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IDH1 (Isocitrate Dehydrogenase) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone IDH1/1152]
Catalog # AH11495

Product Information

Application	WB, IHC, IF, FC
Primary Accession	O75874
Other Accession	3417, 593422
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	IDH1/1152
Calculated MW	46659

Additional Information

Gene ID	3417
Other Names	Isocitrate dehydrogenase [NADP] cytoplasmic, IDH, 1.1.1.42, Cytosolic NADP-isocitrate dehydrogenase, IDP, NADP(+)-specific ICDH, Oxalosuccinate decarboxylase, IDH1, PICD
Application Note	WB~~1:1000 IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	IDH1 (Isocitrate Dehydrogenase) Antibody - With BSA and Azide 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). Cytoplasm, cytosol. Peroxisome

Cellular Location

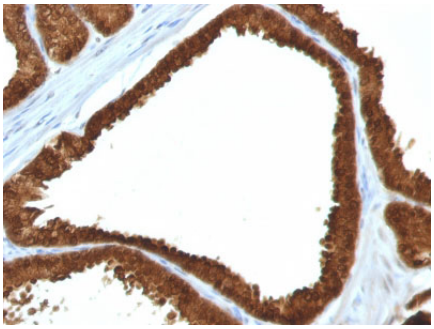
Background

It recognizes a 45kDa protein, which is identified as isocitrate dehydrogenase (IDH1). It belongs to the isocitrate and isopropylmalate dehydrogenases family. IDH1 catalyzes the third step of the citric acid cycle, which involves the oxidative decarboxylation of isocitrate, forming □ □-ketoglutarate and CO2 in a two-step reaction. The first step involves the oxidation of isocitrate to the intermediate oxalosuccinate, while the second step involves the production of □ □-ketoglutarate. During this process, either NADH or NADPH is produced along with CO2. Recently, an inactivating mutation of IDH1 has been implicated in glioblastoma. IDH1 appears to function as a tumor suppressor that, when mutationally inactivated, contributes to tumorigenesis in part through induction of the HIF-1 pathway.

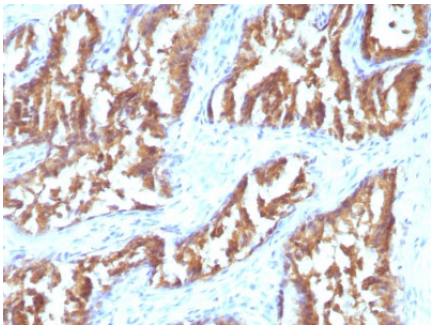
References

Geisbrecht, B.V. and Gould, S.J. 1999. The human PICD gene encodes a cytoplasmic and peroxisomal NADP+-dependent isocitrate dehydrogenase. J. Biol. Chem. 274: 30527-30533

Images



Formalin-fixed, paraffin-embedded human Colon Carcinoma stained with IDH1 Monoclonal Antibody (IDH1/1152).



Formalin-fixed, paraffin-embedded human Prostate Carcinoma stained with IDH1 Monoclonal Antibody (IDH1/1152).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.