

**Mouse Anti-IDH1 (Isocitrate Dehydrogenase) [IDH/1152]: MC0065, MC0065RTU7**

**Intended Use:** For Research Use Only

**Description:** 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 alpha-ketoglutarate and CO<sub>2</sub> 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 alpha-ketoglutarate. During this process, either NADH or NADPH is produced along with CO<sub>2</sub>. 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.

**Specifications**

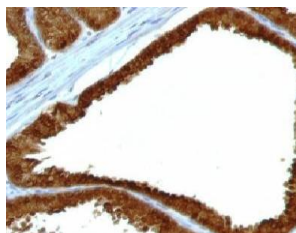
Clone: IDH/1152  
 Source: Mouse  
 Isotype: IgG1k  
 Reactivity: Human  
 Immunogen: Recombinant fragment of human IDH1 protein aa 281-414  
 Localization: Cytoplasm, nucleus  
 Formulation: Purified antibody in PBS pH9.0, containing BSA and ≤ 0.09% sodium azide (NaN<sub>3</sub>)  
 Storage: Store at 2°- 8°C  
 Applications: IHC  
 Package:

Description	Catalog No.	Size
IDH1 (Isocitrate Dehydrogenase) Concentrated	MC0065	1 ml
IDH1 (Isocitrate Dehydrogenase) Prediluted	MC0065RTU7	7 ml

**IHC Procedure\***

Positive Control Tissue: HepG2, HeLa, HT29 or MCF7 cells. Breast, colon or prostate carcinoma  
 Concentrated Dilution: 50-200  
 Pretreatment: Tris EDTA pH9.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C  
 Incubation Time and Temp: 30-60 minutes @ RT  
 Detection: Refer to the detection system manual

\* Result should be confirmed by an established diagnostic procedure.



FFPE human colon carcinoma stained with anti-IDH1 using DAB

**References**

1. Radioprotection of IDH1-Mutated Cancer Cells by the IDH1-Mutant Inhibitor AGI-5198. Molenaar RJ, et al. Cancer Res. Nov 15;75(22):4790-802, 2015.
2. Comparative study of IDH1 mutations in gliomas by high resolution melting analysis, immunohistochemistry and direct DNA sequencing. Li J, et al. Mol Med Rep. Sep;12(3):4376-81, 2015. Comparison of immunohistochemistry, DNA sequencing and allele-specific PCR for the detection of IDH1 mutations in gliomas. Loussouarn D, et al. Int J Oncol. Jun;40(6):2058-62, 2012.
3. The human PICD gene encodes a cytoplasmic and peroxisomal NADP<sup>+</sup>-dependent isocitrate dehydrogenase. Geisbrecht, B.V. et al. J. Biol. Chem. 274: 30527-30533, 1999.