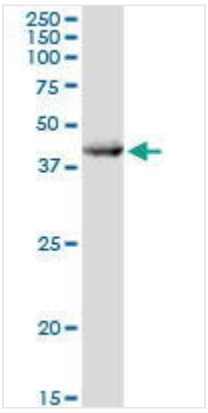
IDH Antibody – Rabbit Polyclonal

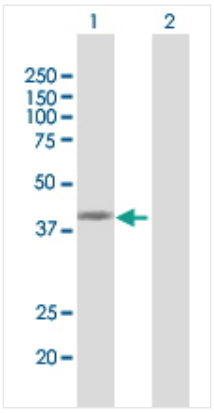
PRODUCT OVERVIEW

Product Name	IDH, Polyclonal Antibody
Full Product Name	Isocitrate Dehydrogenase [NADP], Cytoplasmic (IDH, IDCD, IDH1, IDP, IDPC, Cytosolic NADP-isocitrate Dehydrogenase, NADP(+)-specific ICDH, Ox
Product Gene Name	anti-IDH antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Allophycocyanin (APC).
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes human IDH1.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amo
Molecular Weight	46,659 Da
OMIM	137800
3D Structure	ModBase 3D Structure for O75874
Immunogen	Full length human IDH1, aa1-414 (NP_005887.2).
Immunogen Sequence	MSKKISGGSVVEMQGDEMTRIIWELIKEKLIFPYVELDLHSYDLGIENRDATNDQVTKDAAEAIKKHNVGVKCATITPDEKRVEEFKLKQMWKSPNGTIRNIL
Conjugate	APC
Note	Preservative Free
Product Categories/Family for anti-IDH antibody	Antibodies; Enzymes; Dehydrogenase
Applications Tested/Suitable for anti-IDH antibody	Western Blot (WB)
Application Notes for anti-IDH antibody	Applications are based on unconjugated antibody.
Related Product Information for anti-IDH antibody	IDH1 belongs to two distinct subclasses. The protein is the NADP(+)-dependent isocitrate dehydrogenase found in the cytoplasm and peroxisomes. Th
Other Notes	Small volumes of anti-IDH antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessar

Searchable Terms for IDH purchase	MBS6383180 is an antibody targeting IDH. Also known as Isocitrate Dehydrogenase [NADP], Cytoplasmic (IDH, IDCD, IDH1, IDP, IDPC, Cytosolic NA



Western Blot (WB) of anti-IDH antibody
IDH1 rabbit polyclonal antibody. Western Blot analysis of IDH1 expression in human kidney.



Western Blot (WB) of anti-IDH antibody
Western Blot analysis of IDH1 expression in transfected 293T cell line by IDH1 polyclonal antibody. Lane 1: IDH1 transfected lysate (46.7kD). Lane 2: Non-transfected lysate.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IDH. It may not necessarily be applicable to this product.

NCBI GI #	28178825
NCBI GeneID	3417
NCBI Accession #	NP_005887.2
UniProt Primary Accession #	O75874
UniProt Secondary Accession #	Q567U4; Q6FHQ6; Q7Z3V0; Q93090; Q9NTJ9; Q9UKW8
UniProt Related Accession #	O75874
GenBank Nucleotide #	NM_005896.2
NCBI Official Full Name	isocitrate dehydrogenase
NCBI Official Synonym Full Names	isocitrate dehydrogenase 1 (NADP+), soluble
NCBI Official Symbol	IDH1
NCBI Official Synonym Symbols	IDH; IDP; IDCD; IDPC; PICD; HEL-216; HEL-S-26
UniProt Protein Name	Isocitrate dehydrogenase [NADP] cytoplasmic
UniProt Synonym Protein Names	Cytosolic NADP-isocitrate dehydrogenase; IDP; NADP(+)-specific ICDH; Oxalosuccinate decarboxylase
Protein Family	Isocitrate dehydrogenase [NAD] regulatory
UniProt Gene Name	IDH1
UniProt Synonym Gene Names	PICD; IDH
UniProt Entry Name	IDHC_HUMAN
NCBI Protein Information	isocitrate dehydrogenase [NADP] cytoplasmic; isocitrate dehydrogenase [NADP] cytoplasmic; NADP(+)-specific ICDH; oxalosuccinate decarboxylase; epididymis luminal protein 216; epididymis secretory protein Li 26; NADP-dependent isocitrate dehydrogenase, cyt

NCBI Summary for IDH	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. [provided by RefSeq, Sep 2013]
UniProt Comments for IDH	IDH1: an oxidoreductase that catalyzes the third step of the TCA cycle: the oxidative decarboxylation of isocitrate, consuming NADP(+), and producing alpha-ketoglutarate (alpha-KG) and CO2. Alpha-KG is an activator the dioxygenases that hydroxylate the transcription factor HIF and lead to its degradation by VHL. Since HIF turns on oncogenic pathways, IDH1 has apparent tumor suppressor activity. Homo-dimerization is required for activity. Each subunit binds 1 magnesium or manganese ion. IDH1 is located in the cytosol and peroxisomes. Somatic mutations affecting arginine 132 (R132) are found in 80% of grade II?III gliomas and secondary glioblastomas in humans, and cause disease in a tissue-specific fashion. Only a single copy of the gene has been found to be mutated in tumours. Mutations of R132 to H, C, S, G, V, or L have been reported to be neomorphic, abolishing the conversion of isocitrate to alpha-KG. Instead, alpha-KG is converted to R(-)-2-hydroxyglutarate (2HG). Elevated levels of 2HG correlate with an elevated risk of malignant brain tumors. Neomorphic mutations in IDH1 and IDH2 convert alpha-KG to 2-hydroxyglutarate (2-HG) occur in a high percentage of patients with cytogenetically normal acute myeloid leukemia (AML). Protein type: Other Amino Acids Metabolism - glutathione; Oxidoreductase; EC 1.1.1.42; Carbohydrate Metabolism - citrate (TCA) cycle Chromosomal Location of Human Ortholog: 2q33.3 Cellular Component: peroxisomal matrix; mitochondrion; cytoplasm; peroxisome; cytosol Molecular Function: protein homodimerization activity; magnesium ion binding; isocitrate dehydrogenase (NADP+) activity; NADP binding; NAD binding; receptor binding Biological Process: isocitrate metabolic process; NADPH regeneration; glyoxylate cycle; glutathione metabolic process; response to steroid hormone stimulus; tricarboxylic acid cycle; response to oxidative stress; cellular lipid metabolic process; female gonad development; 2-oxoglutarate metabolic process Disease: Glioma Susceptibility 1
Research Articles on IDH	**1.** The IDH1 mutation was more common in supplementary motor area region tumors compared with other brain
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