

**Anti-IDH2 Picoband Antibody**  
**Catalog # ABO12288****Specification**

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**Anti-IDH2 Picoband Antibody - Product Information**

Application	WB, IHC, IHC-P, IHC-F, IC, ICC
Primary Accession	<a href="#">P48735</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Isocitrate dehydrogenase [NADP], mitochondrial(IDH2) detection. Tested with WB, IHC-P, IHC-F in Human; Mouse;Rat.

**Reconstitution**

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

**Anti-IDH2 Picoband Antibody - 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**

50909 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, By Heat<br>Immunohistochemistry(Frozen Section)|0.5-1 µg/ml<br>Western blot, 0.1-0.5 µg/ml<br>

**Subcellular Localization**

Mitochondrion.

**Protein Name**

Isocitrate dehydrogenase [NADP], mitochondrial

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of human IDH2 (413-447aa KDLAGCIHGLSNVKLNEHFLNTTDFLDTIKSNLDR), identical to the related mouse and rat sequences.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage**

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Anti-IDH2 Picoband Antibody - 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 Picoband Antibody - 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](#)

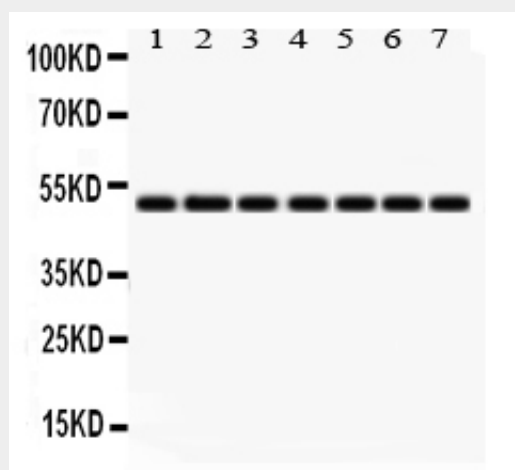
**Anti-IDH2 Picoband Antibody - Images**

Figure 1. Western blot analysis of IDH2 using anti-IDH2 antibody (ABO12288). 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: Rat Cardiac Muscle Tissue Lysate, Lane 2: Rat Liver Tissue Lysate, Lane 3: NIH3T3 Whole Cell Lysate, Lane 4: SW620 Whole Cell Lysate, Lane 5: HELA Whole Cell Lysate, Lane 6: MCF-7 Whole Cell Lysate, Lane 7: 22RV1 Whole Cell Lysate. 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 rabbit anti-IDH2 antigen affinity purified polyclonal antibody (Catalog # ABO12288) at 0.5  $\mu$ g/mL overnight at 4 $^{\circ}$ C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit 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 with Tanon 5200 system. A specific band was detected for IDH2 at approximately 51KD. The expected band size for IDH2 is at 51KD.

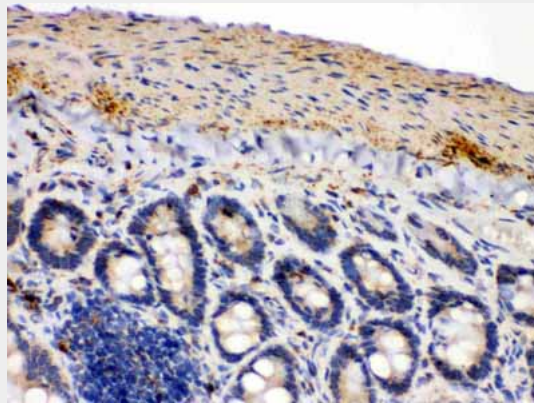


Figure 2. IHC analysis of IDH2 using anti-IDH2 antibody (ABO12288). IDH2 was detected in paraffin-embedded section of Mouse Intestine Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 $\mu$ g/ml rabbit anti-IDH2 Antibody (ABO12288) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

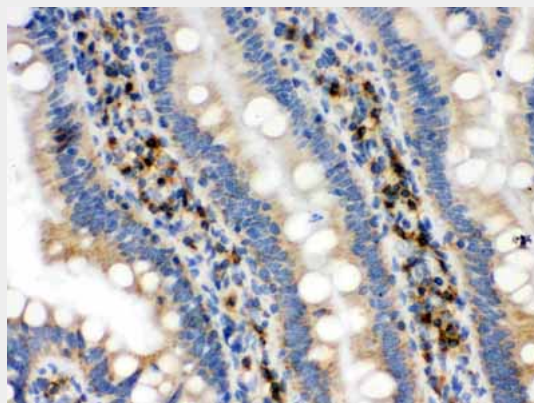


Figure 3. IHC analysis of IDH2 using anti-IDH2 antibody (ABO12288). IDH2 was detected in paraffin-embedded section of Rat Intestine Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 $\mu$ g/ml rabbit anti-IDH2 Antibody (ABO12288) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

