10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

Anti-MPPB/PMPCB Antibody Picoband™ (monoclonal, 9F13E4)

Catalog # ABO16567

Specification

Anti-MPPB/PMPCB Antibody Picoband™ (monoclonal, 9F13E4) - Product Information

Application	**WB, IHC, IF, ICC, FC**
Primary Accession	O75439
Host	**Mouse**
Isotype	**Mouse IgG2b**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-MPPB/PMPCB Antibody Picoband™ (monoclonal, 9F13E4) . Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.

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

Anti-MPPB/PMPCB Antibody Picoband™ (monoclonal, 9F13E4) - Additional Information

Gene ID 9512

Other Names
Mitochondrial-processing peptidase subunit beta, 3.4.24.64, Beta-MPP, P-52, PMPCB, MPPB

Calculated MW
43 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat
 Immunohistochemistry(Paraffin-embedded Section), 2-5 µg/ml, Human
 Immunocytochemistry/Immunofluorescence, 5 µg/ml, Human
 Flow Cytometry, 1-3 µg/1x10^6 cells, Human

Contents
Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.

Immunogen
E.coli-derived human MPPB/PMPCB recombinant protein (Position: E23-Q479).

Purification
Immunogen affinity purified.

Storage	**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 freezing and thawing.**

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Anti-MPPB/PMPCB Antibody Picoband™ (monoclonal, 9F13E4) - Protein Information

Name PMPCB

Synonyms MPPB

Function
Catalytic subunit of the essential mitochondrial processing protease (MPP), which cleaves the mitochondrial sequence off newly imported precursors proteins (Probable) (PubMed:29576218). Preferentially, cleaves after an arginine at position P2 (By similarity). Required for PINK1 turnover by coupling PINK1 mitochondrial import and cleavage, which results in subsequent PINK1 proteolysis (PubMed:22354088).

Cellular Location
Mitochondrion matrix

Anti-MPPB/PMPCB Antibody Picoband™ (monoclonal, 9F13E4) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-MPPB/PMPCB Antibody Picoband™ (monoclonal, 9F13E4) - Images

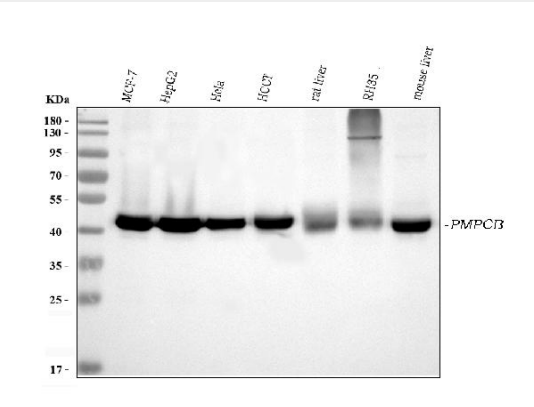

Figure 1. Western blot analysis of PMPCB using anti-PMPCB antibody (M11793).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human MCF-7 whole cell lysates,
Lane 2: human HepG2 whole cell lysates,
Lane 3: human Hela whole cell lysates,

Lane 4: human HCCT tissue lysates,
Lane 5: rat liver tissue lysates,
Lane 6: rat RH35 whole cell lysates,
Lane 7: mouse liver tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-PMPCB antigen affinity purified monoclonal antibody (Catalog # M11793) 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 PMPCB at approximately 43 kDa. The expected band size for PMPCB is at 54 kDa.

