

IDH1 Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5173

Specification

IDH1 Antibody (Center) - Product Information

Application	IF, WB, IHC-P, FC,E
Primary Accession	O75874
Other Accession	P41562 , O88844 , O9XSG3 , O6XUZ5
Reactivity	Human, Rat
Predicted	Bovine, Mouse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	H=47;M=47;Rat=47 KDa
Isotype	Rabbit IgG
Antigen Source	HUMAN

IDH1 Antibody (Center) - Additional Information

Gene ID 3417

Antigen Region
116-143

Other Names

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

Dilution

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

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.

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](http://www.uniprot.org/citations/10521434), PubMed: [19935646](http://www.uniprot.org/citations/19935646)). Plays a critical role in the generation of NADPH, an important cofactor in many biosynthesis pathways (PubMed: [10521434](http://www.uniprot.org/citations/10521434)). May act as a corneal epithelial crystallin and may be involved in maintaining corneal epithelial transparency (By similarity).

Cellular Location

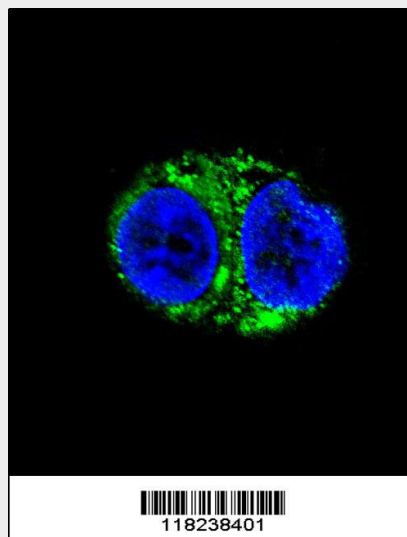
Cytoplasm, cytosol. Peroxisome

IDH1 Antibody (Center) - Protocols

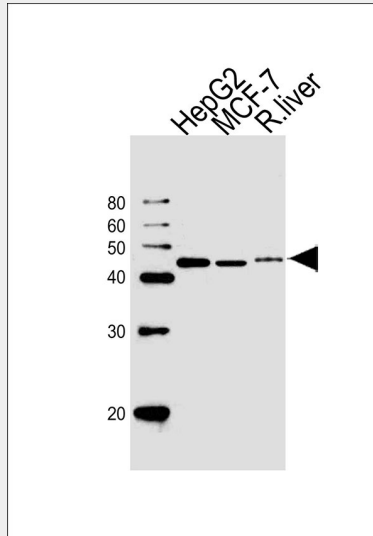
Provided below are standard protocols that you may find useful for product applications.

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

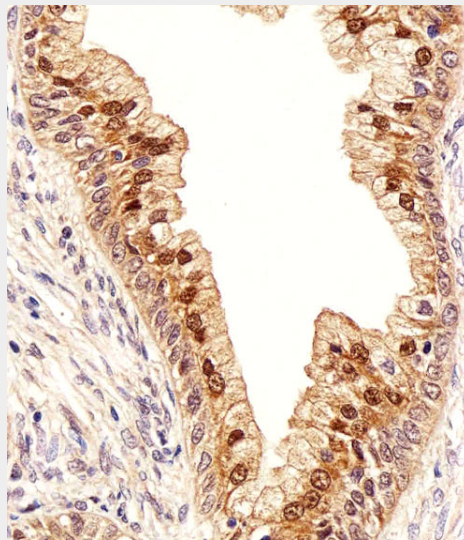
IDH1 Antibody (Center) - Images



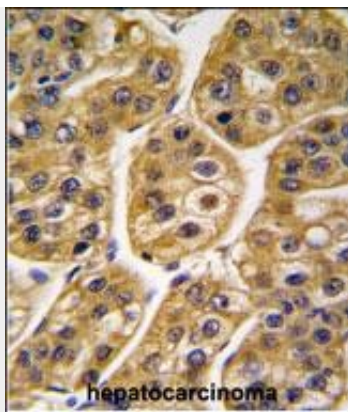
Confocal immunofluorescent analysis of IDH1 Antibody (Center)(Cat#AW5173) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). DAPI was used to stain the cell nuclear (blue).



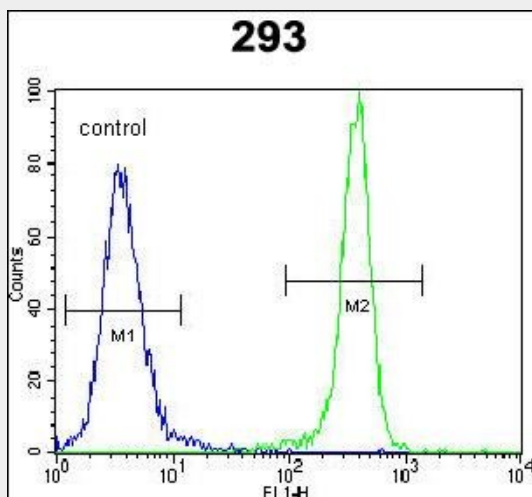
Western blot analysis of lysates from HepG2, MCF-7 cell line and rat liver tissue lysate (from left to right), using IDH1 Antibody (Center) (Cat. #AW5173). AW5173 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L (HRP) at 1:10000 dilution was used as the secondary antibody.



Immunohistochemical analysis of paraffin-embedded H. prostate section using IDH1 Antibody (Center) (Cat#AW5173). AW5173 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) (Cat. #AW5173) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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)