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

Anti-SDHB Antibody Picoband™ (monoclonal, 2I3)

Catalog # ABO14874

Specification

Anti-SDHB Antibody Picoband™ (monoclonal, 2I3) - Product Information

Application	**WB, IHC, FC**
Primary Accession	P21912
Host	**Mouse**
Isotype	**Mouse IgG1**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-SDHB Antibody Picoband™ (monoclonal, 2I3) . Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.

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

Anti-SDHB Antibody Picoband™ (monoclonal, 2I3) - Additional Information

Gene ID 6390

Other Names
Succinate dehydrogenase [ubiquinone] iron-sulfur subunit, mitochondrial, 1.3.5.1, Iron-sulfur subunit of complex II, Ip, SDHB, SDH, SDH1

Calculated MW
29 kDa KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human
 Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat
 Flow Cytometry, 1-3 µg/1x10^6 cells, Human

Subcellular Localization
Mitochondrion inner membrane. Peripheral membrane protein. Matrix side.

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

Immunogen
E. coli-derived human SDHB recombinant protein (Position: A29-V280).

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-SDHB Antibody Picoband™ (monoclonal, 2I3) - Protein Information

Name SDHB

Synonyms SDH, SDH1

Function
Iron-sulfur protein (IP) subunit of the succinate dehydrogenase complex (mitochondrial respiratory chain complex II), responsible for transferring electrons from succinate to ubiquinone (coenzyme Q) (PubMed:26925370, PubMed:27604842). SDH also oxidizes malate to the non-canonical enol form of oxaloacetate, enol- oxaloacetate (By similarity). Enol-oxaloacetate, which is a potent inhibitor of the succinate dehydrogenase activity, is further isomerized into keto-oxaloacetate (By similarity).

Cellular Location
Mitochondrion inner membrane; Peripheral membrane protein; Matrix side

Anti-SDHB Antibody Picoband™ (monoclonal, 2I3) - 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-SDHB Antibody Picoband™ (monoclonal, 2I3) - Images

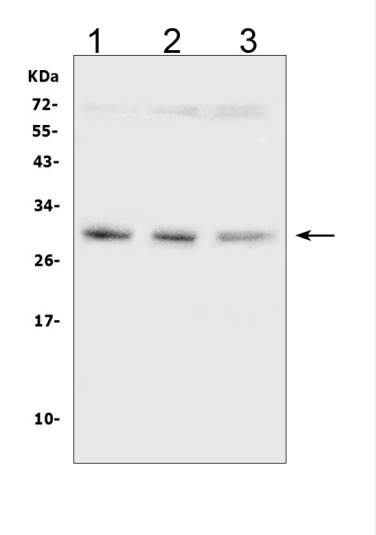

Figure 1. Western blot analysis of SDHB using anti-SDHB antibody (M01090-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human HEK293 whole cell lysates,
Lane 2: human HepG2 whole cell lysates,
Lane 3: human THP-1 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-SDHB antigen affinity purified monoclonal antibody (Catalog # M01090-1) 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 SDHB at approximately 29KD. The expected band size for SDHB is at 29KD.

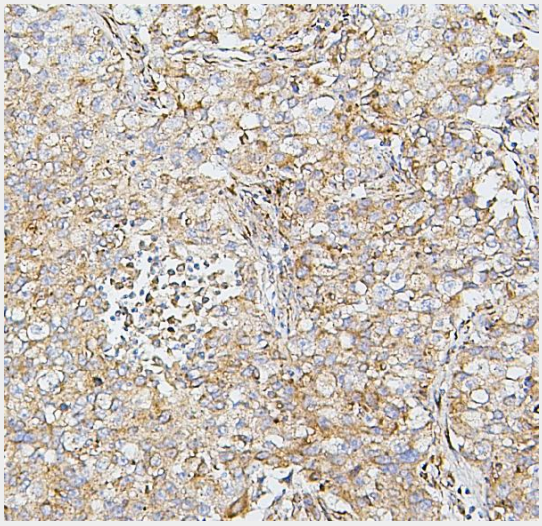

Figure 2. IHC analysis of SDHB using anti-SDHB antibody (M01090-1).
SDHB was detected in paraffin-embedded section of human lung cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-SDHB Antibody (M01090-1) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

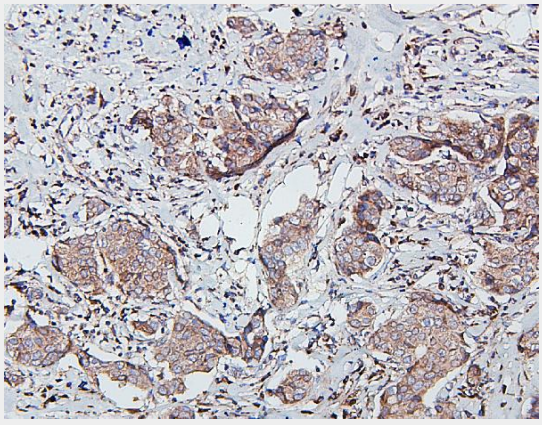

Figure 3. IHC analysis of SDHB using anti-SDHB antibody (M01090-1).

