



# Anti- human CD4 Mouse Monoclonal Primary Antibody

Clone: UMAB64

**IVD**

**REF** CE00010

## CATALOG NUMBER

C0010MA01-MA 0.1 mL  
C0010MA05-MA 0.5 mL  
C0010MA10-MA 1.0 mL

## ENGLISH

### Intended use

Anti-human CD4 (Clone: UMAB64) Mouse Monoclonal Primary Antibody is intended for detection of CD4 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

CD4 is a membrane glycoprotein of T lymphocytes that interacts with major histocompatibility complex class II antigens and is also a receptor for the human immunodeficiency virus. It is expressed not only in T lymphocytes, but also in B cells, macrophages, and granulocytes. It is also expressed in specific regions of the brain. The protein functions to initiate or augment the early phase of T-cell activation, and may function as an important mediator of indirect neuronal damage in infectious and immune-mediated diseases of the central nervous system. [provided by RefSeq, Aug 2010].

### Reagent provided

Anti-human CD4 Mouse Monoclonal Primary Antibody (Clone: UMAB64) 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 IgG2b. The protein concentration is approximately 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 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 CD4 (NP\_000607) produced in HEK293T cell.

## Specificity

The specificity of the anti-human CD4 Mouse Monoclonal Primary Antibody was established on known human tonsil and human kidney. The anti-CD4 presented no staining on human kidney and positive staining on human tonsil 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 CD4 Mouse Monoclonal Primary Antibody can be used on paraffin-embedded tissue sections at a working dilution of 1:100 to 1:200. Anti-human CD4 Mouse Monoclonal Primary Antibody (Clone: UMAB64) working dilution requires 20 minutes of pretreatment with Heat Induced Epitope Retrieval (HIER) for staining. We recommend using Accel pH 8.5 [GBI Labs B22C-125] for HIER, which showed optimal staining at a dilution of 1:200 on positive human tonsil and negative staining on normal human kidney. 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 Accel pH 8.5 [GBI Labs B22C-125].
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 CD4 Mouse Monoclonal Primary Antibody is membranous.

## Performance Characteristics

### Predicted Staining in Normal Tissue/Cells

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

Anti-human CD4 Mouse Monoclonal Primary Antibody (Clone: UMAB64) produced strong staining when screened on human tonsil.

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