responsible for the structural integrity of epithelial cells and are subdivided into cytokeratins and hair keratins. The type I cytokeratins consist of acidic proteins which are arranged in pairs of heterotypic keratin chains. This cytokeratin is a major cellular protein of mature enterocytes and goblet cells and is specifically expressed in the gastric and intestinal mucosa. The type I cytokeratin genes are clustered in a region of chromosome 17q12-q21. [provided by RefSeq, Jul 2008].

Alternative names: CD20; CK-20; CK20; K20; KRT21

**Reagent provided**
Anti-human CK20/Keratin-20 Mouse Monoclonal Primary Antibody (Clone: UMAB167) 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,k. The protein concentration is approximately 1.0 +/- 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 KRT20 (NP_061883) produced in E.coli.
**Specificity**
The specificity of the anti-human CK20/Keratin-20 Mouse Monoclonal Primary Antibody was established on known positive gastric cancer and small intestine. The anti-human CK20/Keratin-20 presented no staining on spleen and positive staining on human gastric cancer and small intestine 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 (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 CK20/Keratin-20 Mouse Monoclonal Primary Antibody can be used on formalin-fixed, paraffin-embedded tissue sections at a working dilution of 1:100 to 1:200. Anti-human CK20/Keratin-20 Mouse Monoclonal Primary Antibody (Clone: UMAB167) working dilution requires heat induced epitope retrieval (HIER) for 3 minutes using pressure chamber at 110C for staining. We recommend using HIER Accel 3 in 1 EDTA solution pH 8.7, which showed optimal staining of anti-CK20/Keratin 20 antibody at a dilution of 1:200 on human gastric cancer and small intestine staining. 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 peroxidase quenching solution for ~10 minutes, then rinse 2x with dH₂O.
3. Heat Induced Epitope Retrieval is required for this antibody; Accel 3 in 1 EDTA solution, pH 8.7 at 110C for 3 minutes.
4. Allow slides to cool down from step 3, rinse with distilled water, wash with PBS-T 3 times, 2 minutes each.
5. Apply serum blocking solution.[Optional]
6. Apply primary antibody and incubate for 30-60 minutes at room temperature. After incubation wash with PBS-T 3 times, 2 minutes each.
7. Apply secondary antibody and incubate according to the data sheet of the detection system. Wash with PBS-T 3 times, 2 minutes each.
8. Apply enzyme conjugate and incubate according to data sheet of detection system. Wash with PBS-T 3 times, 2 minutes each.
9. Apply chromogen and incubate 5-10 minutes and rinse with distilled water.

**Staining interpretation**
The cellular staining pattern for Anti-human CK20/Keratin-20 Mouse Monoclonal Primary Antibody is cytoplasmic and membranous.

**Performance Characteristics**
*Predicted Staining in Normal Tissue/Cells*
Human spleen was shown to be negative for this antibody.

*Predictive Staining in Tumor*
Anti-human CK20/Keratin-20 Mouse Monoclonal (Clone: UMAB167) produced cytoplasmic and membranous staining when screened on human gastric cancer and small intestine.
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