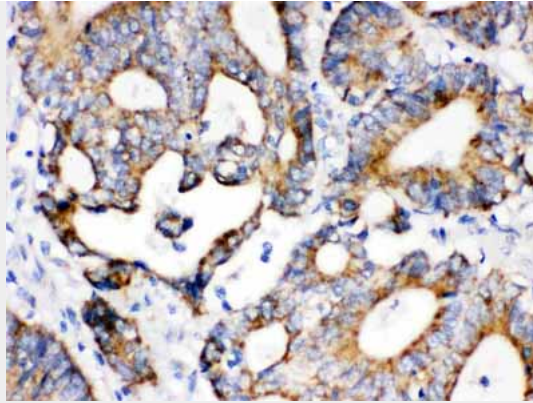


Figure 4. IHC analysis of IDH2 using anti-IDH2 antibody (ABO12288).IDH2 was detected in paraffin-embedded section of Human Intestinal Cancer Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 $\mu$ g/ml rabbit anti-IDH2 Antibody (ABO12288) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

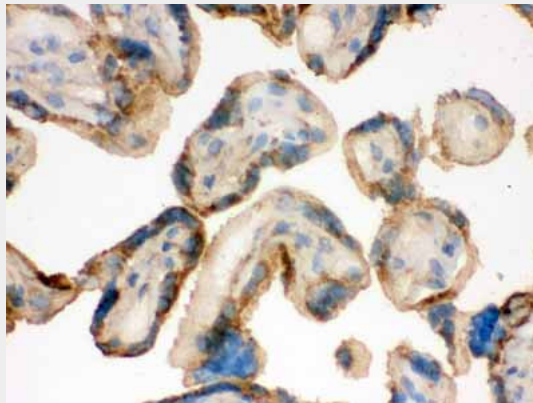


Figure 5. IHC analysis of IDH2 using anti-IDH2 antibody (ABO12288).IDH2 was detected in frozen section of human placenta tissue . Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 $\mu$ g/ml rabbit anti-IDH2 Antibody (ABO12288) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

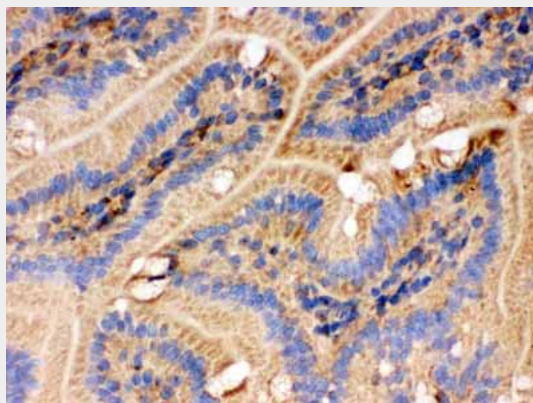


Figure 6. IHC analysis of IDH2 using anti-IDH2 antibody (ABO12288).IDH2 was detected in frozen



section of mouse small intestine tissue. 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 $\mu$ g/ml rabbit anti-IDH2 Antibody (ABO12288) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

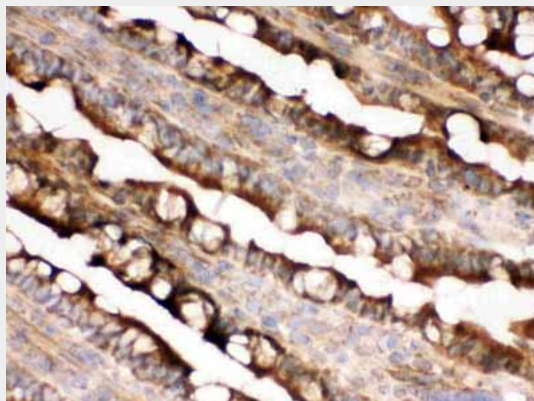


Figure 7. IHC analysis of IDH2 using anti-IDH2 antibody (ABO12288). IDH2 was detected in frozen section of rat small intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 $\mu$ g/ml rabbit anti-IDH2 Antibody (ABO12288) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

#### **Anti-IDH2 Picoband Antibody - Background**

Isocitrate dehydrogenase [NADP], mitochondrial is an enzyme 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.