

# 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 075874
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**

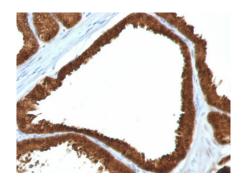
# **Background**

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  $\Box$   $\Box$  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  $\Box$   $\Box$  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.

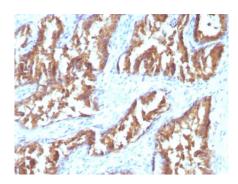
## References

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'.