Anti– human CD19 Mouse Monoclonal Primary Antibody
Clone: UMAB103

**Intended use**
Anti- human CD19 Mouse Monoclonal Primary Antibody is intended for the detection of CD19 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**
Lymphocytes proliferate and differentiate in response to various concentration of different antigens. The ability of the B cell to respond in a specific, yet sensitive manner to the various antigens is achieved with the use of low-affinity antigen receptors. CD19 is a cell surface molecule which assembles with the antigen receptor of B lymphocytes in order to decrease the threshold for antigen receptor-dependent stimulation.

Alternative names: B4, CVID3

**Reagent provided**
Anti- human CD19 Mouse Monoclonal Primary Antibody (Clone: UMAB103) 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 total protein concentration is 0.6 ± 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 tissues, and this can be dependent upon the detection system used. These are guidelines only, and the optimal dilutions should be determined by the individual laboratory.

**Immunogen**
Full length recombinant protein of human CD19 (NP_001761) produced in HEK293T cell.
Specificity
The specificity of the anti-human CD19 Mouse Monoclonal Primary Antibody was established on normal human tonsil and pancreas. The anti-CD19 presented no staining on formalin fixed human pancreas and positive staining on normal human tonsil 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 (NaNO₃), a chemical highly toxic in pure form. At product concentrations, though not classified as hazardous, NaNO₃ 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 CD19 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 CD19 Mouse Monoclonal Primary Antibody working dilution requires 20 minutes of pretreatment with Heat Induced Epitope Retrieval (HIER) at 95 to 100°C. We recommend using Citrate buffer pH 6.0 (GBI Labs B05C-100), which showed optimal positive staining at a dilution of 1:200 on human tonsil and negative staining on human pancreas tissue using two-step detection systems (Polink-2 Broad HRP).

Staining procedure
Manual Staining Procedure
1. Deparaffinize slides.
2. Submerge slides in peroxidase quenching solution for ~10 minutes and rinse with PBS-T 3 times, 2 minutes each.
3. Heat Induced Epitope Retrieval is required for this antibody.
4. 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 CD19 Mouse Monoclonal Primary Antibody is membranous.

Performance Characteristics
Predicted Staining in Normal Tissue/Cells
Normal human pancreas was shown to be negative for this antibody. Normal human tonsil was shown to be positive with this antibody.
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