

Mouse Monoclonal Antibody to IDH1
Purified Mouse Monoclonal Antibody
Catalog # AO2436a**Specification**

Mouse Monoclonal Antibody to IDH1 - Product Information

Application	WB, FC, ICC, E
Primary Accession	O75874
Reactivity	Human, Mouse, Monkey
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Calculated MW	46.7kDa KDa

Description

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 cytoplasm and peroxisomes. It 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. Alternatively spliced transcript variants encoding the same protein have been found for this gene.;

Immunogen

Purified recombinant fragment of human IDH1 (AA: 156-298) expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide

Application Note

ELISA: 1/10000; WB: 1/500 - 1/2000; ICC: 1/50 - 1/250; FCM: 1/200 - 1/400

Mouse Monoclonal Antibody to IDH1 - Additional Information

Gene ID 3417

Other Names

IDH; IDP; IDCD; IDPC; PICD; HEL-216; HEL-S-26

Dilution

WB~~1:1000
FC~~1:10~50
ICC~~N/A
E~~N/A

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Mouse Monoclonal Antibody to IDH1 is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Monoclonal Antibody to IDH1 - 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).

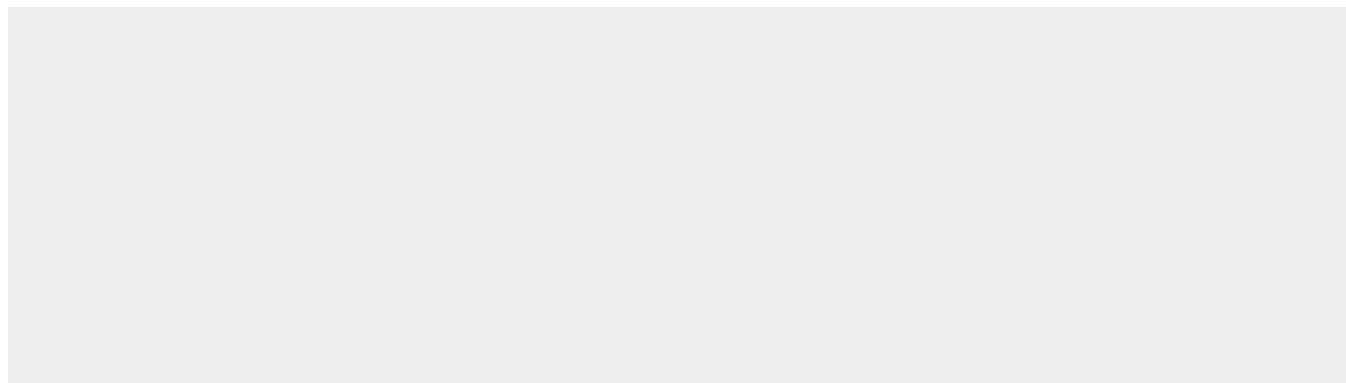
Cellular Location

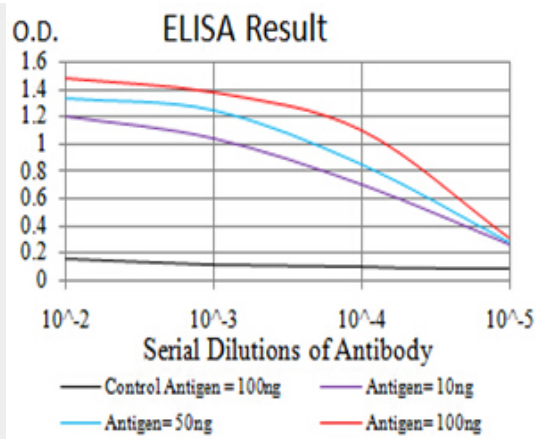
Cytoplasm, cytosol. Peroxisome

Mouse Monoclonal Antibody to IDH1 - Protocols

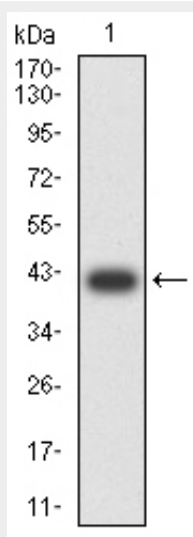
Provided below are standard protocols that you may find useful for product applications.

