10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-ME1 Antibody Picoband™ (monoclonal, 5E5F7)

Catalog # ABO16595

Specification

Anti-ME1 Antibody Picoband™ (monoclonal, 5E5F7) - Product Information

Application	**WB, IHC**
Primary Accession	P48163
Host	**Mouse**
Isotype	**Mouse IgG1**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-ME1 Antibody Picoband™ (monoclonal, 5E5F7) . Tested in IHC, 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-ME1 Antibody Picoband™ (monoclonal, 5E5F7) - Additional Information

Gene ID 4199

Other Names
NADP-dependent malic enzyme, NADP-ME, 1.1.1.40, Malic enzyme 1, ME1 (HGNC:6983)

Calculated MW
64 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat
 Immunohistochemistry(Paraffin-embedded Section), 2-5 µg/ml, Human, Rat

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

Immunogen
E.coli-derived human ME1 recombinant protein (Position: M1-Q572).

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-ME1 Antibody Picoband™ (monoclonal, 5E5F7) - Protein Information

Name ME1 (HGNC:6983)

Function
Catalyzes the oxidative decarboxylation of (S)-malate in the presence of NADP(+) and divalent metal ions, and decarboxylation of oxaloacetate.

Cellular Location
Cytoplasm.

Tissue Location
Expressed in all tissues tested including liver, placenta and white adipose tissue.

Anti-ME1 Antibody Picoband™ (monoclonal, 5E5F7) - 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-ME1 Antibody Picoband™ (monoclonal, 5E5F7) - Images

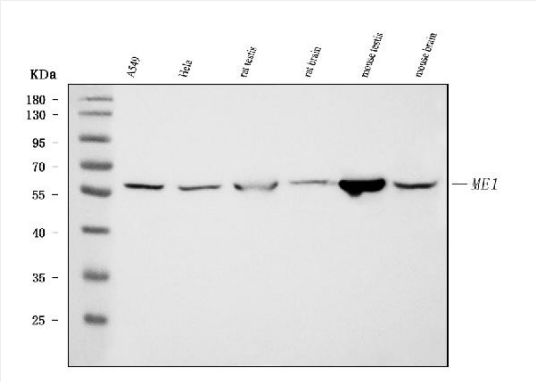

Figure 1. Western blot analysis of ME1 using anti-ME1 antibody (M03449).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human A549 whole cell lysates,
Lane 2: human Hela whole cell lysates,
Lane 3: rat testis tissue lysates,
Lane 4: rat brain tissue lysates,
Lane 5: mouse testis tissue lysates,
Lane 6: mouse brain 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-ME1 antigen affinity purified monoclonal antibody (Catalog # M03449) 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 ME1 at approximately 64 kDa. The expected band size for ME1 is at 64 kDa.

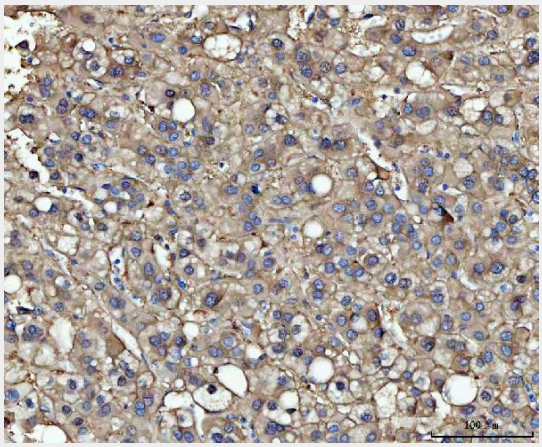

Figure 2. IHC analysis of ME1 using anti-ME1 antibody (M03449).
ME1 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-ME1 Antibody (M03449) 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.

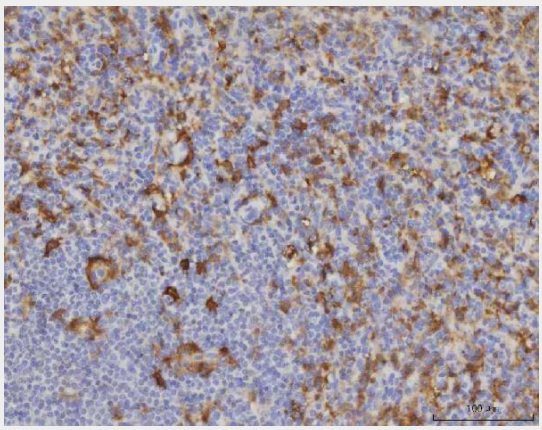

Figure 3. IHC analysis of ME1 using anti-ME1 antibody (M03449).
ME1 was detected in a paraffin-embedded section of human spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-ME1 Antibody (M03449) 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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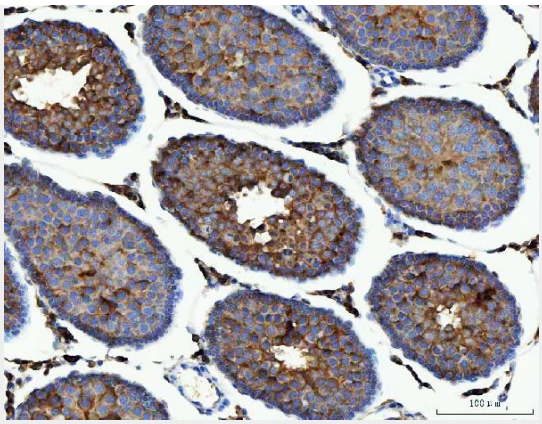

Figure 4. IHC analysis of ME1 using anti-ME1 antibody (M03449).
ME1 was detected in a paraffin-embedded section of rat testis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-ME1 Antibody (M03449) 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.

Anti-ME1 Antibody Picoband™ (monoclonal, 5E5F7) - Background

NADP-dependent malic enzyme is a protein that in humans is encoded by the ME1 gene. This gene encodes a cytosolic, NADP-dependent enzyme that generates NADPH for fatty acid biosynthesis. The activity of this enzyme, the reversible oxidative decarboxylation of malate, links the glycolytic and citric acid cycles. The regulation of expression for this gene is complex. Increased expression can result from elevated levels of thyroid hormones or by higher proportions of carbohydrates in the diet.