Recombinant Human IDH3G, His-tagged

Cat. No. IDH3G-28927TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length Human IDH3G (amino acids 40-393) with an N terminal His tag and expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	354 amino acids
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. NAD(+)-dependent isocitrate dehydrogenases catalyze the allosterically regulated rate-limiting step of the tricarboxylic acid cycle. Each isozyme is a heterotetramer that is composed of two alpha subunits, one beta subunit, and one gamma subunit. The protein encoded by this gene is the gamma subunit of one isozyme of NAD(+)-dependent isocitrate dehydrogenase. This gene is a candidate gene for periventricular heterotopia. Several alternatively spliced transcript variants of this gene have been described, but only some of their full length natures have been determined.

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Conjugation	HIS
Molecular Weight	41.100kDa inclusive of tags
Biological activity	Recombinant human IDH3G protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography
Form	Liquid
Purity	by SDS-PAGE
Storage buffer	pH: 8.00Constituents:0.32% Tris HCl, 1.17% Sodium chloride, 50% Glycerol, 0.08% DTT, 5.84% EDTA
Storage	Store at +4°C short term (1-2 weeks). Aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Sequences of amino acids	MGSSHHHHHH SSGLVPRGSH MRNRVALKGNI ETNHNLPPSH KSRNNILRTS LDLYANVIHC KSLPGVVTRH KDIDILIVRE NTEGEYSSLE HESVAGVVES LKIITKAKSL FSEQTIPPS AKYGGRHTVT MIPGDGIGPE LMLHVKSVFR HACVPVDFEE VHVSSNADEE DIRNAIMAIRRIAEYAFKLA QESGRKKVTA VHKANIMKLG DGLFLQCCRE VAARYPQITF ENMIVDNTTM QLVSRPQQFD VMVMPNLYGN IVNNVCAGLVGGPGLVAGAN YGHVYAVFET ATRNTGKSIA NKNIANPTAT LLASCMMLDH LKLHSYATSI RKAVLASMDN ENMHTPDIGG QGTTSEAIQDVIRHIRVING RAVEA
Sequence Similarities	Belongs to the isocitrate and isopropylmalate dehydrogenases family.

GENE INFORMATION

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Gene Name	IDH3G isocitrate dehydrogenase 3 (NAD+) gamma [Homo sapiens]
Official Symbol	IDH3G
Synonyms	IDH3G; isocitrate dehydrogenase 3 (NAD+) gamma; isocitrate dehydrogenase [NAD] subunit gamma, mitochondrial;
Gene ID	3421
mRNA Refseq	NM_004135
Protein Refseq	NP_004126
MIM	300089
Uniprot ID	P51553
Chromosome Location	Xq28
Pathway	Citrate cycle (TCA cycle), organism-specific biosystem; Citrate cycle (TCA cycle), conserved biosystem; Citrate cycle, first carbon oxidation, oxaloacetate => 2-oxoglutarate, organism-specific biosystem; Citrate cycle, first carbon oxidation, oxaloacetate =>
Function	ATP binding; NAD binding; isocitrate dehydrogenase (NAD+) activity; magnesium ion binding; oxidoreductase activity;

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