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Product datasheet for RC200639

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:	Myc-DDK
Symbol:	Lipoamide Dehydrogenase
Synonyms:	DLDD; DLDH; E3; GCSL; LAD; OGDC-E3; PHE3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC200639 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCAGAGCTGGAGTCGTGTGTACTGCTCCTTGGCCAAGAGAGGCCATTTCAATCGAATATCTCATGGCC
TACAGGGACTTTCTGCAGTGCCTCTGAGAACTTACGCAGATCAGCCGATTGATGCTGATGTAACAGTTAT
AGGTTCTGGTCCTGGAGGATATGTTGCTGCTATTAAAGCTGCCCAGTTAGGCTTCAAGACAGTCTGCATT
GAGAAAAATGAAACACTTGGTGGAACATGCTTGAATGTTGGTTGTATTCCTTCTAAGGCTTTATTGAACA
ACTCTCATTATTACCATATGGCCCATGGAAAAGATTTTGCATCTAGAGGAATTGAAATGTCCGAAGTTCG
CTTGAATTTAGACAAGATGATGGAGCAGAAGAGTACTGCAGTAAAAGCTTTAACAGGTGGAATTGCCCAC
TTATTCAAACAGAATAAGGTTGTTCATGTCAATGGATATGGAAAGATAACTGGCAAAAATCAAGTCACTG
CTACGAAAGCTGATGGCGGCACTCAGGTTATTGATACAAAGAACATTCTTATAGCCACGGGTTCAGAAGT
TACTCCTTTTCCTGGAATCACGATAGATGAAGATACAATAGTGTCATCTACAGGTGCTTTATCTTTAAAA
AAAGTTCCAGAAAAGATGGTTGTTATTGGTGCAGGAGTAATAGGTGTAGAATTGGGTTCAGTTTGGCAAA
GACTTGGTGCAGATGTGACAGCAGTTGAATTTTTAGGTCATGTAGGTGGAGTTGGAATTGATATGGAGAT
ATCTAAAAACTTTCAACGCATCCTTCAAAAACAGGGGTTTAAATTTAAATTGAATACAAAGGTTACTGGT
GCTACCAAGAAGTCAGATGGAAAAATTGATGTTTCTATTGAAGCTGCTTCTGGTGGTAAAGCTGAAGTTA
TCACTTGTGATGTACTCTTGGTTTGCATTGGCCGACGACCCTTTACTAAGAATTTGGGACTAGAAGAGCT
GGGAATTGAACTAGATCCCAGAGGTAGAATTCCAGTCAATACCAGATTTCAAACTAAAATTCCAAATATC
TATGCCATTGGTGATGTAGTTGCTGGTCCAATGCTGGCTCACAAAGCAGAGGATGAAGGCATTATCTGTG
TTGAAGGAATGGCTGGTGGTGCTGTGCACATTGACTACAATTGTGTGCCATCAGTGATTTACACACACCC
TGAAGTTGCTTGGGTTGGCAAATCAGAAGAGCAGTTGAAAGAAGAGGGTATTGAGTACAAAGTTGGGAAA
TTCCCATTTGCTGCTAACAGCAGAGCTAAGACAAATGCTGACACAGATGGCATGGTGAAGATCCTTGGGC
AGAAATCGACAGACAGAGTACTGGGAGCACATATTCTTGGACCAGGTGCTGGAGAAATGGTAAATGAAGC
TGCTCTTGCTTTGGAATATGGAGCATCCTGTGAAGATATAGCTAGAGTCTGTCATGCACATCCGACCTTA
TCAGAAGCTTTTAGAGAAGCAAATCTTGCTGCGTCATTTGGCAAATCAATCAACTTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC200639 protein sequence
Red=Cloning site Green=Tags(s)