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

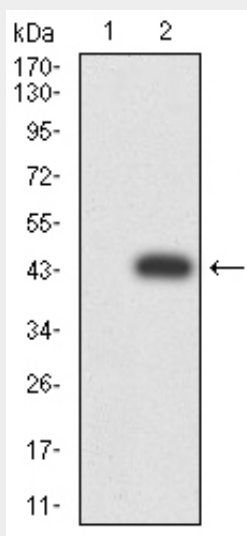
Mouse Monoclonal Antibody to IDH1 - Images



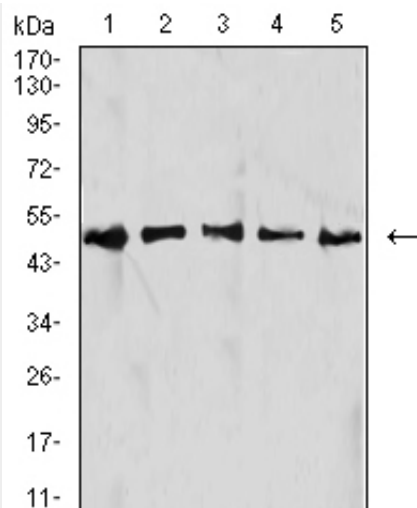
Black line: Control Antigen (100 ng); Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line: Antigen (100 ng)



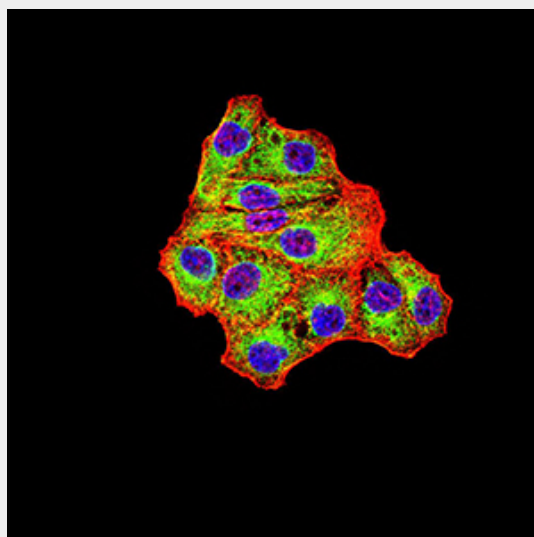
Western blot analysis using IDH1 mAb against human IDH1 (AA: 156-298) recombinant protein. (Expected MW is 41.8 kDa)



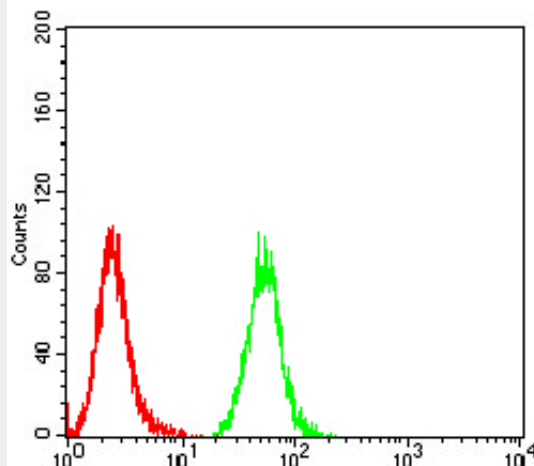
Western blot analysis using IDH1 mAb against HEK293 (1) and IDH1 (AA: 156-298)-hlgGfC transfected HEK293 (2) cell lysate.



Western blot analysis using IDH1 mouse mAb against HepG2 (1), NIH/3T3 (2), C2C12 (3), COS7 (4), and SW480 (5) cell lysate.



Immunofluorescence analysis of HeLa cells using IDH1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin. Secondary antibody from Fisher



Flow cytometric analysis of Hela cells using IDH1 mouse mAb (green) and negative control (red).

Mouse Monoclonal Antibody to IDH1 - References

1.Cancer Cell. 2015 Dec 14;28(6):773-84. ; 2.Int J Cancer. 2015 Sep 1;137(5):1058-65. ;