



# Rabbit Anti-Human IDH1 Polyclonal Antibody (CABT-L2027)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Product Overview</b>	Polyclonal Antibody to Isocitrate Dehydrogenase 1, Soluble (Knockout Validated)
<b>Specificity</b>	The antibody is a rabbit polyclonal antibody raised against IDH1. It has been selected for its ability to recognize IDH1 in immunohistochemical staining and western blotting.
<b>Target</b>	IDH1
<b>Immunogen</b>	Recombinant fragment corresponding to human IDH1 (Ala74~Ile333)
<b>Isotype</b>	IgG
<b>Source/Host</b>	Rabbit
<b>Species Reactivity</b>	Human, Mouse, Pig
<b>Purification</b>	Antigen-specific affinity chromatography followed by Protein A affinity chromatography
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	WB
<b>Format</b>	Liquid
<b>Concentration</b>	Lot specific
<b>Size</b>	200 µg
<b>Buffer</b>	Supplied as solution form in 0.01M PBS with 50% glycerol, pH7.4.
<b>Preservative</b>	0.05% Proclin-300

<b>Storage</b>	Avoid repeated freeze/thaw cycles. Store at 4°C for frequent use. Aliquot and store at -20°C for 12 months.
<b>Ship</b>	4°C with ice bags

## BACKGROUND

<b>Introduction</b>	<p>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]</p>
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<b>Keywords</b>	PICD;IDP;Oxalosuccinate decarboxylase;NADP(+)-specific ICDH;Cytosolic NADP-isocitrate dehydrogenase
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## GENE INFORMATION

<b>Gene Name</b>	IDH1 isocitrate dehydrogenase 1 (NADP+), soluble [ Homo sapiens (human) ]
<b>Official Symbol</b>	IDH1
<b>Synonyms</b>	IDH1; isocitrate dehydrogenase 1 (NADP+), soluble; IDH; IDP; IDCD; IDPC; PICD; HEL-216; HEL-S-26; isocitrate dehydrogenase [NADP] cytoplasmic; NADP(+)-specific ICDH; oxalosuccinate decarboxylase; epididymis luminal protein 216; epididymis secretory protein Li 26; NADP-dependent isocitrate dehydrogenase, cytosolic; NADP-dependent isocitrate dehydrogenase, peroxisomal;
<b>Entrez Gene ID</b>	<a href="#">3417</a>
<b>Protein Refseq</b>	NP_001269315
<b>UniProt ID</b>	<a href="#">O75874</a>
<b>Chromosome Location</b>	2q33.3

<b>Pathway</b>	2-Oxocarboxylic acid metabolism; Abnormal conversion of 2-oxoglutarate to 2-hydroxyglutarate; Biosynthesis of amino acids; Carbon metabolism; Central carbon metabolism in cancer; Citrate cycle (TCA cycle); Citrate cycle (TCA cycle, Krebs cycle); Citrate cycle, first carbon oxidation, oxaloacetate => 2-oxoglutarate;
<b>Function</b>	NAD binding; NADP binding; isocitrate dehydrogenase (NADP+) activity; magnesium ion binding; protein homodimerization activity; receptor binding;