Recombinant Full Length Human IDH1 Protein, C-Flag-tagged

Cat. No. IDH1-1116HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Full Length Human IDH1 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
Species	Human
Source	Mammalian Cells
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	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.

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Molecular Mass	46.5 kDa
AA Sequence	MSKKISGGSVVEMQGDEMTRIIWELIKEKLIFPYVELDLHSYDLGIENRDATNDQVTK DAAEAIKKHNVG VKCATITPDEKRVEEFKLKQMWKSPNGTIRNILGGTVFREAIICKNI PRLVSGWVKPIIIGRHAYGDQYR ATDFVVPGPGKVEITYTPSDGTQKVTYLVHNFEE GGGVAMGMYNQDKSIEDFAHSSFQMALSKGWPLYLS TKNTILKKYDGRFKDIFQEI YDKQYKSQFEAQKIWYEHRLIDDMVAQAMKSEGGFIWACKNYDGDVQSDS VAQG YGSLGMMTSVLVCPDGKTVEAESAHGTVTRHYRMYQKGQETSTNPIASIFAWTRGL AHRAKLDNNK ELAFFANALEEVSIETIEAGFMTKDLAACIKGLPNVQRSDYLNTFEFMDKLGENLKIKL AQAKLTRTRPLEQKLISEEDLAANDILDYKDDDDKV	
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining.
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade.
Concentration	>50 ug/mL as determined by microplate BCA method.
Preparation	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Protein Pathways	Citrate cycle (TCA cycle), Glutathione metabolism, Metabolic pathways
Full Length	Full L.

GENE INFORMATION

Gene Name	IDH1 isocitrate dehydrogenase (NADP(+)) 1 [Homo sapiens (human)]

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Official Symbol	IDH1
Synonyms	IDH; IDP; IDCD; IDPC; PICD; HEL-216; HEL-S-26
Gene ID	3417
mRNA Refseq	NM_005896.4
Protein Refseq	NP_005887.2
MIM	147700
UniProt ID	O75874

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