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Product datasheet for PH310582

Isocitrate dehydrogenase (IDH1) (NM_005896) Human Mass Spec Standard

Product data:

Product Type:	Mass Spec Standards
Description:	IDH1 MS Standard C13 and N15-labeled recombinant protein (NP_005887)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC210582
Predicted MW:	46.5 kDa
Protein Sequence:	>RC210582 representing NM_005896 Red=Cloning site Green=Tags(s) MSKKISGGSVVEMQGDEMTRIIWELIKEKLIFPYVELDLHSYDLGIENRDATNDQVTKDAAEAIKKHNVG VKCATITPDEKRVEEFKLKQMWKSPNGTIRNILGGTVFREAIICKNIPRLVSGWVKPIIIGRHAYGDQYR ATDFVVPGPGKVEITYTPSDGTQKVTYLVHNFEEGGGVAMGMYNQDKSIEDFAHSSFQMALSKGWPLYLS TKNTILKKYDGRFKDIFQEIYDKQYKSQFEAQKIWYEHRLIDDMVAQAMKSEGGFIWACKNYDGDVQSDS VAQGYGSLGMMTSVLVCPDGKTVEAESAHGTVTRHYRMYQKGQETSTNPIASIFAWTRGLAHRAKLDNNK ELAFFANALEEVSIETIEAGFMTKDLAACIKGLPNVQRSDYLNTFEFMDKLGENLKIKLAQAKL TRTRPLEQKLISEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- 13C6, 15N4]-L-Arginine and [U- 13C6, 15N2]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	NP_005887
RefSeq Size:	2339
RefSeq ORF:	1242
Synonyms:	HEL-216; HEL-S-26; IDCD; IDH; IDP; IDPC; PICD
Locus ID:	3417

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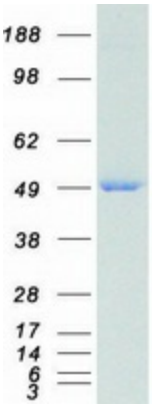
UniProt ID: O75874, A0A024R3Y6

Cytogenetics: 2q34

Summary: 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]

Protein Pathways: Citrate cycle (TCA cycle), Glutathione metabolism, Metabolic pathways

Product images:



Coomassie blue staining of purified IDH1 protein (Cat# [TP310582]). The protein was produced from HEK293T cells transfected with IDH1 cDNA clone (Cat# [RC210582]) using MegaTran 2.0 (Cat# [TT210002]).