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Mouse Monoclonal Antibody to IDH1

Purified Mouse Monoclonal Antibody
Catalog # AO2436a

Product Information

Application	WB, FC, ICC, E
Primary Accession	O75874
Reactivity	Human, Mouse, Monkey
Host	Mouse
Clonality	Monoclonal
Clone Names	7G8A1
Isotype	Mouse IgG1
Calculated MW	46659
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

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.

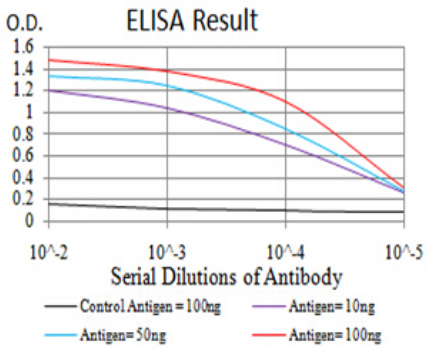
Protein Information

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

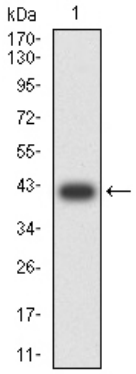
References

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

Images

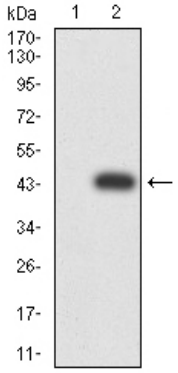


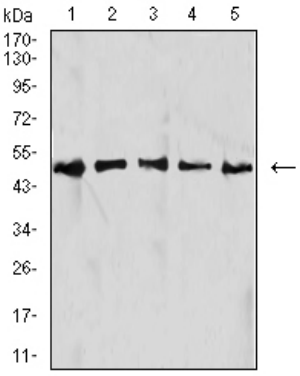
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



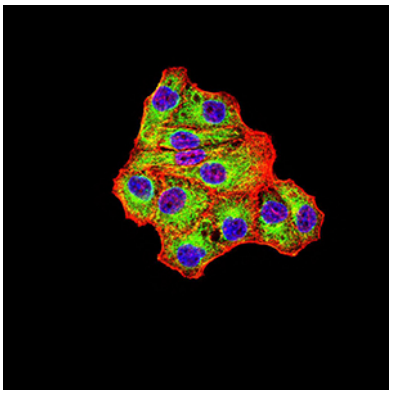
Western blot analysis using IDH1 mAb against human IDH1 (AA: 156-298) recombinant protein. (Expected MW is 41.8 kDa)

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

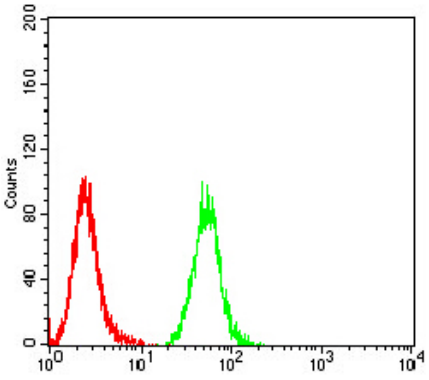




Western blot analysis using IDH1 mouse mAb against HepG2 (1), NIH/3T3 (2), C2C12 (3), COS7 (4), and SW480 (5) cell lysate.



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).