

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

IDH1 Antibody (Center) - Product Information

Application	WB, IHC-P, FC, IF, E
Primary Accession	O75874
Other Accession	P41562 , O88844 , Q9XSG3 , Q6XUZ5
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
IHC-P~~1:100
FC~~1:10~50
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 (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

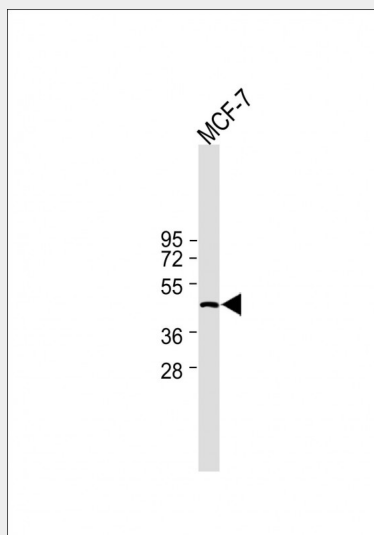
Cytoplasm, cytosol. Peroxisome

IDH1 Antibody (Center) - Protocols

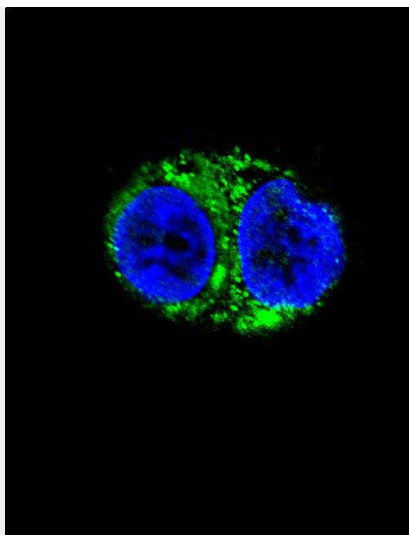
Provided below are standard protocols that you may find useful for product applications.

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

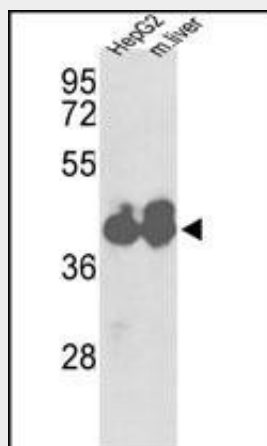
IDH1 Antibody (Center) - Images



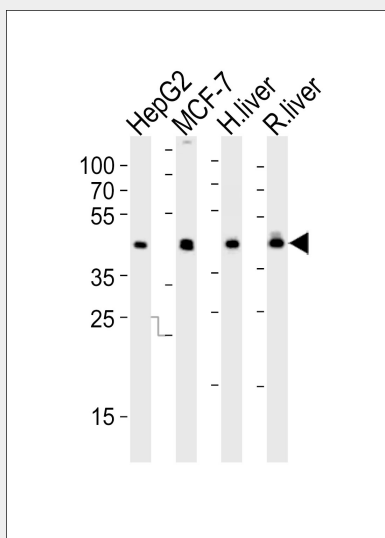
All lanes : Anti-IDH1 Antibody (Center) at 1:2000 dilution Lane 1: MCF-7 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG/A/M(H/L), Peroxidase conjugated at 1/2000 dilution. Observed band size : 47kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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).

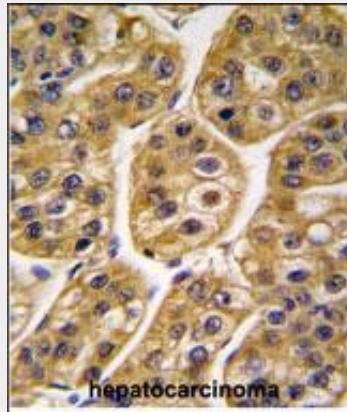


Western blot analysis of IDH1 Antibody (Center) (Cat.#AP7454c) in HepG2 cell line and mouse liver tissue lysates (35ug/lane). IDH1 (arrow) was detected using the purified Pab.

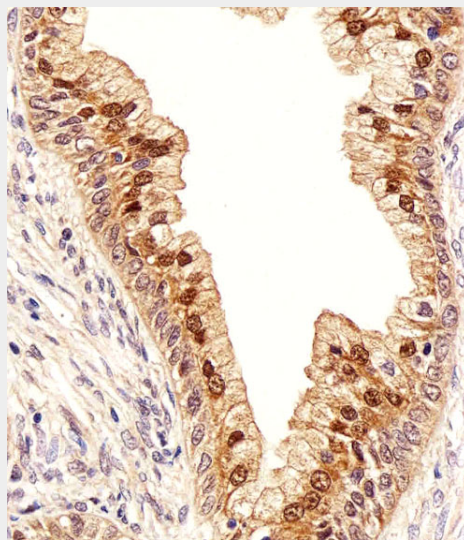


Western blot analysis of lysates from HepG2, MCF-7 cell line, human liver and rat liver tissue

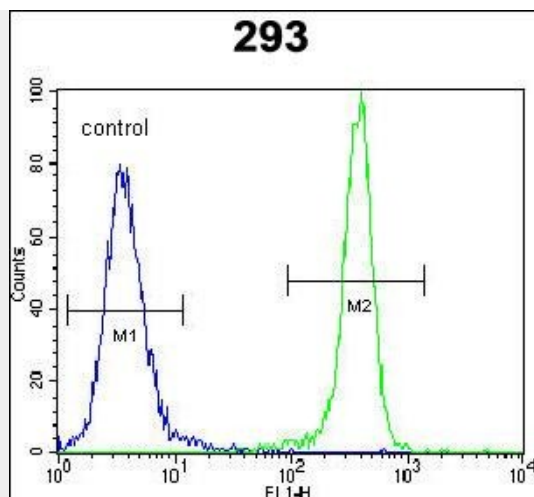
lysate(from left to right), using IDH1 Antibody (Center)(Cat. #AP7454c). AP7454c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 35ug per lane.



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.



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.



IDH1 Antibody (Center) (Cat. #AP7454c) 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)