



## IDH1 blocking peptide (CDBP5541)

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

### PRODUCT INFORMATION

#### Antigen Description

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]

<b>Conjugate</b>	Unconjugated
<b>Applications</b>	Used as a blocking peptide in immunoblotting applications.
<b>Format</b>	Liquid
<b>Concentration</b>	200 µg/mL
<b>Size</b>	0.05 mg
<b>Preservative</b>	None
<b>Storage</b>	-20°C

### GENE INFORMATION

<b>Gene Name</b>	<a href="#">IDH1 isocitrate dehydrogenase 1 (NADP+), soluble [ Homo sapiens (human) ]</a>
<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>mRNA Refseq</b>	<a href="#">NM_001282386</a>
<b>Protein Refseq</b>	<a href="#">NP_001269315</a>
<b>UniProt ID</b>	O75874
<b>Pathway</b>	2-Oxocarboxylic acid metabolism; Abnormal conversion of 2-oxoglutarate to 2-hydroxyglutarate; Biosynthesis of amino acids; Carbon metabolism; Citrate cycle (TCA cycle); Citrate cycle (TCA cycle; Citrate cycle; Disease
<b>Function</b>	NAD binding; NADP binding; isocitrate dehydrogenase (NADP+) activity; isocitrate dehydrogenase (NADP+) activity; magnesium ion binding; protein homodimerization activity; receptor binding