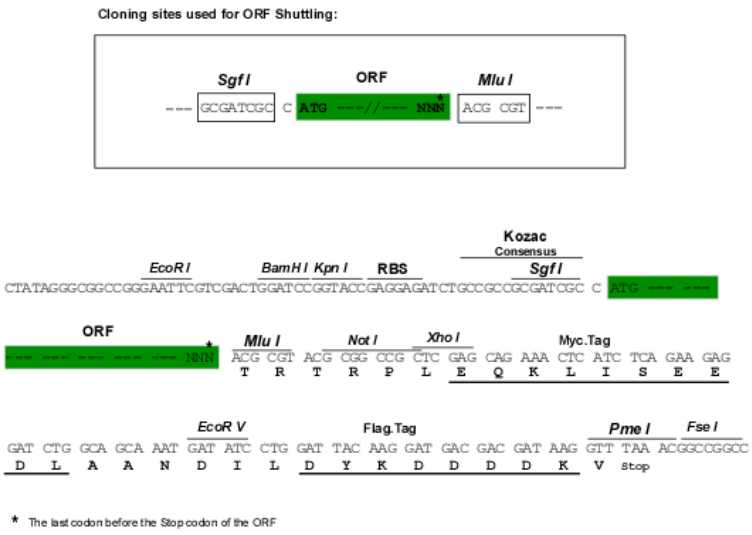
MQSWSRVYCSLAKRGHFNRISHGLQGLSAVPLRTYADQPIDADVTVIGSGPGGYVAAIKAAQLGFKTVCI
EKNETLGGTCLNVGCIPSKALLNNSHYYHMAHGKDFASRGIEMSEVRLNLDKMMEQKSTAVKALTGGIAH
LFKQNKVVHVNGYGKITGKNQVTATKADGGTQVIDTKNILIATGSEVTPFPGITIDEDTIVSSTGALSLK
KVPEKMVVIGAGVIGVELGSVWQRLGADVTAVEFLGHVGGVGIDMEISKNFQRILQKQGFKFKLNTKVTG
ATKKSDGKIDVSIEAASGGKAEVITCDVLLVCIGRRPFTKNLGLEELGIELDPRGRIPVNTRFQTKIPNI
YAIGDVVAGPMLAHKAEDEGIICVEGMAGGAVHIDYNCVPSVIYTHPEVAWVGKSEEQLKEEGIEYKVGK
FPFAANSRAKTNADTDGMVKILGQKSTDRVLGAHILGPGAGEMVNEAALALEYGASCEDIARVCHAHPTL
SEAFREANLAASFGKSINF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6199_a08.zip

Restriction Sites: SgfI-MluI

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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: NM_000108.5

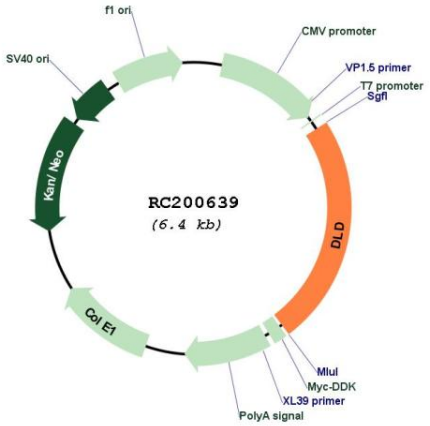
RefSeq Size: 3613 bp

RefSeq ORF: 1530 bp

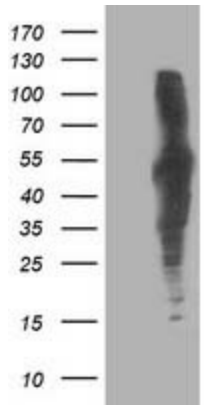
Locus ID: 1738

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
MW:	54.2 kDa
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]

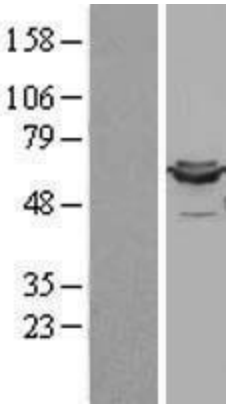
Product images:



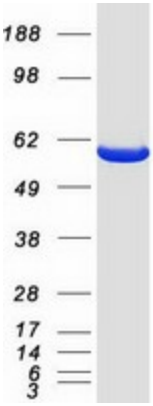
Circular map for RC200639



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY DLD (Cat# RC200639, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-DLD(Cat# [TA503387]). Positive lysates [LY400041] (100ug) and [LC400041] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400041]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200639 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified DLD protein (Cat# [TP300639]). The protein was produced from HEK293T cells transfected with DLD cDNA clone (Cat# RC200639) using MegaTran 2.0 (Cat# [TT210002]).