

Product datasheet for **RG213591**

GCDH (NM_013976) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GCDH (NM_013976) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GCDH
Synonyms:	ACAD5; GCD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG213591 representing NM_013976 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCCTGAGAGGCGTCTCCGTGCGGCTGCTGAGCCGCGGACCCGGCCTGCACGTCCTTCGCACGTGGG
TCTCGTCGGCGGCAGACCCGAGAAAGCGGGGAGAACACAGAGCCAACTGGCTAAGTCTCGCGTCCCGA
GTTTGACTGGCAGGACCCGCTGGTGTGGAGGAGCAGCTGACCACAGATGAGATCCTCATCAGGGACACC
TTCCGCACCTACTGCCAGGAGAGACTCATGCCTCGCATCTGTTGGCCAATCGCAACGAAGTTTTTCATC
GGGAGATCATTTGAGATGGGGGAGTTGGGTGTGCTGGGCCCCACCATCAAAGGATATGGCTGTGCTGG
GGTTTCGTCTGTGGCCTATGGGCTCCTGGCCCCGAGAGCTGGAGCGGGTGGACAGTGGCTACAGGTCGGCG
ATGAGTGTCCAGTCTCCCTCGTCATGCACCCTATCTATGCCTATGGCAGCGAGGAACAGCGGCAGAAGT
ACCTGCCCCAGCTGGCCAAGGGGGAGCTCCTGGGCTGCTTCGGGCTCACAGAGCCCAACAGCGGAAGTGA
CCCCAGCAGCATGGAGACCAGAGCCCACTACAACCTCATCCAACAAGAGCTACACCCTCAATGGGACCAAG
ACCTGGATCACGAACTCGCTATGGCCGATCTGTTGTAGTGTGGGCTCGGTGTGAAGATGGCTGCATTC
GGGGCTTCCTGCTGGAGAAGGGGATGCGGGTCTCTCGGCCCCAGGATCCAGGGCAAGTTCTCGCTGCG
GGCCTCAGCCACAGGCATGATCATGACGGTGTGGAGGTGCCAGAGGAGAATGTGCTCCCTGGTGCA
TCCAGCCTGGGGGTCCCTTCGGCTGCCCTGAACAACGCCCGGTACGGCATCGCGTGGGGCGTCTGGAG
CTTCGGAGTTCTGCTTGACACAGCCCGCAGTACGCCCTCGACAGGATGCAGTTTGGTGTCCCACTGGC
CAGGAACCAGCTGATTCAGAAGAAGCTGGCAGACATGCTCACTGAGATTACCCTGGGCCCTTCACGCCTGC
CTGCAGCTCGGCCGCTTGAAGGACCAGGACAAGGCTGCCCCGAGATGGTTTCTGCTGAAGAGGAATA
ACTGTGGAAAGCCCTGGACATCGCCCGCAGGCCGAGACATGCTGGGGGGAAATGGGATTTCTGACGA
GTATCACGTGATCCGGCACGCCATGAACCTGGAGGCCGTGAACACCTACGAAGTCGTTTCAGATGTGTTCC
TAAAAAGAAGATGGAATTCTCTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG213591 representing NM_013976
 Red=Cloning site Green=Tags(s)

MALRGVSVRLLSRGPGLHVLRTWVSSAAQTEKGGRTQSQLAKSSRPEFDWQDPLVLEEQLTTDEILIRDT
 FRTYCQERLMPRIILLANRNEVFHREIISEMDELGVLGPTIKGYGCAGVSSVAYGLLARELERVDSGYRSA
 MSVQSSLVMHPIYAYGSEEQKQKYLPLAKGELLGCFGLTEPNSGSDPSSMETRAHYNSSNKSYTLNGTK
 TWITNSPMADLFVWARCEDGCIKRGFLLEKGMRLSAPRIQKFSLRASATGMIIMDGVPEENVLPGA
 SSLGGPFGLNNARYGIAWGVLGASEFCLHTARQYALDRMQFGVPLARNQLIQKKLADMLTEITLGLHAC
 LQLGRLKDQDKAAPMVSLKRNCGKALDIARQARDMLGGNGISDEYHVIIRHAMNLEAVNTYEVVMQCS
 LKRRWNSL

TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

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

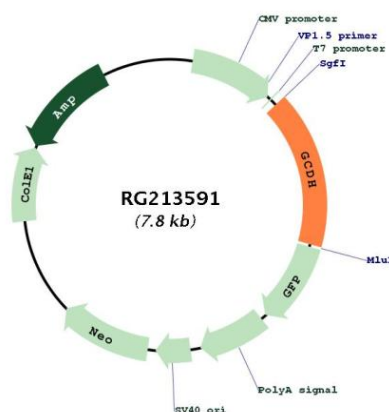
Domains: Acyl-CoA_dh, Acyl-CoA_dh_M, Acyl-CoA_dh_N

Protein Families: Druggable Genome

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

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 RG213591