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

Anti-Aconitase 2 Antibody Picoband™ (monoclonal, 4C12D1)

Catalog # ABO16607

Specification

Anti-Aconitase 2 Antibody Picoband™ (monoclonal, 4C12D1) - Product Information

Application	**WB, IHC**
Primary Accession	Q99798
Host	**Mouse**
Isotype	**Mouse IgG1**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-Aconitase 2 Antibody Picoband™ (monoclonal, 4C12D1) . 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-Aconitase 2 Antibody Picoband™ (monoclonal, 4C12D1) - Additional Information

Gene ID 50

Other Names
Aconitate hydratase, mitochondrial, Aconitase, 4.2.1.3, Citrate hydro-lyase, ACO2

Calculated MW
85 kDa KDa

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

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

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human Aconitase 2, identical to the related mouse and rat sequences.

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-Aconitase 2 Antibody Picoband™ (monoclonal, 4C12D1) - Protein Information

Name ACO2

Function
Catalyzes the isomerization of citrate to isocitrate via cis- aconitate.

Cellular Location
Mitochondrion {ECO:0000250|UniProtKB:P16276}.

Anti-Aconitase 2 Antibody Picoband™ (monoclonal, 4C12D1) - 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-Aconitase 2 Antibody Picoband™ (monoclonal, 4C12D1) - Images

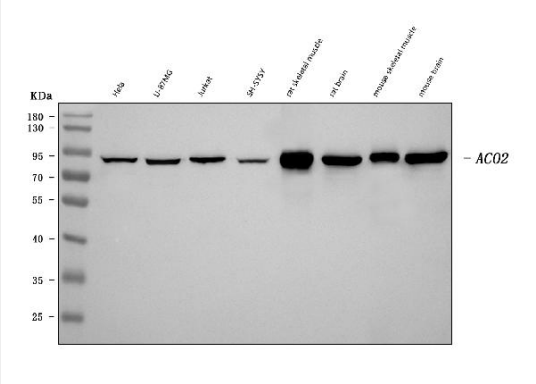

Figure 1. Western blot analysis of Aconitase 2 using anti-Aconitase 2 antibody (M03096-3). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human U-87MG whole cell lysates,
Lane 3: human Jurkat whole cell lysates,
Lane 4: human SH-SY5Y whole cell lysates,
Lane 5: rat skeletal muscle tissue lysates,
Lane 6: rat brain tissue lysates,
Lane 7: mouse skeletal muscle tissue lysates,
Lane 8: 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-Aconitase 2 antigen affinity purified monoclonal antibody (Catalog #

M03096-3) 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 Aconitase 2 at approximately 85 kDa. The expected band size for Aconitase 2 is at 85 kDa.

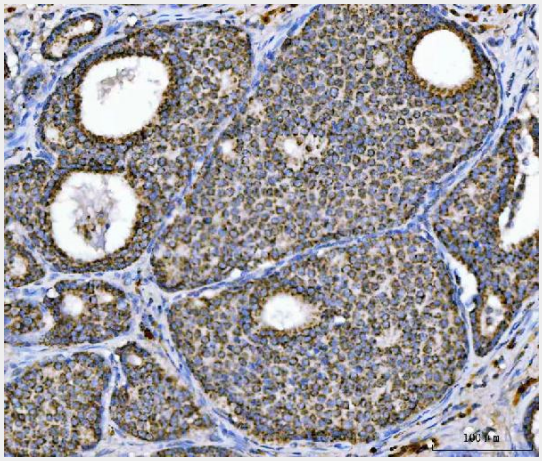

Figure 2. IHC analysis of Aconitase 2 using anti-Aconitase 2 antibody (M03096-3).
Aconitase 2 was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Aconitase 2 Antibody (M03096-3) 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.

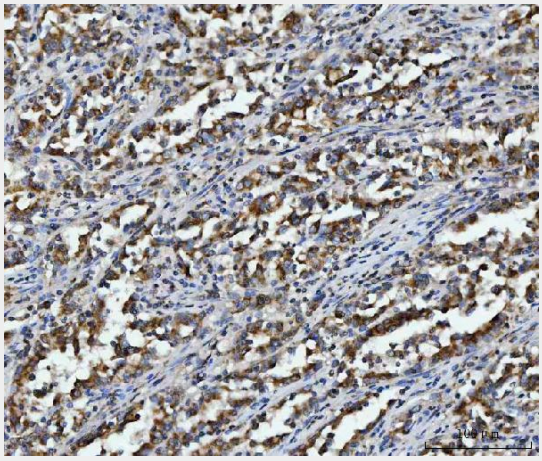

Figure 3. IHC analysis of Aconitase 2 using anti-Aconitase 2 antibody (M03096-3).
Aconitase 2 was detected in a paraffin-embedded section of human hepatocellular carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Aconitase 2 Antibody (M03096-3) 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.

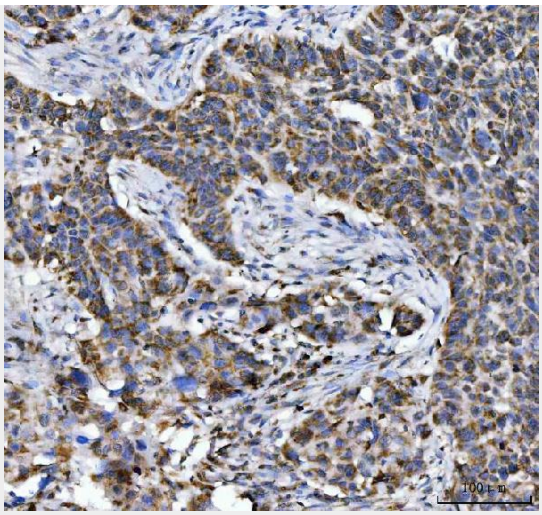

Figure 4. IHC analysis of Aconitase 2 using anti-Aconitase 2 antibody (M03096-3).
Aconitase 2 was detected in a paraffin-embedded section of human laryngeal squamous cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Aconitase 2 Antibody (M03096-3) 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.

