

## Product datasheet for RC205074

### Lactate Dehydrogenase B (LDHB) (NM\_002300) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Lactate Dehydrogenase B (LDHB) (NM_002300) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Lactate Dehydrogenase B
Synonyms:	HEL-S-281; LDH-B; LDH-H; LDHBD; TRG-5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC205074 representing NM_002300 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCAACTCTTAAGGAAAACTCATTGCACCAGTTGCGGAAGAAGAGGCAACAGTTCCAAACAATAAGA  
TCACTGTAGTGGGTGTTGGACAAGTTGGTATGGCGTGTGCTATCAGCATTCTGGGAAAGTCTCTGGCTGA  
TGAAGTGGCTCTTGTGGATGTTTGGGAAGATAAGCTTAAAGGAGAAATGATGGATCTGCAGCATGGGAGC  
TTATTTCTTCAGACACCTAAAATTGTGGCAGATAAAGATTATTCTGTGACCGCCAATTCTAAGATTGTAG  
TGGTAAGTGCAGGAGTCCGTCAGCAAGAAGGGGAGAGTCCGCTCAATCTGGTGCAGAGAAATGTTAATGT  
CTTCAAATTCATTATTCCTCAGATCGTCAAGTACAGTCCCTGATTGCATCATAATTGTGGTTTCCAACCCA  
GTGGACATTCTTACGTATGTTACCTGGAACCTAAGTGGATTACCCAAACACCGCGTGATTGGAAGTGGAT  
GTAATCTGGATTCTGCTAGATTTGCTACCTTATGGCTGAAAACTTGGCATTTCATCCAGCAGCTGCCA  
TGGATGGATTTTGGGGAAACATGGCGACTCAAGTGTGGCTGTGTGGAGTGGTGTGAATGTGGCAGGTGTT  
TCTCTCCAGGAATTGAATCCAGAAATGGGAACTGACAATGATAGTGAATTTGGAAGGAAGTGCATAAGA  
TGGTGGTTGAAAGTGCCTATGAAGTCATCAAGCTAAAAGGATATACCAACTGGGCTATTGGATTAAGTGT  
GGCTGATCTTATTGAATCCATGTTGAAAACTATCCAGGATTCATCCCGTGTCAACAATGGTAAAGGGG  
ATGTATGGCATTGAGAATGAAGTCTTCTGAGCCTTCCATGTATCCTCAATGCCCGGGGATTAACCAGCG  
TTATCAACCAGAAGCTAAAGGATGATGAGTTGCTCAGCTCAAGAAAAGTGCAGATACCCGTGGGACAT  
CCAGAAGGACCTAAAAGACCTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC205074 representing NM\_002300  
 Red=Cloning site Green=Tags(s)

MATLKEKLIAPVAEEATVPNNKITVVGVGQVGMACAISILGKSLADELALVDVLEDKLGEMMDLQHGS  
 LFLQTPKIVADKDYSVTANSKIVVVTAGVRQEGESRLNLVQRNVVFKFIIPQIVKYSPDCIIIVVSNP  
 VDILTYVTWKL SGLPKHRVIGSGCNLDSARFRYLMAEKLGIHPSSCHGWILGEHGDSSVAVWSGVNVAGV  
 SLQELNPEMGTDNDSENWKEVHKM VVESAYEVIKLKGYTNWAIGLSVADLIESMLK NLSRIHPVSTMVKG  
 MYGIENEVFLSLPCILNARGLTSVINQ LK DDEVAQLKKSADTLWDIQDLKDL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg2583\\_e09.zip](https://cdn.origene.com/chromatograms/mg2583_e09.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_002300

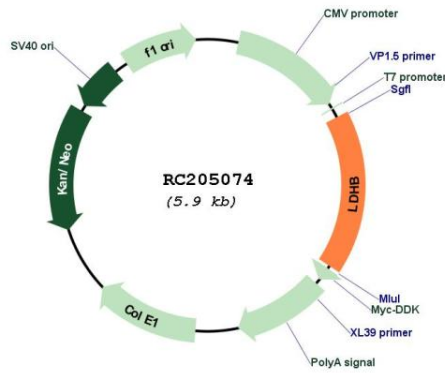
**ORF Size:** 1002 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

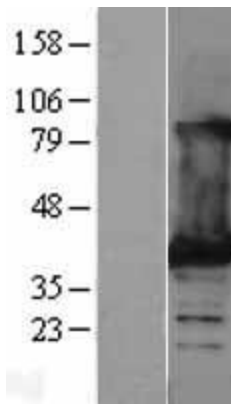
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in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

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_002300.7</a>
<b>RefSeq Size:</b>	1336 bp
<b>RefSeq ORF:</b>	1005 bp
<b>Locus ID:</b>	3945
<b>UniProt ID:</b>	<a href="#">P07195</a>
<b>Cytogenetics:</b>	12p12.1
<b>Domains:</b>	ldh
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Cysteine and methionine metabolism, Glycolysis / Gluconeogenesis, Metabolic pathways, Propanoate metabolism, Pyruvate metabolism
<b>MW:</b>	36.5 kDa
<b>Gene Summary:</b>	This gene encodes the B subunit of lactate dehydrogenase enzyme, which catalyzes the interconversion of pyruvate and lactate with concomitant interconversion of NADH and NAD <sup>+</sup> in a post-glycolysis process. Alternatively spliced transcript variants have been found for this gene. Recent studies have shown that a C-terminally extended isoform is produced by use of an alternative in-frame translation termination codon via a stop codon readthrough mechanism, and that this isoform is localized in the peroxisomes. Mutations in this gene are associated with lactate dehydrogenase B deficiency. Pseudogenes have been identified on chromosomes X, 5 and 13. [provided by RefSeq, Feb 2016]

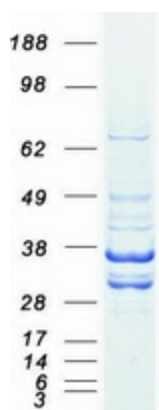
Product images:



Circular map for RC205074



Western blot validation of overexpression lysate (Cat# [LY400836]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205074 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified LDHB protein (Cat# [TP305074]). The protein was produced from HEK293T cells transfected with LDHB cDNA clone (Cat# RC205074) using MegaTran 2.0 (Cat# [TT210002]).