

Anti-IDH2 Antibody Picoband™ (monoclonal, 6B13)
Catalog # ABO14977**Specification****Anti-IDH2 Antibody Picoband™ (monoclonal, 6B13) - Product Information**

Application	WB, IHC, IF, ICC, FC
Primary Accession	P48735
Host	Mouse
Isotype	Mouse IgG2a
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Lyophilized

Description

Anti-IDH2 Antibody Picoband™ (monoclonal, 6B13) . Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.

Reconstitution

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

Anti-IDH2 Antibody Picoband™ (monoclonal, 6B13) - Additional Information

Gene ID 3418

Other Names

Isocitrate dehydrogenase [NADP], mitochondrial, IDH, 1.1.1.42, ICD-M, IDP, NADP(+)-specific ICDH, Oxalosuccinate decarboxylase, IDH2

Calculated MW

45 kDa KDa

Application Details

Western blot, 0.1-0.25 µg/ml, Human, Mouse, Rat
Immunohistochemistry (Paraffin-embedded Section), 2-5 µg/ml, Human, Rat
Immunocytochemistry/Immunofluorescence, 5 µg/ml, Human
Flow Cytometry, 1-3 µg/1x10⁶ cells, Human

Contents

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

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human IDH2, identical to the related mouse and rat sequences.

Purification

Immunogen affinity purified.

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-IDH2 Antibody Picoband™ (monoclonal, 6B13) - Protein Information

Name IDH2

Function

Plays a role in intermediary metabolism and energy production (PubMed:19228619, PubMed:22416140). It may tightly associate or interact with the pyruvate dehydrogenase complex (PubMed:19228619, PubMed:22416140).

Cellular Location

Mitochondrion {ECO:0000250|UniProtKB:P33198}.

Anti-IDH2 Antibody Picoband™ (monoclonal, 6B13) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-IDH2 Antibody Picoband™ (monoclonal, 6B13) - Images

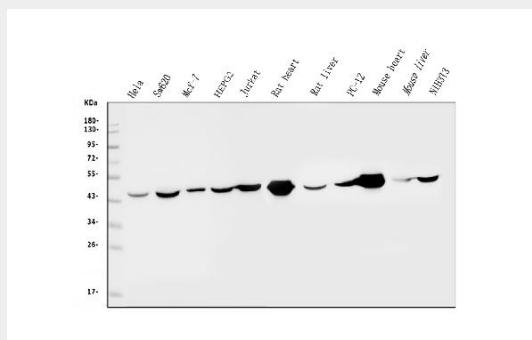


Figure 1. Western blot analysis of IDH2 using anti-IDH2 antibody (M00510-4).

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 HeLa whole cell lysates,
Lane 2: human Sw620 whole cell lysates,
Lane 3: human MCF-7 whole cell lysates,
Lane 4: human HEPG2 whole cell lysates,
Lane 5: human Jurkat whole cell lysates,
Lane 6: rat heart tissue lysates,

Lane 7: rat liver tissue lysates,
Lane 8: rat PC-12 whole cell lysates,
Lane 9: mouse heart tissue lysates,
Lane 10: mouse liver tissue lysates,
Lane 11: mouse NIH/3T3 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-IDH2 antigen affinity purified monoclonal antibody (Catalog # M00510-4) at 0.25 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 IDH2 at approximately 45KD. The expected band size for IDH2 is at 45KD.

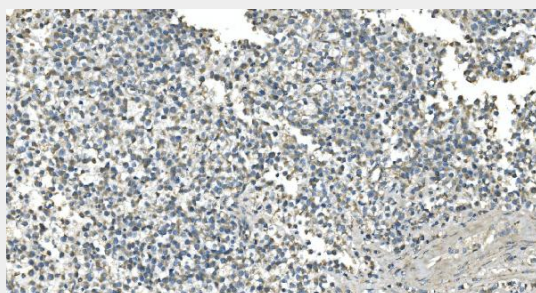


Figure 2. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-4).

IDH2 was detected in paraffin-embedded section of human testicular 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 2 µg/ml mouse anti-IDH2 Antibody (M00510-4) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

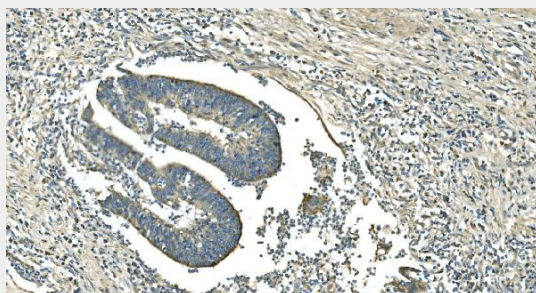


Figure 3. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-4).

IDH2 was detected in paraffin-embedded section of human rectal 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 2 µg/ml mouse anti-IDH2 Antibody (M00510-4) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

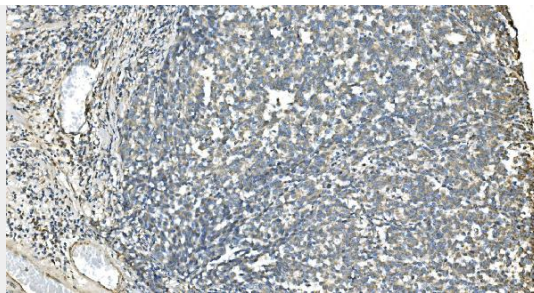


Figure 4. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-4).

