Anti- human PD-1 Mouse Monoclonal Primary Antibody

Clone: UMAB198

C0059MA01-MA  0.1 mL
C0059MA05-MA  0.5 mL
C0059MA10-MA  1.0 mL

ENGLISH

Intended use
Anti- human PD-1 (Clone: UMAB198) Mouse Monoclonal Primary Antibody is intended for detection of PD-1 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
This gene encodes a cell surface membrane protein of the immunoglobulin superfamily. This protein is expressed in pro-B-cells and is thought to play a role in their differentiation. In mice, expression of this gene is induced in the thymus when anti-CD3 antibodies are injected and large numbers of thymocytes undergo apoptosis. Mice deficient for this gene bred on a BALB/c background developed dilated cardiomyopathy and died from congestive heart failure. These studies suggest that this gene product may also be important in T cell function and contribute to the prevention of autoimmune diseases [provided by RefSeq, Jul].

Alternative names: CD279; hPD-1; hPD-l; hSLE1; PD-1; PD1; SLEB2

Reagent provided
Anti-human PD-1 Mouse Monoclonal Primary Antibody (Clone: UMAB198) 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 IgG2a,k. The protein concentration is approximately 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 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 PDCD1 (NP_005009) produced in HEK293T cell.
Specificity
The specificity of the anti-human PD-1 Mouse Monoclonal Primary Antibody was established on known human tonsil. The anti-human PD-1 presented no staining on human liver and positive staining on 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 PD-1 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 PD-1 Mouse Monoclonal Primary Antibody (Clone: UMAB198) working dilution requires heat induced epitope retrieval (HIER) for 3 minutes using pressure chamber at 110°C for staining. We recommend using HIER Accel 3 in 1 EDTA solution pH 8.7, which showed optimal staining of anti-PD-1 antibody at a dilution of 1:200 on human tonsil 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 110°C 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 PD-1 Mouse Monoclonal Primary Antibody is membranous.

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

Predictive Staining in Tumor
Anti-human PD-1 Mouse Monoclonal (Clone: UMAB198) produced membranous staining when screened on human tonsil.
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