

## Product datasheet for **RG207367**

### **D2HGDH (NM\_152783) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	D2HGDH (NM_152783) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	D2HGDH
Synonyms:	D2HGD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG207367 representing NM\_152783  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCTGCCCGCTCGGCCCTGCGCTGGCCCGCTGGCTGTTGCGGGGTGCTCCGGGAGCCGCGGGTTCTT  
 GGGGTCGGCCGGTTGGCCCCCTGGCCCGCAGAGGCTGCTGCTCCGCCCGGGGACCCCGAGGTGCCGCT  
 GACCCGGGAGCGCTACCCCGTGCAGCGCTTGCCGTTCTCCACGGTGTCTAAGCAGGACCTGGCCGCTTT  
 GAGCGCATCGTCCCGCGGGGTCGTCACGGACCCGGAAGCGCTGCAGGCTCCCAACGTGGACTGGTTGC  
 GGACGCTGCGAGGCTGTAGCAAGGTGCTGCTGAGGCCACGGACGTCGGAGGAGGTGTCCACATCTCAG  
 GCACTGCCACGAGAGAACCTGGCCGTGAACCCACAGGGGGCAACACAGGCATGGTGGTGGCAGCGTC  
 CCCGCTTTTGACGAGATCATCTCTCCACTGCCCGCATGAACCGGTCTCAGCTTCCACAGCGTGTCTG  
 GAATTCTGGTTTCCAGGCGGGTGCCTCTGGAGGAGCTGAGCCGGTATGTGGAGGAACGGGACTTCAT  
 CATGCCGCTGGACTTAGGAGCCAAGGGCAGCTGCCACATCGGGGAAACGTGGCAACCAACGCTGGAGGC  
 CTGCGGTTTCTTCGATATGGCTCACTGCATGGGACTGTCTGGGCTGGAAGTGGTGTGGCCGACGGCA  
 CTGTCCTGGACTGCCTGACCTCCCTGAGGAAGGACAACACGGGCTATGACCTGAAGCAGCTGTTATCGG  
 GTCGGAGGGCACTTTGGGGATCATCACCACGGTGTCCATCTTGTGTCCACCAAGCCAGGGCTGTGAAC  
 GTGGCTTCTCGGCTGCCAGGCTTGTCTGAGGTTCTGCAGACCTTCAGCACCTGCAAGGGGATGCTGG  
 GTGAGATCCTGTCTGCATTTCAGTTTCATGGATGCTGTGTGCATGCAGCTGGTCCGGCGCCATCTCCACCT  
 GGCCAGCCCGTGCAAGAGAGTCCGTTTACGTCTCATCGAGACTTCAGGCTCCAACGCAGGCCATGAC  
 GCTGAGAAGTGGCCACTTCTGGAGCACGCGCTGGGCTCCGGCTGGTACCATGGGACCATGGCCA  
 CCGACAGAGAAAGTCAAGATGCTGTGGCCCTGAGGAAAGGATCACAGAGGCGCTGAGCCGGGATGCC  
 CTACGTGTACAAGTACGACTCTCCCTCCCTGTGGAGCGGCTCTACGACATCGTGACTGACCTGCGCGCC  
 CGCCTCGGCCCGCACGCAAGCACGTGGTGGGCTATGGCCACCTTGGAGATGGTAACTGCACCTCAATG  
 TGACGGCGGAGGCCTTACGCCCCCTCGCTCTGGCTGCCCTGGAGCCCCACGTGTACGAGTGGACGGCCGG  
 GCAGCAGGGCAGCGTCAGCGCGGAGCACGGAGTGGGCTTACGAAAGAGGGACGCTCTGGGCTACAGCAAG  
 CCACCGGGGGCCCTGCAGCTCATGCAGCAGCTCAAGGCCCTGCTGGACCCCAAGGGCATCTCAACCCT  
 ACAAGACGCTGCCAGCCAGGCC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG207367 representing NM\_152783  
 Red=Cloning site Green=Tags(s)

MLPRRPLAWPAWLLRGAPGAAGSWGRPVGPLARRGCCSAPGTPEVPLTRERYPVQRLPFSTVSKQDLAAF  
 ERIVPGGVVTDPEALQAPNVDWLRTRLRGCCKVLLRPRTSEEVSHILRHCHERNLAVNPQGGNTGMVGGSV  
 PVFDEIILSTARMNRVLSFHSVSGILVCQAGCVLEELSRVVEERDFIMPLDLGAKGSCHIGGNVATNAGG  
 LRFLRYGSLHGTVLGLEVVADGTVDCLTSLRKDNTGYDLKQLFIGSEGLGIITTVSILCPPKRAVN  
 VAFLLGCPGFAEVLQTFSTCKGMLGEILSAFEMDAVCMQLVGRHLHLASPVQESPFYVLIETSGSNAGHD  
 AEKLGHFLEHALGSLVTDGTMATDQRKVKMLWALRERITEALSRDGYVYKDLVSLPVERLYDIVTDLRA  
 RLGPHAKHVVGYGLGDGNLHLNVTAEAFSPSLLAALEPHVYEWTAGQQGSVSAEHGVGFRKRDVLGYSK  
 PPGALQLMQQLKALLDPKGILNPYKTLPSQA

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_152783

**ORF Size:** 1563 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\\_152783.2](#), [NP\\_689996.3](#)

**RefSeq Size:** 2604 bp

**RefSeq ORF:** 1566 bp

**Locus ID:** 728294

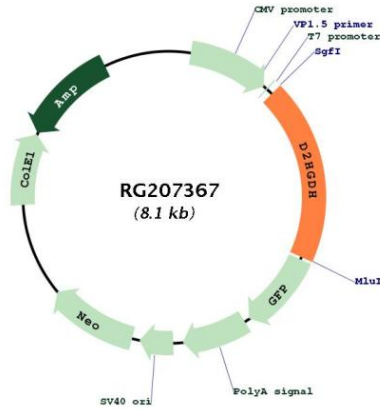
**UniProt ID:** [Q8N465](#)

**Cytogenetics:** 2q37.3

**Gene Summary:**

This gene encodes D-2hydroxyglutarate dehydrogenase, a mitochondrial enzyme belonging to the FAD-binding oxidoreductase/transferase type 4 family. This enzyme, which is most active in liver and kidney but also active in heart and brain, converts D-2-hydroxyglutarate to 2-ketoglutarate. Mutations in this gene are present in D-2-hydroxyglutaric aciduria, a rare recessive neurometabolic disorder causing developmental delay, epilepsy, hypotonia, and dysmorphic features. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RG207367