

**IDH1 Antibody (Center)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7454c**

**Specification**

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**IDH1 Antibody (Center) - Product Information**

Application	WB, IF, IHC-P, FC,E
Primary Accession	<a href="#">O75874</a>
Other Accession	<a href="#">P41562</a> , <a href="#">O88844</a> , <a href="#">O9XSG3</a> , <a href="#">O6XUZ5</a>
Reactivity	Human, Mouse
Predicted	Bovine, Rat, Sheep
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	46659
Antigen Region	116-143

**IDH1 Antibody (Center) - 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 116-143 amino acids from the Central region of human IDH1.

**Dilution**

WB~~1:1000  
IF~~1:10~50  
IHC-P~~1:50~100  
FC~~1:10~50

**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 (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

**IDH1 Antibody (Center) - 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).

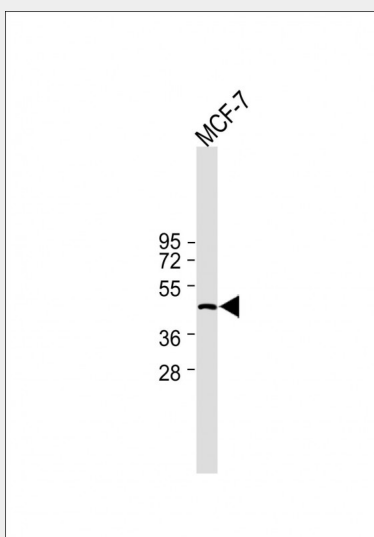
**Cellular Location**

Cytoplasm, cytosol. Peroxisome

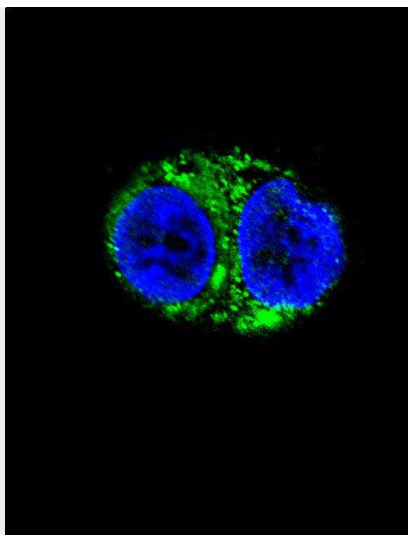
**IDH1 Antibody (Center) - Protocols**

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

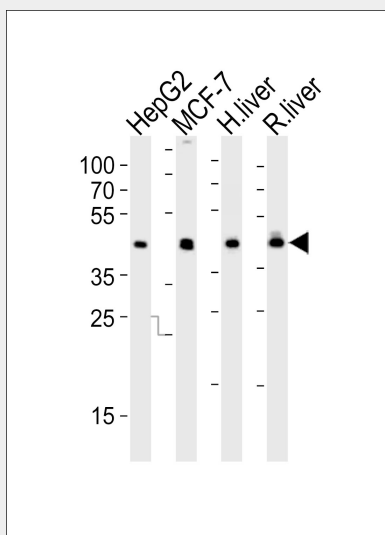
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**IDH1 Antibody (Center) - Images**

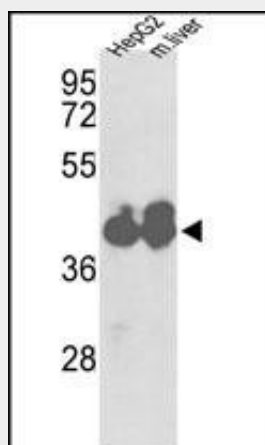
All lanes : Anti-IDH1 Antibody (Center) at 1:2000 dilution Lane 1: MCF-7 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG/A/M(H/L), Peroxidase conjugated at 1/2000 dilution. Observed band size : 47kDa Blocking/Dilution buffer: 5% NFDM/TBST.



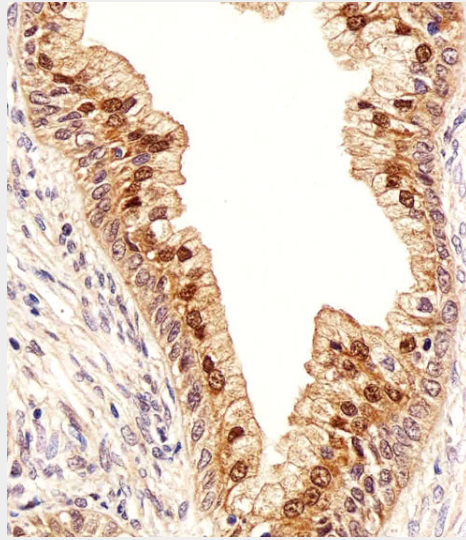
Confocal immunofluorescent analysis of IDH1 Antibody (Center)(Cat#AP7454c) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green).DAPI was used to stain the cell nuclear (blue).