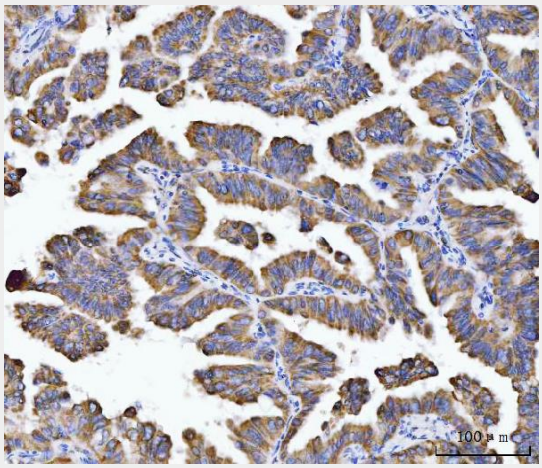

Figure 5. IHC analysis of Aconitase 2 using anti-Aconitase 2 antibody (M03096-3).
Aconitase 2 was detected in a paraffin-embedded section of human lung adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Aconitase 2 Antibody (M03096-3) 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.

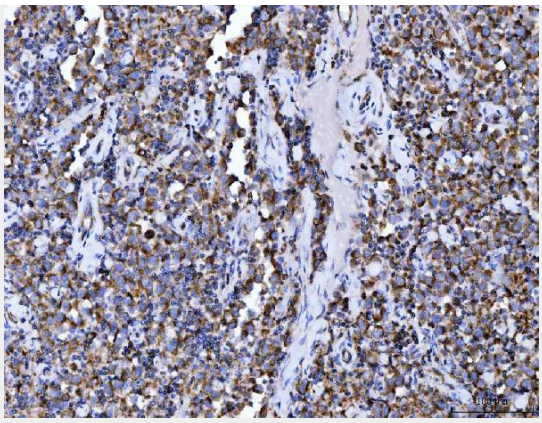

Figure 6. IHC analysis of Aconitase 2 using anti-Aconitase 2 antibody (M03096-3).
Aconitase 2 was detected in a paraffin-embedded section of human testicular germ cell tumor tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Aconitase 2 Antibody (M03096-3) 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.

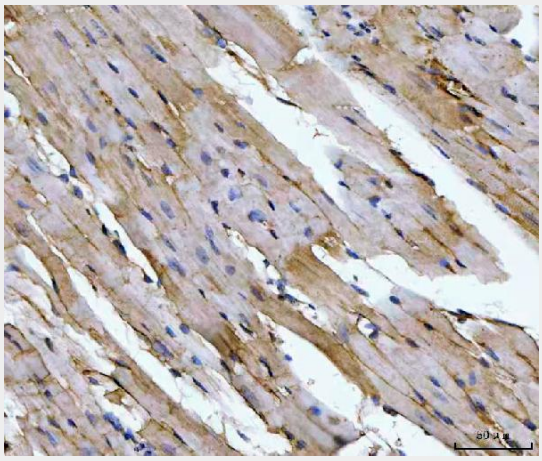

Figure 7. IHC analysis of Aconitase 2 using anti-Aconitase 2 antibody (M03096-3).
Aconitase 2 was detected in a paraffin-embedded section of mouse heart tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Aconitase 2 Antibody (M03096-3) 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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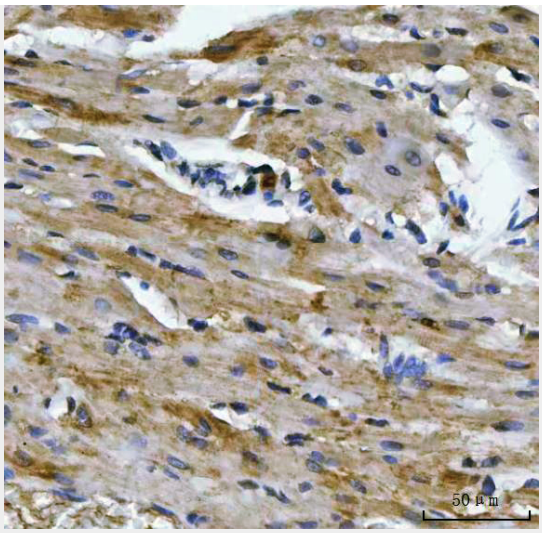

Figure 8. IHC analysis of Aconitase 2 using anti-Aconitase 2 antibody (M03096-3).
Aconitase 2 was detected in a paraffin-embedded section of rat heart tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Aconitase 2 Antibody (M03096-3) 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-Aconitase 2 Antibody Picoband™ (monoclonal, 4C12D1) - Background

Aconitase 2, mitochondrial is a protein that in humans is encoded by the ACO2 gene. The protein encoded by this gene belongs to the aconitase/IPM isomerase family. It is an enzyme that catalyzes the interconversion of citrate to isocitrate via cis-aconitate in the second step of the TCA cycle. This protein is encoded in the nucleus and functions in the mitochondrion. It was found to be one of the mitochondrial matrix proteins that are preferentially degraded by the serine protease 15(PRSS15), also known as Lon protease, after oxidative modification.