

## Product datasheet for **RC213591**

### GCDH (NM\_013976) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	GCDH (NM_013976) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GCDH
Synonyms:	ACAD5; GCD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC213591 representing NM\_013976  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCCTGAGAGGCGTCTCCGTGCGGCTGCTGAGCCCGGACCCGGCCTGCACGTCCTTCGCACGTGGG  
 TCTCGTCGGCGGCAGACCCGAGAAAGCGGGAGAACACAGAGCCAACTGGCTAAGTCTCGCGTCCCGA  
 GTTTGACTGGCAGGACCCGCTGGTGTGGAGGAGCAGCTGACCACAGATGAGATCCTCATCAGGGACACC  
 TTCCGCACCTACTGCCAGGAGAGACTCATGCCTCGCATCCTGTTGGCCAATCGCAACGAAGTTTTTCATC  
 GGGAGATCATTTTCGGAGATGGGGGAGTTGGGTGTGCTGGGCCCCACCATCAAAGGATATGGCTGTGCTGG  
 GGTTCGTCGTGGCCTATGGGCTCCTGGCCCCGAGAGCTGGAGCGGGTGGACAGTGGCTACAGGTGGCG  
 ATGAGTGTCCAGTCTCCCTCGTCATGCACCCTATCTATGCCTATGGCAGCGAGGAACAGCGGCAGAAGT  
 ACCTGCCCCAGCTGGCCAAGGGGAGCTCCTGGGCTGCTTCGGGCTCACAGAGCCCAACAGCGGAAGTGA  
 CCCCAGCAGCATGGAGACCAGAGCCCACTACAACCTCATCCAACAAGAGCTACACCCTCAATGGGACCAAG  
 ACCTGGATCACGAACTCGCCTATGGCCGATCTGTTTGTAGTGTGGGCTCGGTGTGAAGATGGCTGCATTC  
 GGGGCTTCTGCTGGAGAAGGGGATGCGGGGTCTCTCGGCCCCAGGATCCAGGGCAAGTTCCTCGTGGC  
 GGCTCAGCCACAGGCATGATCATGAGACGGTGTGGAGGTGCCAGAGGAGAATGTGCTCCCTGGTGCA  
 TCCAGCCTGGGGGTCCCTTCGGCTGCCTGAACAACGCCCGGTACGGCATCGCGTGGGGCGTGTGGAG  
 CTTCCGAGTTCTGCTTGCACACAGCCCGGCAGTACGCCCTCGACAGGATGCAAGTTGGTGTCCCACTGGC  
 CAGGAACCAGCTGATTCAGAAGAAGCTGGCAGACATGCTCACTGAGATTACCCTGGGCTTCACGCCTGC  
 CTGCAGCTCGGCCGCTTGAAGGACCAGGACAAGGCTGCCCCGAGATGGTTTCTGCTGAAGAGGAATA  
 ACTGTGGGAAAGCCCTGGACATCGCCCGCAGGCCGAGACATGCTGGGGGGAATGGGATTTCTGACGA  
 GTATCACGTGATCCGGCACGCCATGAACCTGGAGCCGTGAACACCTACGAAGTCGTTTCAGATGTGTTCC  
 TAAAAAGAAGATGGAATTCTCTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC213591 representing NM\_013976  
 Red=Cloning site Green=Tags(s)

MALRGVSVRLLSRGPGLHVLRTWVSSAAQTEKGGRTQSQLAKSSRPEFDWQDPLVLEEQLTTDEILIRDT  
 FRTYCQERLMPRILLANRNEVFHREIISEMGELGVLGPTIKGYGCAGVSSVAYGLLARELERVDSGYRSA  
 MSVQSSLVMHPIYAYGSEEQRKYLPQLAKGELLGCFGLTEPNSSGDPSSMETRAHYNSSNKSYYTLNGTK  
 TWITNSPMADLFVWARCEDGCIKRGFLLEKGMRLSAPRIQKFSLRASATGMIIMDGVVEPEENVLPGA  
 SSLGGPFGLNNARYGIWVGLGASEFCLHTARQYALDRMQFGVPLARNQLIQKKLADMLTEITLGLHAC  
 LQLGRLKDQDKAAPMVSLKRNKCGKALDIARQARDMLGGNGISDEYHVIIRHAMNLEAVNTYEVVQMSC  
 LKRRWNSL

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8077\\_b06.zip](https://cdn.origene.com/chromatograms/mk8077_b06.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_013976

**ORF Size:** 1284 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_013976.4](#)

**RefSeq Size:** 1607 bp

**RefSeq ORF:** 1287 bp

**Locus ID:** 2639

**UniProt ID:** [Q92947](#)

**Cytogenetics:** 19p13.13

**Domains:** Acyl-CoA\_dh, Acyl-CoA\_dh\_M, Acyl-CoA\_dh\_N

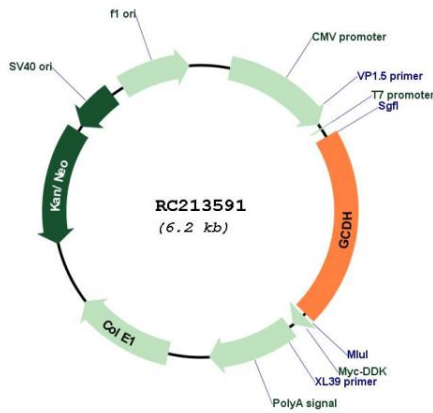
**Protein Families:** Druggable Genome

**Protein Pathways:** Fatty acid metabolism, Lysine degradation, Metabolic pathways, Tryptophan metabolism

**MW:** 47.36 kDa

**Gene Summary:** The protein encoded by this gene belongs to the acyl-CoA dehydrogenase family. It 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. It uses electron transfer flavoprotein as its electron acceptor. The enzyme exists in the mitochondrial matrix as a homotetramer of 45-kD subunits. Mutations in this gene result in the metabolic disorder glutaric aciduria type 1, which is also known as glutaric acidemia type I. Alternative splicing of this gene results in multiple transcript variants. A related pseudogene has been identified on chromosome 12. [provided by RefSeq, Mar 2013]

**Product images:**



Circular map for RC213591