

Mouse anti-Human, Rat MPI Monoclonal Antibody | anti-MPI antibody

Anti-MPI Antibody (monoclonal, 5G5)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19349	Mouse	Human, Rat	Western Blot, Immunohistochemistry, Immunocytochemistry, Immunofluorescence, Flow Cytometry, Functional Assay

PRODUCT SYNONYMS

MPI; Monoclonal Antibody; Anti-MPI Antibody (monoclonal; 5G5); PMI1; Mannose-6-phosphate isomerase; EC 5. 3. 1. 8; Phosphohexomutase; Phosphomannose isomerase; PMI; mannose phosphate isomerase; anti-MPI antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human, Rat
Clonality	Monoclonal
Isotype	Mouse IgG2a
Clone Number	5G5
Specificity	Mouse IgG monoclonal antibody for MPI detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Applicable Applications for anti-MPI antibody	WB (Western Blot), IHC (Immunohistochemistry), ICC (Immunocytochemistry), IF (Immunofluorescence), FCM/FACS (Flow Cytometry)
Application Notes	WB: 0.25-0.5ug/ml Human, Rat IHC-P: 2-5ug/ml Human ICC/IF: 5ug/ml Human FC/FACS/FCM: 1-3ug/1x106 cells Human
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.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



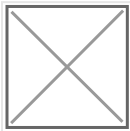
FCM (Flow Cytometry)

Figure 7. Flow Cytometry analysis of U87 cells using anti-MPI antibody (AAA19349).Overlay histogram showing U87 cells stained with AAA19349 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti- MPI Antibody (AAA19349, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was mouse IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



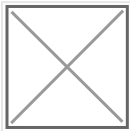
IF (Immunofluorescence)

Figure 6. IF analysis of MPI using anti- MPI antibody (AAA19349).MPI was detected in immunocytochemical section of T-47D cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5μg/mL mouse anti- MPI Antibody (AAA19349) overnight at 4 degree 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 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IHC (Immunohistochemistry)

Figure 5. IHC analysis of MPI using anti-MPI antibody (AAA19349).MPI was detected in paraffin-embedded section of human ovarian serous adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml mouse anti-MPI Antibody (AAA19349) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



IHC (Immunohistochemistry)

Figure 4. IHC analysis of MPI using anti-MPI antibody (AAA19349).MPI was detected in paraffin-embedded section of human renal clear cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml mouse anti-MPI Antibody (AAA19349) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



IHC (Immunohistochemistry)

Figure 3. IHC analysis of MPI using anti-MPI antibody (AAA19349).MPI was detected in paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml mouse anti-MPI Antibody (AAA19349) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



IHC (Immunohistochemistry)

Figure 2. IHC analysis of MPI using anti-MPI antibody (AAA19349).MPI was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml mouse anti-MPI Antibody (AAA19349) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.

ADDITIONAL INFORMATION

Related Product Information for anti-MPI antibody	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.
References	1. Jaeken, J., Matthijs, G., Saudubray, J. -M., Dionisi-Vici, C., Bertini, E., de Lonlay, P., Henri, H., Carchon, H., Schollen, E., Van Schaftingen, E. Phosphomannose isomerase deficiency: a carbohydrate-deficient glycoprotein syndrome with hepatic-intestinal presentation. (Letter) Am. J. Hum. Genet. 62: 1535-1539, 1998. 2. Schollen, E., Dorland, L., de Koning, T. J., Van Diggelen, O. P., Huijmans, J. G. M., Marquardt, T., Babovic-Vuksanovic, D., Patterson, M., Imtiaz, F., Winchester, B., Adamowicz, M., Pronicka, E., Freeze, H., Matthijs, G. Genomic organization of the human phosphomannose isomerase (MPI) gene and mutation analysis in patients with congenital disorders of glycosylation type Ib (CDG-Ib). Hum. Mutat. 16: 247-252, 2000.

NCBI AND UNIPROT INFORMATION

NCBI GI #	7159280
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NCBI GeneID	4351
UniProt Accession #	P34949; Q96AB0; A8K8K9
Molecular Weight	46,656 Da
NCBI Official Full Name	mannose phosphate isomerase
NCBI Official Synonym Full Names	mannose phosphate isomerase
NCBI Official Symbol	MPI
NCBI Official Synonym Symbols	PMI; PMI1; CDG1B
NCBI Protein Information	mannose-6-phosphate isomerase; phosphohexomutase; phosphomannose isomerase 1; mannose-6- phosphate isomerase
UniProt Protein Name	Mannose-6-phosphate isomerase
UniProt Gene Name	MPI
UniProt Synonym Gene Names	PMI1; PMI
UniProt Entry Name	MPI_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/mpi-antibody-clone-5g5-western-blot-immunohistochemistry-immunocytochemistry-immunofluorescence-flow-cytometry-elisa/19349>