SDHB was detected in paraffin-embedded section of human mammary cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-SDHB Antibody (M01090-1) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

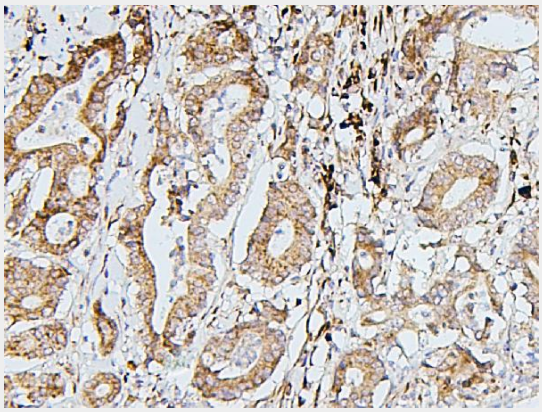

Figure 4. IHC analysis of SDHB using anti-SDHB antibody (M01090-1).
SDHB was detected in paraffin-embedded section of human intestinal cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-SDHB Antibody (M01090-1) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

Figure 5. IHC analysis of SDHB using anti-SDHB antibody (M01090-1).
SDHB was detected in section of mouse cardiac muscle tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with µg/ml mouse anti-SDHB Antibody (M01090-1) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

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

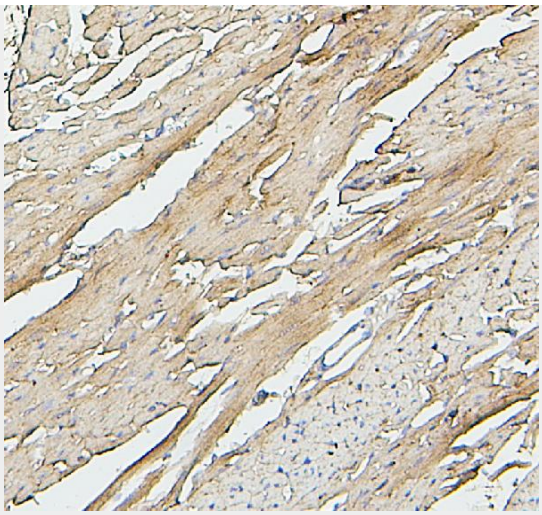

Figure 6. IHC analysis of SDHB using anti-SDHB antibody (M01090-1).
SDHB was detected in section of rat cardiac muscle tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with µg/ml mouse anti-SDHB Antibody (M01090-1) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

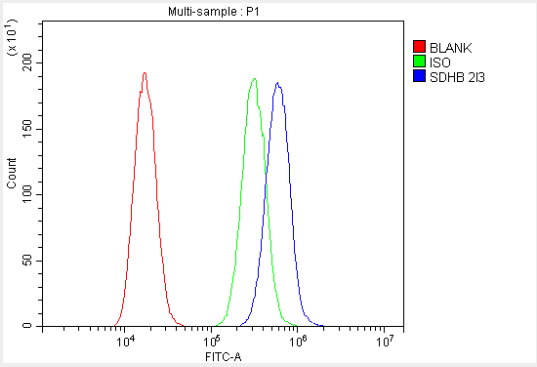

Figure 7. Flow Cytometry analysis of A549 cells using anti-SDHB antibody (M01090-1).
Overlay histogram showing A549 cells stained with M01090-1 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-SDHB Antibody (M01090-1,1 µg/1x10^6 cells) for 30 min at 20°C. 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.

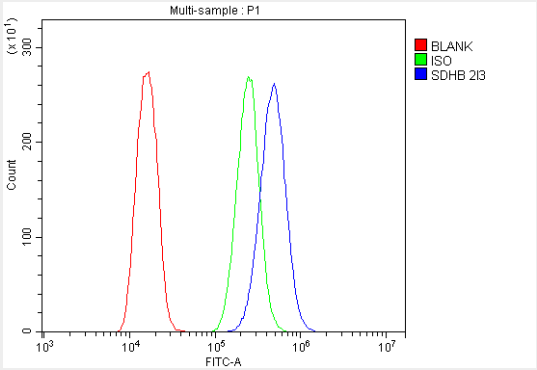

Figure 8. Flow Cytometry analysis of U20S cells using anti-SDHB antibody (M01090-1).
Overlay histogram showing U20S cells stained with M01090-1 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-SDHB Antibody (M01090-1,1 µg/1x10^6 cells) for 30 min at 20°C. 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-SDHB Antibody Picoband™ (monoclonal, 2I3) - Background

SDHB (Succinate Dehydrogenase Complex, Subunit B, iron sulfur protein), also known as iron-sulfur subunit of complex II (Ip) or SDH2, HOMOLOG OF, is a protein that in humans is encoded by the SDHB gene. SDHB is one of four protein subunits forming succinate dehydrogenase, the other three being SDHA, SDHC and SDHD. The SDHB subunit is connected to the SDHA subunit on the hydrophilic, catalytic end of the SDH complex. The SDHB gene is mapped on 1p36.13. It is stated that the nuclear-encoded Krebs cycle enzymes fumarate hydratase and succinate dehydrogenases like SDHB act as tumor suppressors, and germline mutations in these genes predispose individuals to leiomyomas and renal cancer and to paragangliomas, respectively. In affected members of families with paragangliomas-4, mutations were identified in the SDHB gene.