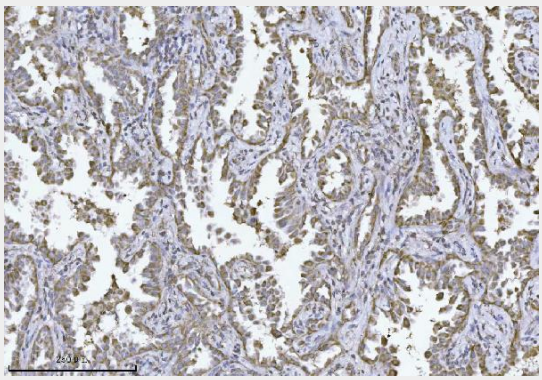

Figure 2. IHC analysis of PMPCB using anti-PMPCB antibody (M11793).
PMPCB was detected in a paraffin-embedded section of human adenocarcinoma of lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-PMPCB Antibody (M11793) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

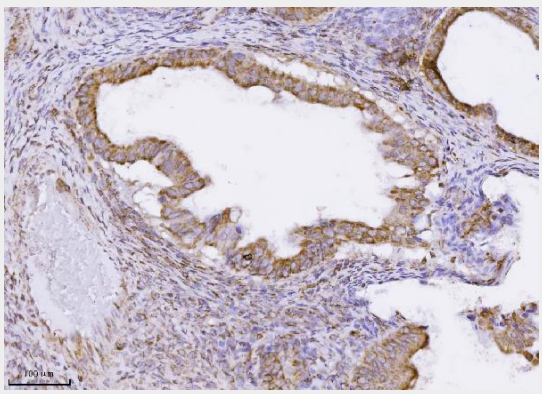

Figure 3. IHC analysis of PMPCB using anti-PMPCB antibody (M11793).
PMPCB was detected in a paraffin-embedded section of human ovarian carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-PMPCB Antibody (M11793) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

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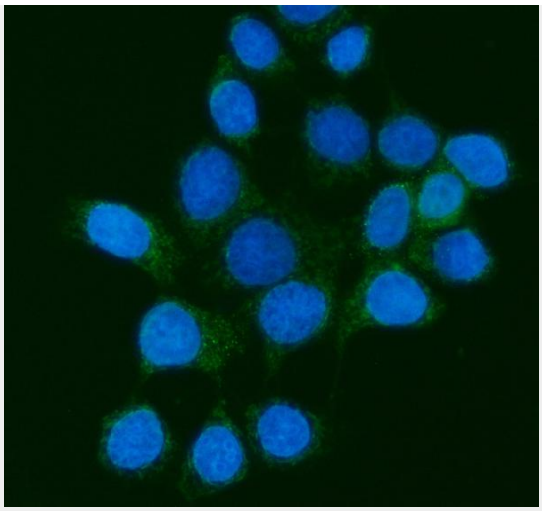

Figure 4. IF analysis of PMPCB using anti-PMPCB antibody (M11793).
PMPCB was detected in an immunocytochemical section of MCF-7 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 µg/mL mouse anti-PMPCB Antibody (M11793) 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.

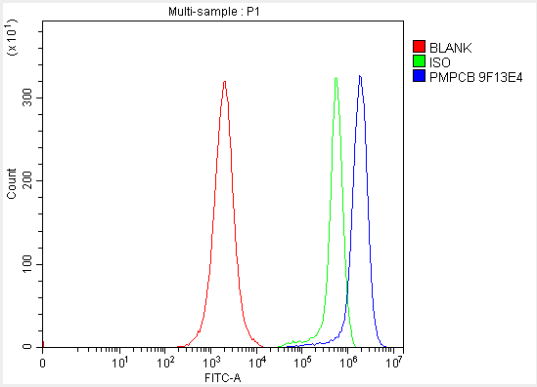

Figure 5. Flow Cytometry analysis of JK cells using anti-PMPCB antibody (M11793).
Overlay histogram showing JK cells stained with M11793 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-PMPCB Antibody (M11793, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Anti-MPPB/PMPCB Antibody Picoband™ (monoclonal, 9F13E4) - Background

Mitochondrial-processing peptidase subunit beta is an enzyme that in humans is encoded by the PMPCB gene. This gene is a member of the peptidase M16 family and encodes a protein with a zinc-binding motif. This protein is located in the mitochondrial matrix and catalyzes the cleavage of the leader peptides of precursor proteins newly imported into the mitochondria, though it only functions as part of a heterodimeric complex.