

# Recombinant Human Glutaryl-CoA Dehydrogenase, His-tagged

**Cat. No.** GCDH-2728H    **Lot. No.** (See product label)

## SPECIFICATION

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>         | Recombinant human GCDH protein, fused to His-tag at N-terminus, was expressed in <i>E.coli</i> and purified by using conventional chromatography techniques. MW = 45.8kDa (415aa), confirmed by MALDI-TOF.                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>                  | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Source</b>                   | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Description</b>              | Glutaryl-CoA dehydrogenase (GCDH) belongs to the acyl-CoA dehydrogenase family. GCDH catalyzes the oxidative decarboxylation of glutaryl-CoA to crotonyl-CoA and CO (2) in the degradative pathway of L-lysine, L-hydroxylysine, and L-tryptophan metabolism. This Protein uses electron transfer flavoprotein as its electron acceptor. The enzyme exists in the mitochondrial matrix as a homotetramer of 45-kD subunits. Alternatively spliced transcript variants encoding different isoforms have been identified. |
| <b>Sequences Of Amino Acids</b> | MGSSHHHHH SSGLVPRGSH MRPEFDWQDP LVLEEQLTTD EILIRDTFRT<br>YCQERLMPRI LLANRNEVFH REIISEMGEL GVLGPTIKGY GCAGVSSVAY<br>GLLARELERV DSGYRSAMSV QSSLVMHPIY AYGSEEQRQK YLPQLAKGEL<br>LGCFGLTEPN SGSDPSSMET RAHYNSSNKS YTLNGTKTWI TNSPMADLFV<br>VWARCEDGCI RGFLLEKGMR GLSAPRIQ GK FSLRASATGM IIMDGVEVPE<br>ENVLPGASSL GPGFGCLNNA RYGIWGVVLG ASEFCLHTAR QYALDRMQFG<br>VPLARNQLIQ KKLADMLTEI TLGLHACLQL GRLKDQDKAA PEMVSLLKRN<br>NCGKALDIAR QARDMLGGNG ISDEYHVIRH AMNLEAVNTY EGTHTDIHALI                                           |

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|                      |                                                                                                                                                       |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | LGRAITGIQA FTASK                                                                                                                                      |
| <b>Form</b>          | Liquid. 20mM Tris-HCl buffer (pH8.0) containing 20% glycerol, 5mM DTT, 200mM NaCl.                                                                    |
| <b>Purity</b>        | > 90% by SDS – PAGE.                                                                                                                                  |
| <b>Concentration</b> | 0.5 mg/ml (determined by Bradford assay).                                                                                                             |
| <b>Storage</b>       | Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles. |

## GENE INFORMATION

|                            |                                                                                                                                         |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | GCDH glutaryl-CoA dehydrogenase [ Homo sapiens ]                                                                                        |
| <b>Synonyms</b>            | GCDH; glutaryl-CoA dehydrogenase; GCD; ACAD5; glutaryl-CoA dehydrogenase, mitochondrial; glutaryl-Coenzyme A dehydrogenase; EC 1.3.99.7 |
| <b>Gene ID</b>             | 2639                                                                                                                                    |
| <b>mRNA Refseq</b>         | NM_000159                                                                                                                               |
| <b>Protein Refseq</b>      | NP_000150                                                                                                                               |
| <b>MIM</b>                 | 608801                                                                                                                                  |
| <b>UniProt ID</b>          | Q92947                                                                                                                                  |
| <b>Chromosome Location</b> | 19p13.2                                                                                                                                 |

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|-----------------|--------------------------------------------------------------------------------------|
| <b>Pathway</b>  | Fatty acid metabolism; Lysine degradation; Metabolic pathways; Tryptophan metabolism |
| <b>Function</b> | FAD binding; glutaryl-CoA dehydrogenase activity; protein binding                    |

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