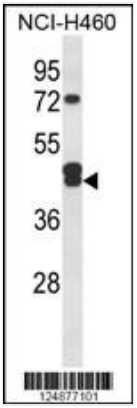
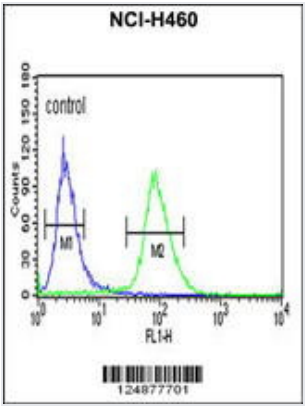
IDH3G Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	IDH3G, Polyclonal Antibody
Full Product Name	IDH3G, CT (IDH3G, Isocitrate dehydrogenase [NAD] subunit gamma, mitochondrial, Isocitric dehydrogenase subunit gamma, NAD(+)-specific ICDH subunit gamma) (AP)
Product Gene Name	anti-IDH3G antibody
Product Synonym Names	IDH3G; Isocitrate dehydrogenase [NAD] subunit gamma, mitochondrial; Isocitric dehydrogenase subunit gamma; NAD(+)-specific ICDH subunit gamma
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 Alkaline Phosphatase (AP).
Purity/Purification	Purified by Protein A Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	41,468 Da
OMIM	300089
3D Structure	ModBase 3D Structure for P51553
Immunogen	IDH3G antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 364~393 amino acids from the C-terminal region of human IDH3G.
Conjugate	AP
Note	Preservative Free
Product Categories/Family for anti-IDH3G antibody	Antibodies; Mitochondrial Proteins
Applications Tested/Suitable for anti-IDH3G antibody	Western Blot (WB), ELISA (EIA)
Application Notes for anti-IDH3G antibody	WB: 1:100-500 ELISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-IDH3G antibody	MBS6309178 is an antibody targeting IDH3G. Also known as IDH3G, CT (IDH3G, Isocitrate dehydrogenase [NAD] subunit gamma, mitochondrial, Isocitric dehydrogenase subunit gamma, NAD(+)-specific ICDH subunit gamma) (AP). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-IDH3G antibody	Bzymek, K.P., et al. Biochemistry 46(18):5391-5397(2007). Soundar, S., et al. J. Biol. Chem. 281(30):21073-21081(2006). Simpson, J.C., et al. EMBO Rep. 1(3):287-292(2000). Weiss, C., et al. Biochemistry 39(7):1807-1816(2000).
Other Notes	Small volumes of anti-IDH3G antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-IDH3G antibody
Western blot analysis of IDH3G Antibody (C-term) in NCI-H460 cell line lysates (35ug/lane). IDH3G (arrow) was detected using the purified Pab.



Flow Cytometry (FC/FACS) of anti-IDH3G antibody
IDH3G Antibody (C-term) flow cytometric analysis of NCI-H460 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IDH3G. It may not necessarily be applicable to this product.

NCBI GI #	4758582
NCBI GeneID	3421
NCBI Accession #	NP_004126.1
UniProt Primary Accession #	P51553
UniProt Secondary Accession #	Q9BUU5; E9PDD5
UniProt Related Accession #	P51553
GenBank Nucleotide #	NM_004135.3
NCBI Official Full Name	isocitrate dehydrogenase
NCBI Official Synonym Full Names	isocitrate dehydrogenase 3 (NAD+) gamma
NCBI Official Symbol	IDH3G
NCBI Official Synonym Symbols	H-IDHG
UniProt Protein Name	Isocitrate dehydrogenase [NAD] subunit gamma, mitochondrial
UniProt Synonym Protein Names	Isocitric dehydrogenase subunit gamma; NAD(+)-specific ICDH subunit gamma
Protein Family	Isocitrate dehydrogenase
UniProt Gene Name	IDH3G
UniProt Entry Name	IDH3G_HUMAN
NCBI Protein Information	isocitrate dehydrogenase [NAD] subunit gamma, mitochondrial; isocitrate dehydrogenase [NAD] subunit gamma, mitochondrial; IDH-gamma; NAD (H)-specific isocitrate dehydrogenase gamma subunit; NAD(+)-specific ICDH subunit gamma; NAD+-specific ICDH; isocitrat

NCBI Summary for IDH3G	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. NAD(+)-dependent isocitrate dehydrogenases catalyze the allosterically regulated rate-limiting step of the tricarboxylic acid cycle. Each isozyme is a heterotetramer that is composed of two alpha subunits, one beta subunit, and one gamma subunit. The protein encoded by this gene is the gamma subunit of one isozyme of NAD(+)-dependent isocitrate dehydrogenase. This gene is a candidate gene for periventricular heterotopia. Several alternatively spliced transcript variants of this gene have been described, but only some of their full length natures have been determined. [provided by RefSeq, Jul 2008]
UniProt Comments for IDH3G	IDH3G: a enzyme that that catalyzes the oxidative decarboxylation of isocitrate to alpha-ketoglutarate (alpha-KG), requiring nicotinamide adenine dinucleotide (NAD) as a cofactor. The holoenzyme is a heterooligomer of subunits alpha, beta, and gamma in the apparent ratio of 2:1:1. IDH3 is a mitochondrial enzyme that functions in the Krebs cycle, which generates substrates for cellular respiration. Alpha-KG can exit the mitochondria and enter other cellular compartments where it is a cofactor for the dioxygenases that hydroxylate the transcription factor HIF and trigger its degradation by VHL. Since HIF turns on oncogenic pathways, IDH3 may have tumor suppressor activity. Two isoforms of the human protein are produced by alternative splicing. Protein type: Carbohydrate Metabolism - citrate (TCA) cycle; Oxidoreductase; EC 1.1.1.41; Mitochondrial Chromosomal Location of Human Ortholog: Xq28 Cellular Component: nucleoplasm; mitochondrion; mitochondrial matrix; nucleolus Molecular Function: magnesium ion binding; isocitrate dehydrogenase (NAD+) activity; NAD binding; ATP binding Biological Process: isocitrate metabolic process; cellular metabolic process; tricarboxylic acid cycle; carbohydrate metabolic process
Research Articles on IDH3G	**1.** active sites of the human NAD-IDH are shared between alpha and gamma subunits and between alpha and beta subunits
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