

## Product datasheet for **TA500610M**

### Isocitrate dehydrogenase (IDH1) Mouse Monoclonal Antibody [Clone ID: OTI2H9]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	OTI2H9
Applications:	IF, WB
Recommended Dilution:	WB 1:2000, IHC 1:50, IF 1:100
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Full-length protein expressed in 293T cell transfected with human IDH1 expression vector
Formulation:	PBS (pH 7.3) containing 1% BSA, 50% glycerol and 0.02% sodium azide.
Concentration:	1 mg/ml
Purification:	Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	46.7 kDa
Gene Name:	isocitrate dehydrogenase (NADP(+)) 1
Database Link:	<a href="#">NP_005887</a> <a href="#">Entrez Gene 15926 Mouse</a> <a href="#">Entrez Gene 24479 Rat</a> <a href="#">Entrez Gene 3417 Human</a> <a href="#">O75874</a>



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**Background:**

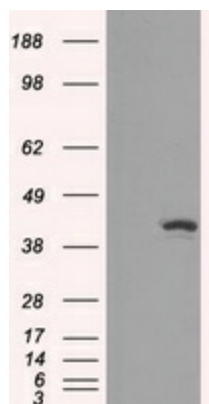
Isocitrate dehydrogenases catalyze the oxidative decarboxylation of isocitrate to 2-oxoglutarate. These enzymes belong to two distinct subclasses, one of which utilizes NAD(+) as the electron acceptor and the other NADP(+). Five isocitrate dehydrogenases have been reported: three NAD(+)-dependent isocitrate 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.

**Synonyms:**

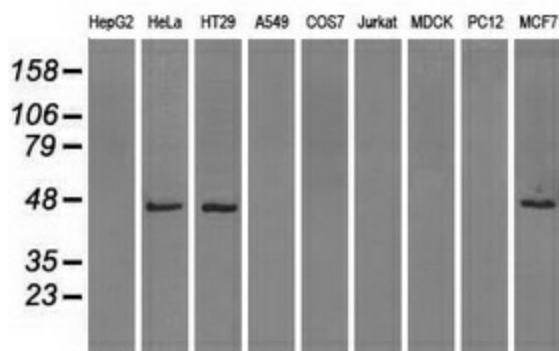
HEL-216; HEL-S-26; IDCD; IDH; IDP; IDPC; PICD

**Protein Pathways:**

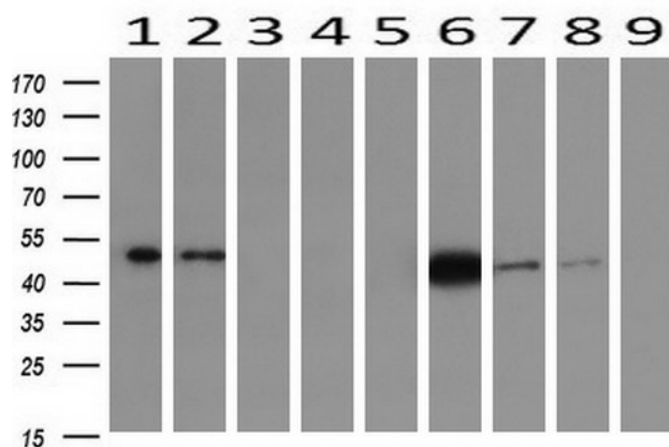
Citrate cycle (TCA cycle), Glutathione metabolism, Metabolic pathways

**Product images:**


HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY IDH1 (Cat# [RC210582], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-IDH1 (Cat# [TA500610]). Positive lysates [LY401782] (100ug) and [LC401782] (20ug) can be purchased separately from OriGene.



Western blot analysis of extracts (35ug) from 9 different cell lines by using anti-IDH1 monoclonal antibody.



Western blot analysis of extracts (10ug) from 9 Human tissue by using anti-IDH1 monoclonal antibody at 1:200 (1: Testis; 2: Omentum; 3: Uterus; 4: Breast; 5: Brain; 6: Liver; 7: Ovary; 8: Thyroid gland; 9: Colon).

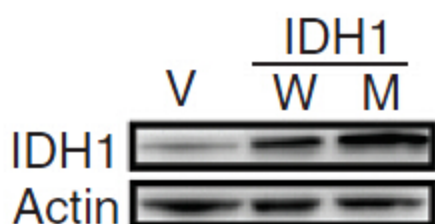
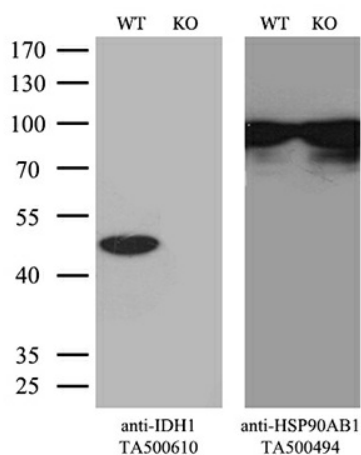
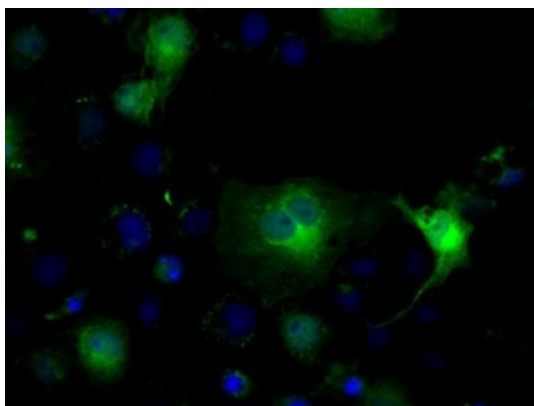


Figure from citation: Western Blot of IDH1 protein level by using anti-IDH1 antibody in normal human astrocyte (NHA) cells. [View Citation](#)



Equivalent amounts of cell lysates (10 ug per lane) of wild-type HeLa cells (WT, Cat# LC810HELA) and IDH1-Knockout HeLa cells (KO, Cat# LC810112) were separated by SDS-PAGE and immunoblotted with anti-IDH1 monoclonal antibody [TA500610]. Then the blotted membrane was stripped and reprobed with anti-HSP90AB1 antibody ([TA500494]) as a loading control (1:500).



Anti-IDH1 mouse monoclonal antibody ([TA500610]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY IDH1 ([RC210582]).