

**Anti-IDH2 Antibody Picoband™ (monoclonal, 2H4)**  
Catalog # ABO14976**Specification****Anti-IDH2 Antibody Picoband™ (monoclonal, 2H4) - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | WB, IHC                |
| Primary Accession | <a href="#">P48735</a> |
| Host              | Mouse                  |
| Isotype           | Mouse IgG1             |
| Reactivity        | Rat, Human, Mouse      |
| Clonality         | Monoclonal             |
| Format            | Lyophilized            |

**Description**

Anti-IDH2 Antibody Picoband™ (monoclonal, 2H4) . Tested in IHC, 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, 2H4) - 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, 0.25-0.5 µg/ml, Human, Mouse, Rat<br> Immunohistochemistry (Paraffin-embedded Section), 2-5 µg/ml, Human<br>

**Contents**

Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na<sub>2</sub>HPO<sub>4</sub>.

**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, 2H4) - Protein Information

**Name** IDH2

### Function

Plays a role in intermediary metabolism and energy production (PubMed:<a href="http://www.uniprot.org/citations/19228619" target="\_blank">19228619</a>, PubMed:<a href="http://www.uniprot.org/citations/22416140" target="\_blank">22416140</a>). It may tightly associate or interact with the pyruvate dehydrogenase complex (PubMed:<a href="http://www.uniprot.org/citations/19228619" target="\_blank">19228619</a>, PubMed:<a href="http://www.uniprot.org/citations/22416140" target="\_blank">22416140</a>).

### Cellular Location

Mitochondrion {ECO:0000250|UniProtKB:P33198}.

## Anti-IDH2 Antibody Picoband™ (monoclonal, 2H4) - 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, 2H4) - Images

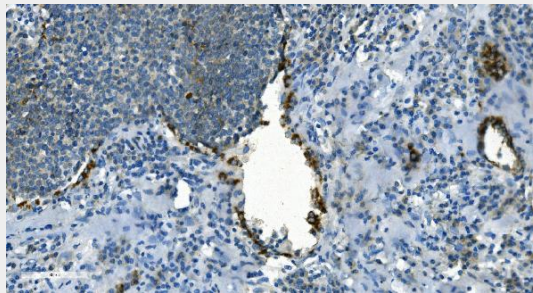


Figure 2. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-3). IDH2 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-IDH2 Antibody (M00510-3) 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.

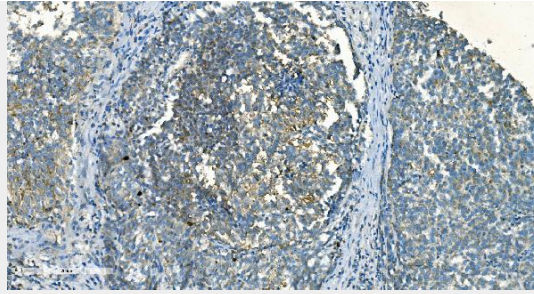


Figure 3. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-3). IDH2 was detected in paraffin-embedded section of human melanoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2  $\mu$ g/ml mouse anti-IDH2 Antibody (M00510-3) 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.

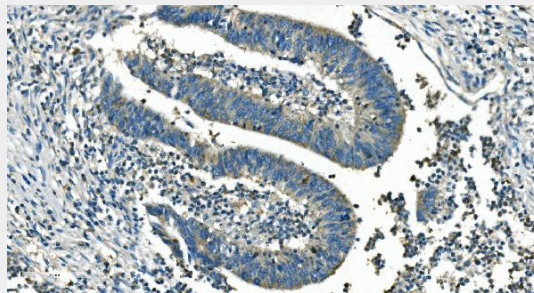


Figure 4. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-3). IDH2 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2  $\mu$ g/ml mouse anti-IDH2 Antibody (M00510-3) 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.

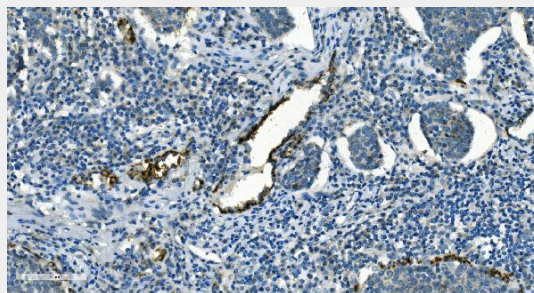


Figure 5. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-3). IDH2 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2  $\mu$ g/ml mouse anti-IDH2 Antibody (M00510-3) 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.

