

**IDH1 Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7454A****Specification**

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**IDH1 Antibody (N-term) - Product Information**

|                   |                                                                                                   |
|-------------------|---------------------------------------------------------------------------------------------------|
| Application       | FC, IHC-P, WB, IF,E                                                                               |
| Primary Accession | <a href="#">O75874</a>                                                                            |
| Other Accession   | <a href="#">P41562</a> , <a href="#">O88844</a> , <a href="#">Q9XSG3</a> , <a href="#">Q6XUZ5</a> |
| Reactivity        | Human, Mouse                                                                                      |
| Predicted         | Bovine, Rat, Sheep                                                                                |
| Host              | Rabbit                                                                                            |
| Clonality         | Polyclonal                                                                                        |
| Isotype           | Rabbit IgG                                                                                        |
| Antigen Region    | 63-90                                                                                             |

**IDH1 Antibody (N-term) - Additional Information****Gene ID** 3417**Other Names**

Isocitrate dehydrogenase [NADP] cytoplasmic, IDH, Cytosolic NADP-isocitrate dehydrogenase, IDP, NADP(+)-specific ICDH, Oxalosuccinate decarboxylase, IDH1, PICD

**Target/Specificity**

This IDH1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 63-90 amino acids from the N-terminal region of human IDH1.

**Dilution**

FC~~1:10~50  
IHC-P~~1:50~100  
WB~~1:1000  
IF~~1:10~50  
E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

IDH1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**IDH1 Antibody (N-term) - Protein Information**

**Name** IDH1

**Synonyms** PICD

**Function** Catalyzes the NADP(+)-dependent oxidative decarboxylation of isocitrate (D-threo-isocitrate) to 2-ketoglutarate (2-oxoglutarate), which is required by other enzymes such as the phytanoyl-CoA dioxygenase (PubMed:[10521434](#), PubMed:[19935646](#)). Plays a critical role in the generation of NADPH, an important cofactor in many biosynthesis pathways (PubMed:[10521434](#)). May act as a corneal epithelial crystallin and may be involved in maintaining corneal epithelial transparency (By similarity).

**Cellular Location**

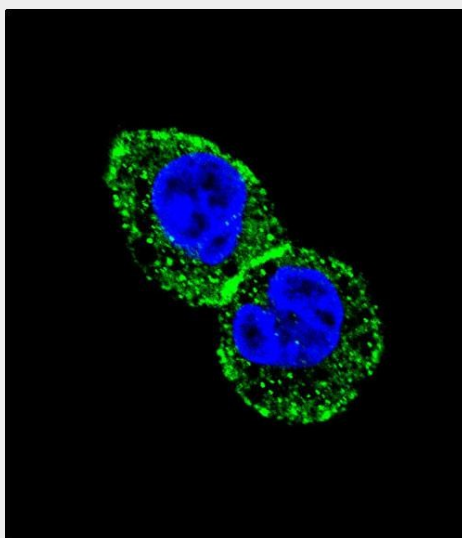
Cytoplasm, cytosol. Peroxisome

**IDH1 Antibody (N-term) - Protocols**

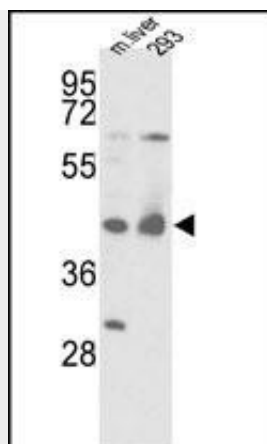
Provided below are standard protocols that you may find useful for product applications.

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

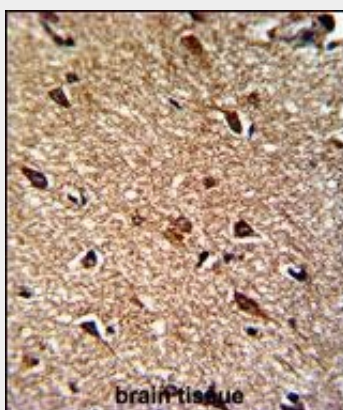
**IDH1 Antibody (N-term) - Images**



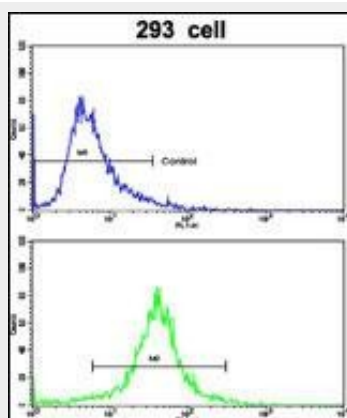
Confocal immunofluorescent analysis of IDH1 Antibody (N-term)(Cat#AP7454a) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green).DAPI was used to stain the cell nuclear (blue).



Western blot analysis of IDH1 Antibody (N-term) (Cat.#AP7454a) in mouse liver tissue and 293 cell line lysates (35ug/lane). IDH1 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human brain reacted with IDH1 Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of 293 cells using IDH1 Antibody (N-term)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

### IDH1 Antibody (N-term) - Background

IDH1 belongs to two distinct subclasses. The protein is the NADP(+)-dependent isocitrate dehydrogenase found in the cytoplasm and peroxisomes. This protein contains the PTS-1

peroxisomal targeting signal sequence. The presence of this enzyme in peroxisomes suggests roles in the regeneration of NADPH for intraperoxisomal reductions, such as the conversion of 2, 4-dienoyl-CoAs to 3-enoyl-CoAs, as well as in peroxisomal reactions that consume 2-oxoglutarate, namely the alpha-hydroxylation of phytanic acid. The cytoplasmic enzyme serves a significant role in cytoplasmic NADPH production.

#### **IDH1 Antibody (N-term) - References**

Geisbrecht B.V., Gould S.J.J. Biol. Chem. 274:30527-30533(1999)  
Xu X., Zhao J., Xu Z.J. Biol. Chem. 279:33946-33957(2004)  
Bleeker F.E., Lamba S. Hum. Mutat. 30:7-11(2009)