

Product datasheet for **RG200639**

Lipoamide Dehydrogenase (DLD) (NM_000108) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Lipoamide Dehydrogenase (DLD) (NM_000108) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Lipoamide Dehydrogenase
Synonyms:	DLDD; DLDH; E3; GCSL; LAD; OGDC-E3; PHE3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG200639 representing NM_000108
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCAGAGCTGGAGTCGTGTACTGCTCCTTGCCAAAGAGAGGCCATTTCAATCGAATATCTCATGGCC
 TACAGGGACTTTCTGCAGTGCCTCTGAGAACTTACGCAGATCAGCCGATTGATGCTGATGTAAACAGTTAT
 AGGTTCTGGTCTCGAGGATATGTTGCTGCTATTAAGCTGCCAGTTAGGCTTCAAGACAGTCTGCATT
 GAGAAAAATGAAACACTTGGTGGAACTGCTTGAATGTTGGTTGATTCTTCTAAGGCTTTATTGAACA
 ACTCTCATTATTACCATATGGCCATGGAAAAGATTTTGCATCTAGAGGAATTGAAATGTCCGAAGTTCC
 CTTGAATTTAGACAAGATGATGGAGCAGAAGAGTACTGCAGTAAAAGCTTTAACAGGTGGAATTGCCAC
 TTATTCAAACAGAATAAGGTTGTCATGTCAATGGATATGGAAAGATAACTGGCAAAAATCAAGTCACTG
 CTACGAAAGCTGATGGCGCACTCAGGTTATTGATACAAAGAACATTTATAGCCACGGGTTCAGAAGT
 TACTCCTTTTCTGGAATCACGATAGATGAAGATACAATAGTGCATCTACAGGTGCTTTATCTTTAAAA
 AAAGTTCCAGAAAAGATGGTTGTTATTGGTGCAGGAGTAAAGGTGTAGAATTGGGTTTCAAGTTGGCAA
 GACTTGGTGCAGATGTGACAGCAGTTGAATTTTTAGGTCATGTAGGTGGAGTTGGAATTGATATGGAGAT
 ATCTAAAACTTTCAACGCATCCTTCAAAAACAGGGGTTAAATTTAAATTTGAATACAAAGGTTACTGGT
 GCTACCAAGAAGTCAGATGGAAAATTGATGTTTCTATTGAAGCTGCTTCTGGTGGTAAAGCTGAAGTTA
 TCATTGTGATGTACTCTTGGTTGCATTGGCCGACGACCCTTTACTAAGAATTTGGGACTAGAAGAGCT
 GGGAAATGAACTAGATCCCAGAGGTAGAATCCAGTCAATACCAGATTTCAAACAAAATTTCAAATATC
 TATGCCATTGGTGTAGTGTGCTGGTCCAATGCTGGCTCACAAAGCAGAGGATGAAGGCATTATCTGTG
 TTGAAGGAATGGCTGGTGGTGTGTCACATTGACTACAATTGTGTGCCATCAGTGATTTACACACGCC
 TGAAGTTGCTTGGGTTGGCAAATCAGAAGAGCAGTTGAAAGAAGAGGGTATTGAGTACAAAGTTGGGAAA
 TTCCCATTTGCTGCTAACAGCAGAGCTAAGACAAATGCTGACACAGATGGCATGGTGAAGATCCTTGGG
 AGAAATCGACAGACAGAGTACTGGGAGCACATATTCTTGGACCAGGTGCTGGAGAATGGTAAATGAAGC
 TGCTCTTGCTTTGGAATATGGAGCATCCTGTGAAGATATAGCTAGAGTCTGTCATGCACATCCGACCTTA
 TCAGAAGCTTTAGAGAAGCAAATCTTGTGCGTCATTTGGCAAATCAATCAACTTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG200639 representing NM_000108
 Red=Cloning site Green=Tags(s)

MQSWSRVYCSLAKRGHFNRISHGLQGLSAVPLRITYADQPIDADVTIVIGSGPGGYVAAIKAAQLGFKTVCI
 EKNETLGGTCLNVGCIPSKALLNNSHYHMAHGKDFASRGIEMSEVRLNLDKMMEQKSTAVKALTGGIAH
 LFKQNKVVHVNGYGKITGKNQVTATKADGGTQVIDTKNILIATGSEVTPFPGITIDEDTIVSSTGALSLK
 KVPEKMVVIAGVIGVELGSVQRLGADVTAVEFLGHVGGVGDIMEISKNFQRILQKQGFKFLNKTGVTG
 ATKKSDGKIDVSI EAASGGKAEVITCDVLLVCIGRRPFTKNLGLLEELGIELDPRGRIPVNTFRFQTKIPNI
 YAIGDVVAGPMLAHKAEDGEIICVEGMAGGAVHIDYNCVPSVIYTHPEVAWVGKSEEQLKEEGIEYKVGK
 FPFANSRAKTNADTDGMVKILGQKSTDRVLGAHILGPGAGEMVNEAALALEYGASCEDIARVCHAHP
 TSEAIFREANLAASFGKSINF

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



ACCN: NM_000108

ORF Size: 1527 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_000108.5](#)

RefSeq Size: 3579 bp

RefSeq ORF: 1530 bp

Locus ID: 1738

UniProt ID: [P09622](#)

Cytogenetics: 7q31.1

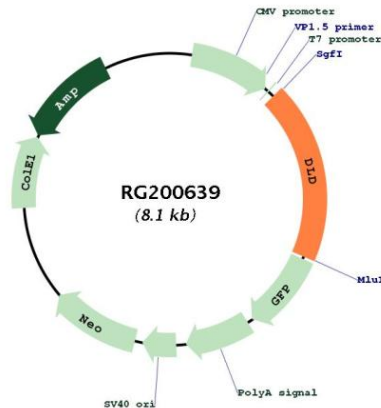
Domains: pyr_redox, pyr_redox_dim

Protein Families: Druggable Genome

Protein Pathways: Citrate cycle (TCA cycle), Glycine, serine and threonine metabolism, Glycolysis / Gluconeogenesis, Metabolic pathways, Pyruvate metabolism, Valine, leucine and isoleucine degradation

Gene Summary: This gene encodes a member of the class-I pyridine nucleotide-disulfide oxidoreductase family. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. In homodimeric form, the encoded protein functions as a dehydrogenase and is found in several multi-enzyme complexes that regulate energy metabolism. However, as a monomer, this protein can function as a protease. Mutations in this gene have been identified in patients with E3-deficient maple syrup urine disease and lipoamide dehydrogenase deficiency. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2014]

Product images:



Circular map for RG200639