



Anti- human CD5 Mouse Monoclonal Primary Antibody

Clone: UMAB9

IVD

REF CE00028

CATALOG NUMBER

C0028MA01-MA 0.1 mL
C0028MA05-MA 0.5 mL

ENGLISH

Intended use

Anti- human CD5 Mouse Monoclonal Primary Antibody is intended for the detection of CD5 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

CD5 is a cluster of differentiation found on a subset of IgM-secreting B cells called B-1 cells, and also on T cells. B-1 cells have limited diversity of their B-cell receptor due to their lack of the enzyme terminal deoxynucleotidyl transferase (TdT) and are potentially self-reactive. CD5 serves to mitigate activating signals from the BCR so that the B-1 cells can only be activated by very strong stimuli (such as bacterial proteins) and not by normal tissue proteins. CD5 is a good immunohistochemical marker for T-cells. About 76% of T-cell neoplasms are reported to express CD5, and it is also found in chronic lymphocytic leukemia, hairy cell leukaemia, and mantle cell lymphoma cells. It is commonly lost in cutaneous T-cell lymphoma, and its absence can be used as an indicator of malignancy in this condition. The absence of CD5 in T cell acute lymphoblastic leukaemia, while relatively rare, is associated with a poor prognosis.

Alternative names: LEU1, T1

Reagent provided

Anti- human CD5 Mouse Monoclonal Primary Antibody (Clone: UMAB9) 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 0.2 ± 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 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 CD5 (NP_055022) produced in HEK293T cell.

Specificity

The specificity of the anti- human CD5 Mouse Monoclonal Primary Antibody was established on normal human tonsil and muscle. The anti-CD5 presented no staining on formalin fixed human muscle 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 (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 CD5 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 CD5 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 10mM Citrate buffer pH 6.0 (GBI Labs B05C-100), which showed optimal staining at a dilution of 1:200 on human tonsil and negative staining on human muscle 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 CD5 Mouse Monoclonal Primary Antibody is membranous.

Performance Characteristics

Predicted Staining in Normal Tissue/Cells

Normal human muscle was shown to be negative for this antibody. Normal human tonsil was shown to be positive with this antibody.

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