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Mouse Monoclonal Antibody to IDH1

Purified Mouse Monoclonal Antibody
Catalog # AO2436a

Specification

Mouse Monoclonal Antibody to IDH1 - Product Information

Application	**E, WB, ICC, FC**
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

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).

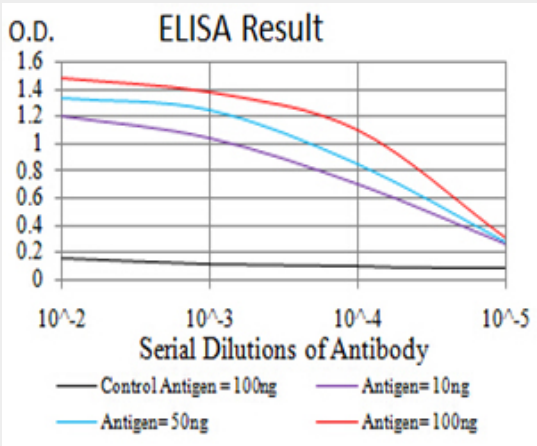
Cellular Location
Cytoplasm, cytosol. Peroxisome

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 Cytomety
- Cell Culture

Mouse Monoclonal Antibody to IDH1 - Images



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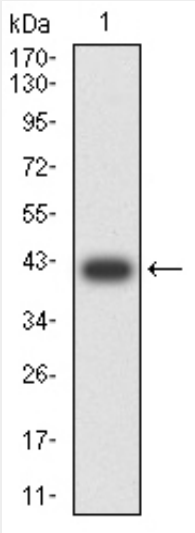
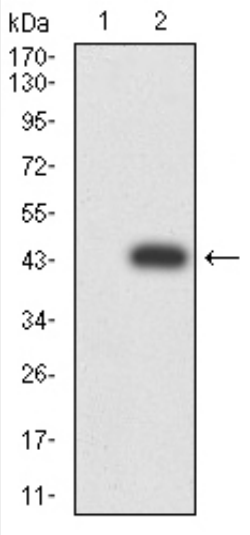
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



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)-hIgGFc transfected HEK293 (2) cell lysate.

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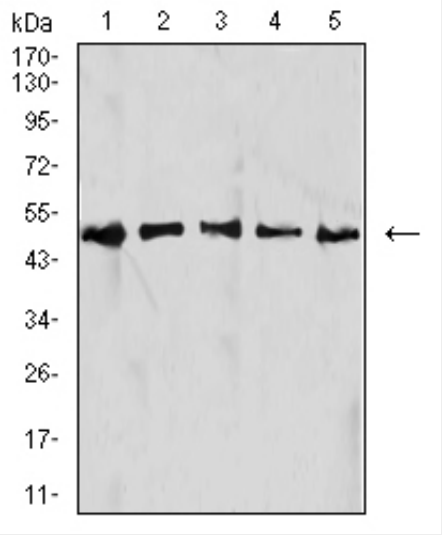
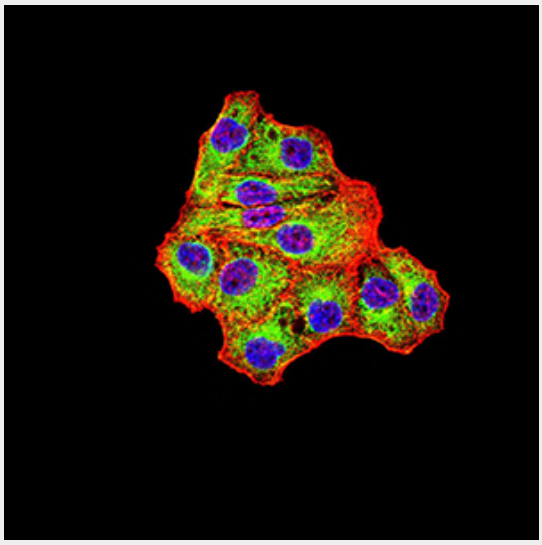
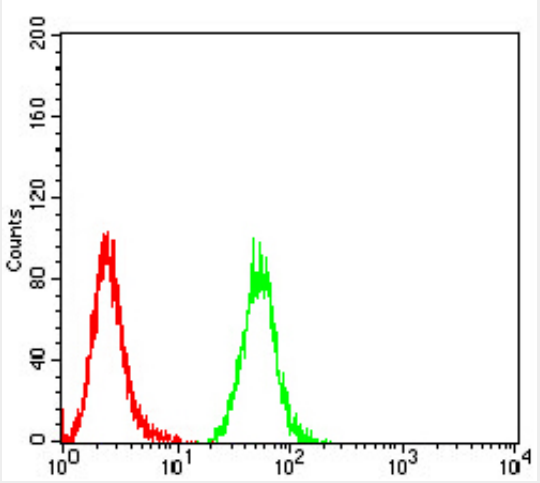


Western blot analysis using IDH1 mouse mAb against HepG2 (1), NIH/3T3 (2), C2C12 (3), COS7 (4), and SW480 (5) cell lysate.



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



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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. ;