

**IDH1 Antibody (Center) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP7454c****Specification**

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**IDH1 Antibody (Center) Blocking Peptide - Product Information**Primary Accession [O75874](#)**IDH1 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 3417**Other Names**

Isocitrate dehydrogenase [NADP] cytoplasmic, IDH, Cytosolic NADP-isocitrate dehydrogenase, IDP, NADP(+)-specific ICDH, Oxalosuccinate decarboxylase, IDH1, PICD

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP7454c](/products/AP7454c) was selected from the Center region of human IDH1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**IDH1 Antibody (Center) Blocking Peptide - Protein Information****Name** IDH1**Synonyms** PICD**Function**

Catalyzes the NADP(+)-dependent oxidative decarboxylation of isocitrate (D-threo-isocitrate) to 2-ketoglutarate (2-oxoglutarate), which is required by other enzymes such as the phytanoyl-CoA dioxygenase (PubMed: [10521434](http://www.uniprot.org/citations/10521434), PubMed: [19935646](http://www.uniprot.org/citations/19935646)). Plays a critical role in the generation of NADPH, an important cofactor in many biosynthesis pathways (PubMed: [10521434](http://www.uniprot.org/citations/10521434)). May act as a corneal epithelial crystallin and may be involved in maintaining corneal epithelial transparency (By similarity).

**Cellular Location**

Cytoplasm, cytosol. Peroxisome

**IDH1 Antibody (Center) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

**IDH1 Antibody (Center) Blocking Peptide - Images****IDH1 Antibody (Center) Blocking Peptide - Background**

IDH1 belongs to two distinct subclasses. The protein is the NADP(+)-dependent isocitrate dehydrogenase found in the cytoplasm and peroxisomes. This protein 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.

**IDH1 Antibody (Center) Blocking Peptide - References**

Geisbrecht B.V., Gould S.J.J. Biol. Chem. 274:30527-30533(1999) Xu X., Zhao J., Xu Z.J. Biol. Chem. 279:33946-33957(2004) Bleeker F.E., Lamba S. Hum. Mutat. 30:7-11(2009)