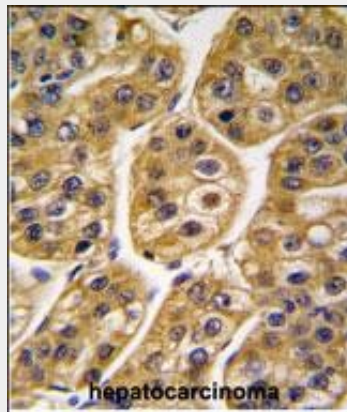
Western blot analysis of lysates from HepG2, MCF-7 cell line, human liver and rat liver tissue lysate(from left to right), using IDH1 Antibody (Center)(Cat. #AP7454c). AP7454c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 35ug per lane.



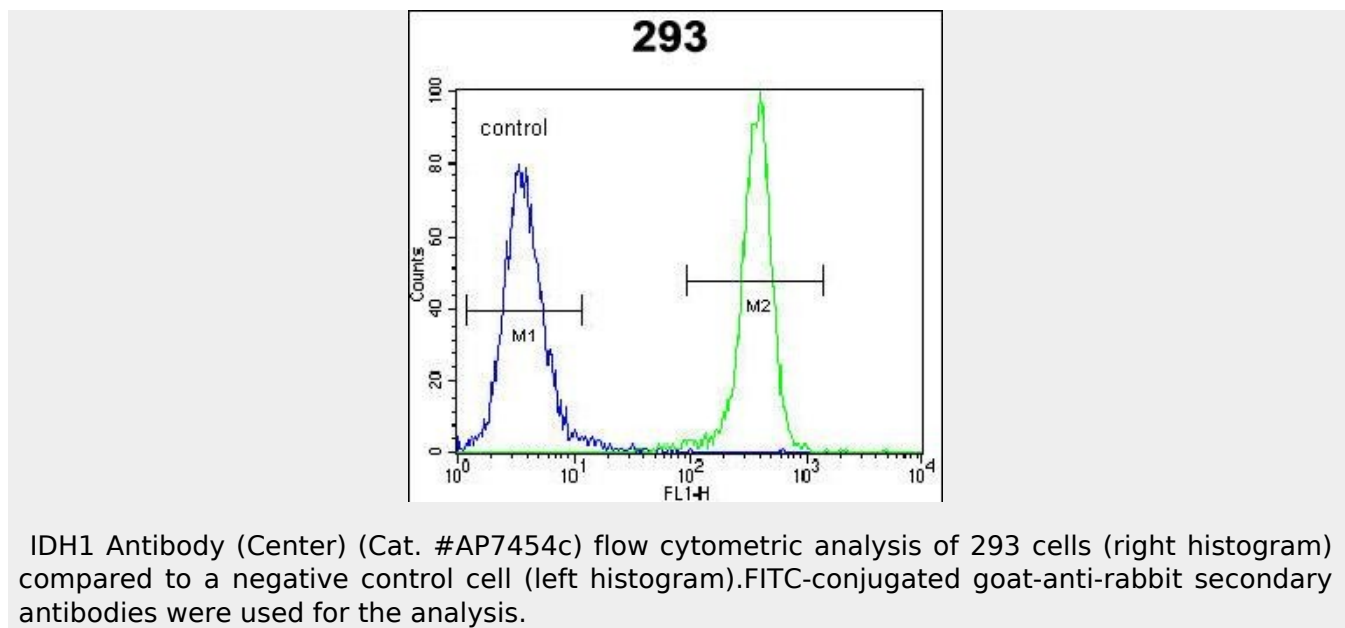
Western blot analysis of IDH1 Antibody (Center) (Cat.#AP7454c) in HepG2 cell line and mouse liver tissue lysates (35ug/lane). IDH1 (arrow) was detected using the purified Pab.



Immunohistochemical analysis of paraffin-embedded H. prostate section using IDH1 Antibody (Center)(Cat#AP7454c). AP7454c was diluted at 1:100 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with IDH1 antibody (Center), 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.



### **IDH1 Antibody (Center) - 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 (Center) - 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)