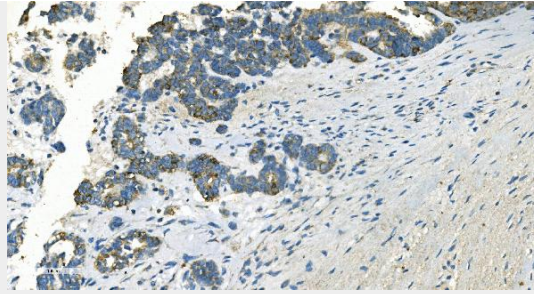


Figure 6. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-3). IDH2 was detected in paraffin-embedded section of human ovarian cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2  $\mu$ g/ml mouse anti-IDH2 Antibody (M00510-3) 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.

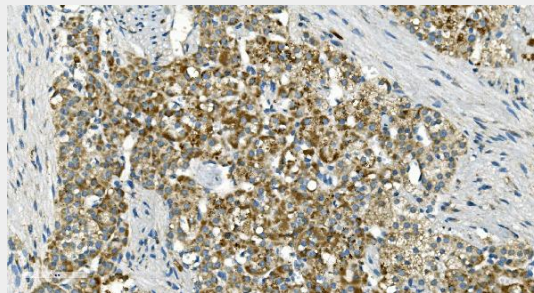


Figure 7. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-3). IDH2 was detected in paraffin-embedded section of human renal carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2  $\mu$ g/ml mouse anti-IDH2 Antibody (M00510-3) 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.

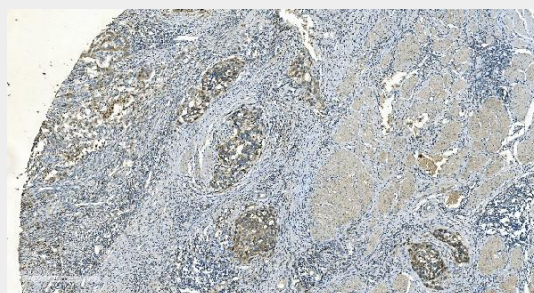


Figure 8. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-3). IDH2 was detected in paraffin-embedded section of human bladder cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2  $\mu$ g/ml mouse anti-IDH2 Antibody (M00510-3) 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.

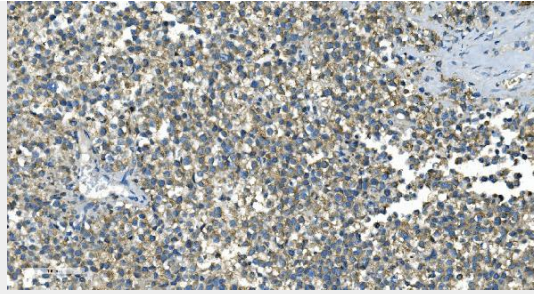


Figure 9. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-3). IDH2 was detected in paraffin-embedded section of human testicular cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-IDH2 Antibody (M00510-3) 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.

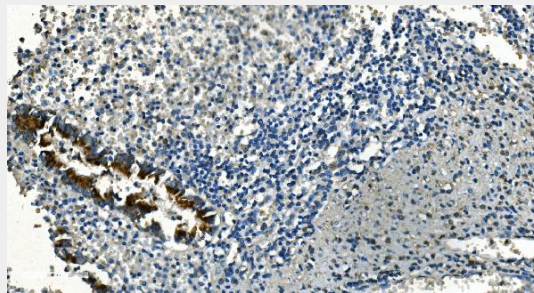


Figure 10. IHC analysis of IDH2 using anti-IDH2 antibody (M00510-3). IDH2 was detected in paraffin-embedded section of human appendicitis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-IDH2 Antibody (M00510-3) 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.

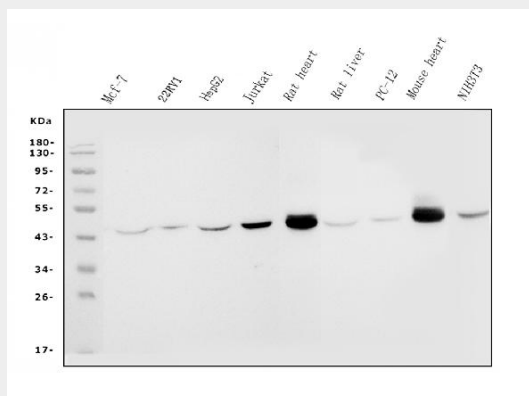


Figure 1. Western blot analysis of IDH2 using anti-IDH2 antibody (M00510-3). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human MCF-7 whole cell lysates,  
 Lane 2: human 22RV1 whole cell lysates,

Lane 3: human HepG2 whole cell lysates,  
Lane 4: human Jurkat whole cell lysates,  
Lane 5: rat heart tissue lysates,  
Lane 6: rat liver tissue lysates,  
Lane 7: rat PC-12 whole cell lysates,  
Lane 8: mouse heart tissue lysates,  
Lane 9: 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 # M00510-3) 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 IDH2 at approximately 45KD. The expected band size for IDH2 is at 45KD.

### **Anti-IDH2 Antibody Picoband™ (monoclonal, 2H4) - 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.