IDH2 was detected in paraffin-embedded section of human melanoma 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 2 μ g/ml mouse anti-IDH2 Antibody (M00510-4) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

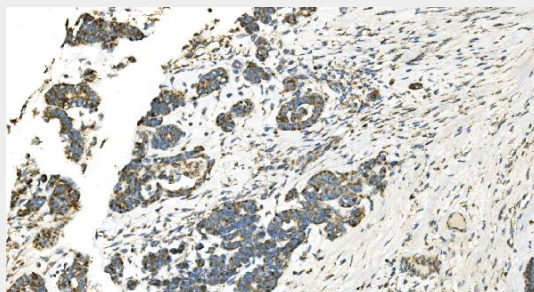


Figure 5. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-4).

IDH2 was detected in paraffin-embedded section of human ovarian 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 2 μ g/ml mouse anti-IDH2 Antibody (M00510-4) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

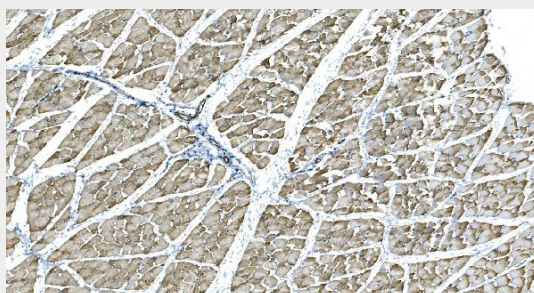


Figure 6. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-4).

IDH2 was detected in paraffin-embedded section of rat skeletal muscle 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 2 μ g/ml mouse anti-IDH2 Antibody (M00510-4) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

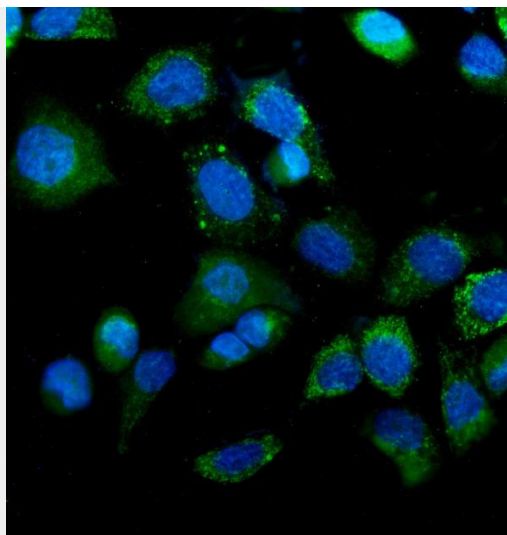


Figure 7. IF analysis of IDH2 using anti-IDH2 antibody (M00510-4). IDH2 was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 $\mu\text{g/mL}$ mouse anti-IDH2 Antibody (M00510-4) 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.

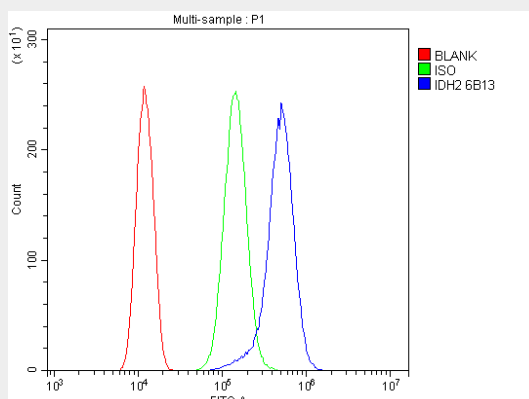


Figure 8. Flow Cytometry analysis of SiHa cells using anti-IDH2 antibody (M00510-4). Overlay histogram showing SiHa cells stained with M00510-4 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-IDH2 Antibody (M00510-4, 1 $\mu\text{g}/1 \times 10^6$ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 $\mu\text{g}/1 \times 10^6$ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 $\mu\text{g}/1 \times 10^6$) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Anti-IDH2 Antibody Picoband™ (monoclonal, 6B13) - Background

Isocitrate dehydrogenase [NADP], mitochondrial isoenzyme that in humans is encoded by the IDH2 gene. Isocitrate dehydrogenases catalyze the oxidative decarboxylation of isocitrate to 2-oxoglutarate. These enzymes belong to two distinct subclasses, one of which utilizes NAD (+) as the electron acceptor and the other NADP (+). Five isocitrate dehydrogenases have been reported: three NAD (+)-dependent isocitrate dehydrogenases, which localize to the mitochondrial matrix, and two NADP (+)-dependent isocitrate dehydrogenases, one of which is mitochondrial and the other predominantly cytosolic. Each NADP (+)-dependent isozyme is a homodimer. The protein encoded by this gene is the NADP (+)-dependent isocitrate dehydrogenase found in the

mitochondria. It plays a role in intermediary metabolism and energy production. This protein may tightly associate or interact with the pyruvate dehydrogenase complex. Alternative splicing results in multiple transcript variants.