

## Human IDH1 Knockdown Cell Lysate

Cat. No. IDH1-206HKCL Lot. No. (See product label)

### SPECIFICATION

**Product Overview** WB-validated IDH1 Knockdown HeLa Cell Lysate

**Species** Human

**Source** HeLa

**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.

**Form** Cell-Tissue Lysis buffer

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<b>Molecular Mass</b>	47 kDa
<b>Notes</b>	Instruction of use: This knockdown cell lysate should be paired with wild-type HeLa cell lysate for use. For Western blotting, we recommend running wild-type and knockdown lysates on the same gel, and loading each well with equal volume and equal amount of total proteins.
<b>Storage</b>	Store at -20 centigrade for two years.
<b>Concentration</b>	Lot-specific
<b>Shipping</b>	Blue Ice
<b>Components</b>	1 vial of 100 µg WT HeLa cell lysate 1 vial of 100 µg IDH1 KD HeLa cell lysate
<b>Protein Pathways</b>	Citrate cycle (TCA cycle), Glutathione metabolism, Metabolic pathways
<b>Lysate QC</b>	RT-qPCR; Western Blotting (WB)

## 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; isocitrate dehydrogenase [NADP] cytoplasmic; NADP(+)-specific ICDH; oxalosuccinate decarboxylase; NADP-dependent isocitrate dehydrogenase, cytosolic; NADP-dependent isocitrate dehydrogenase, peroxisomal; IDH; IDP; IDCD; IDPC; PICD;
<b>Gene ID</b>	3417

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mRNA Refseq	NM_005896
Protein Refseq	NP_005887
MIM	147700
UniProt ID	O75874

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