

Product datasheet for **AR50109PU-N**

Isocitrate dehydrogenase / IDH (1-414, His-tag) Human Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Isocitrate dehydrogenase / IDH (1-414, His-tag) human recombinant protein, 0.5 mg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	MGSSHHHHHH SSGLVPRGSH MSKKISGGSV VEMQGDEMTR IIWELIKEKL IFPYVELDLH SYDLGIENRD ATNDQVTKDA AEAIKKHNVG VKCATITPDE KRVEEFKLLKQ MWKSPNGTIR NILGGTVFRE AIICKNIPRL VSGWVKPIII GRHAYGDQYR ATDFVVPGP KVEITYTPSD GTQKVTVLVH NFEEGGGVAM GMYNQDKSIE DFAHSSFQMA LSKGWPLYLS TKNTILKKYD GRFKDIFQEI YDKQYKSQFE AQKIWYEHRL IDDMVAQAMK SEGGFIWACK NYDGDVQSDS VAQGYGSLGM MTSVLVCPDG KTVEAEAAHG TVTRHYRMYQ KGQETSTNPI ASIFAWTRGL AHRAKLDNNK ELAFFANALE EVSIETIEAG FMTKDLAACI KGLPNVQRSD YLNTFEFMDK LGENLKIKLA QAKL
Tag:	His-tag
Predicted MW:	48.8 kDa
Concentration:	lot specific
Purity:	>95% by SDS - PAGE
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: 20 mM Tris-HCl buffer (pH 8.0) containing 20% glycerol, 0.1M NaCl, 1 mM DTT, 0.1 mM PMSF
Bioactivity:	Specific: > 0.7 units/ml. One unit will convert 1.0 umole of isocitrate to alpha-ketoglutarate per minute at pH7.5 at 25C.
Preparation:	Liquid purified protein
Applications:	Protocol: 1. Prepare 1450ul assay buffer. The final concentrations are 67 mM glycylglycine, 0.44 mM DL-isocitric acid, 1.0 mM beta- NADP, 0.6 mM manganese chloride. 2. Add 50ul of recombinant protein IDH1 with 1 ug, 2 ug, and 5 ug in assay buffer. 3. Mix by inversion and load 200 ul of reaction mix in to a plate well. chloride. 4. Record the increase in A340 nm for 5 minutes at 25C.
Protein Description:	Recombinant human IDH1 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.



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Storage:	Store undiluted at 2-8°C for one week or (in aliquots) at -20°C to -80°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
RefSeq:	NP_001269315
Locus ID:	3417
UniProt ID:	O75874
Cytogenetics:	2q34
Synonyms:	PICD, Cytosolic NADP-isocitrate dehydrogenase, ICDH, IDP, Oxalosuccinate decarboxylase
Summary:	<p>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]</p>
Protein Families:	<p>Protocol: 1. Prepare 1450ul assay buffer. The final concentrations are 67 mM glycylglycine, 0.44 mM DL-isocitric acid, 1.0 mM beta- NADP, 0.6 mM manganese chloride.</p> <p>2. Add 50ul of recombinant protein IDH1 with 1 ug, 2 ug, and 5 ug in assay buffer.</p> <p>3. Mix by inversion and load 200 ul of reaction mix in to a plate well. chloride.</p> <p>4. Record the increase in A340 nm for 5 minutes at 25C.</p>
Protein Pathways:	Citrate cycle (TCA cycle), Glutathione metabolism, Metabolic pathways

Product images:

