

Anti-MPI Antibody Picoband™ (monoclonal, 11I4)
Catalog # ABO14902**Specification****Anti-MPI Antibody Picoband™ (monoclonal, 11I4) - Product Information**

Application	WB, IF, ICC, FC
Primary Accession	P34949
Host	Mouse
Isotype	Mouse IgG1
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized

Description

Anti-MPI Antibody Picoband™ (monoclonal, 11I4) . Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500 µg/ml.

Anti-MPI Antibody Picoband™ (monoclonal, 11I4) - Additional Information

Gene ID 4351

Other Names

Mannose-6-phosphate isomerase, 5.3.1.8, Phosphohexomutase, Phosphomannose isomerase, PMI, MPI (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=7216 target="_blank">HGNC:7216), PMI1

Calculated MW

47 kDa KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Human
 Immunocytochemistry/Immunofluorescence, 5 µg/ml, Human
 Flow Cytometry, 1-3 µg/1x10⁶ cells, Human

Subcellular Localization

Cytoplasm

Tissue Specificity

Expressed in all tissues, but more abundant in heart, brain and skeletal muscle.

Contents

Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg NaN₃.

Immunogen

E. coli-derived human MPI recombinant protein (Position: A2-K99). Human MPI shares 88.8% and 86.7% amino acid (aa) sequence identity with mouse and rat MPI, respectively.

Cross Reactivity

No cross-reactivity with other proteins.

Storage

Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.

Anti-MPI Antibody Picoband™ (monoclonal, 11I4) - Protein Information

Name MPI ([HGNC:7216](#))

Synonyms PMI1

Function

Isomerase that catalyzes the interconversion of fructose-6-P and mannose-6-P and has a critical role in the supply of D-mannose derivatives required for many eukaryotic glycosylation reactions.

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q924M7}.

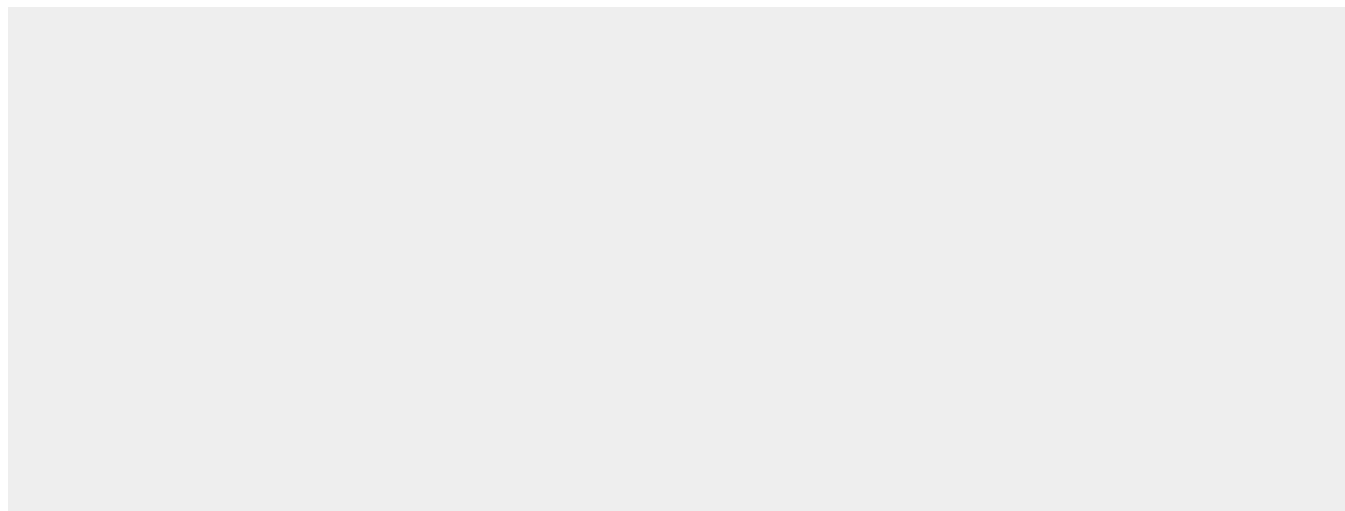
Tissue Location

Expressed in all tissues, but more abundant in heart, brain and skeletal muscle.

Anti-MPI Antibody Picoband™ (monoclonal, 11I4) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-MPI Antibody Picoband™ (monoclonal, 11I4) - Images

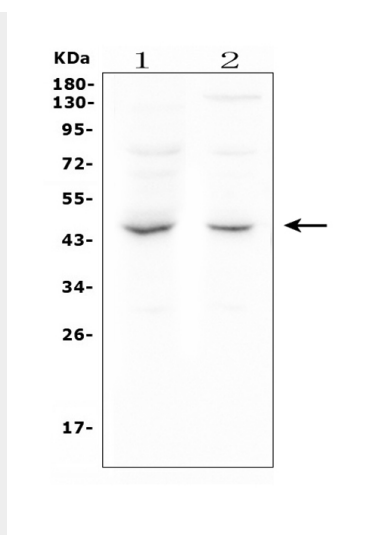


Figure 1. Western blot analysis of MPI using anti-MPI antibody (M00175).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human Caco-2 whole cell lysates

Lane 2: human Hela whole cell lysates

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-MPI antigen affinity purified monoclonal antibody (Catalog # M00175) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for MPI at approximately 47KD. The expected band size for MPI is at 47KD.

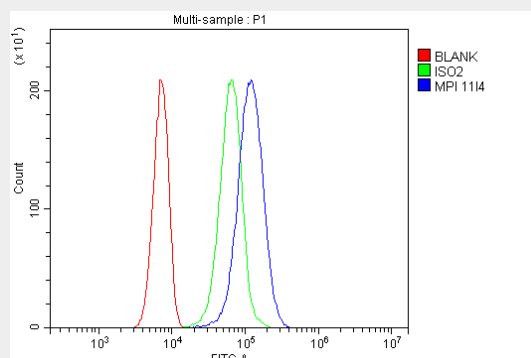


Figure 2. Flow Cytometry analysis of SiHa cells using anti-MPI antibody (M00175).

Overlay histogram showing U2OS cells stained with M00175 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-MPI Antibody (M00175, 1 µg/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

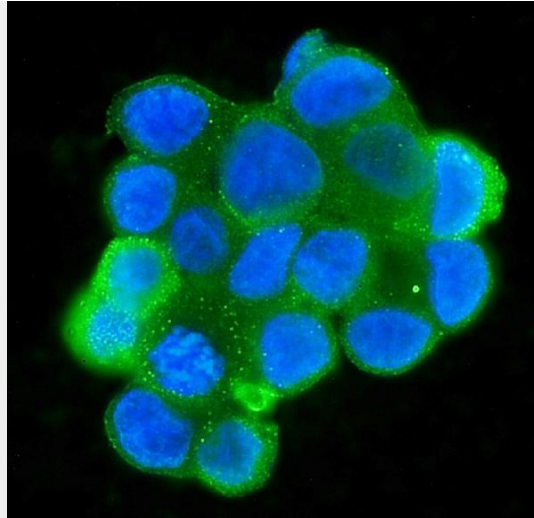


Figure 3. IF analysis of MPI using anti-MPI antibody (M00175).

MPI was detected in immunocytochemical section of MCF-7 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 µg/mL mouse anti-MPI Antibody (M00175) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Anti-MPI Antibody Picoband™ (monoclonal, 11I4) - Background

Mannose-6 phosphate isomerase (MPI), alternately phosphomannose isomerase (PMI), is an enzyme which facilitates the interconversion of fructose 6-phosphate (F6P) and mannose-6-phosphate (M6P). It also plays a critical role in maintaining the supply of D-mannose derivatives, which are required for most glycosylation reactions. Mutations in the MPI gene were found in patients with carbohydrate-deficient glycoprotein syndrome, type Ib. Alternative splicing results in multiple transcript variants. This MPI gene is mapped to 15q24.1.