

Product datasheet for **SC100111**

Pyruvate Dehydrogenase E2 (DLAT) (NM_001931) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pyruvate Dehydrogenase E2 (DLAT) (NM_001931) Human Untagged Clone
Tag:	Tag Free
Symbol:	Pyruvate Dehydrogenase E2
Synonyms:	DLTA; E2; PBC; PDC-E2; PDCE2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC100111 sequence for NM_001931 edited (data generated by NextGen Sequencing)

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ATGTGGCGCGTCTGTGCGCGACGGGCTCAGAATGTAGCCCATGGGCGGGACTCGAGGCT
CGGTGGACGGCCTTGCAAGGAGGTACCCGGAACCCACGAGTGACCTCGCGATCTGGCCCG
GCTCCCGTTTCGTCGCAACAGCGTGACTACAGGGTATGGCGGGTCCGGGCACTGTGCGGC
TGGACCCCAAGTTCTGGGGCCACGCCCGGAACCGCTTACTGCTGCAGCTTTTGGGGTCCG
CCCGCCCGCCTATTACAGTCTTCCCGCATCAGAAGGTTCCATTGCCTTCTCTTTCC
CCCACAATGCAGGCAGGCACCATAGCCCGTTGGGAAAAAAGAGGGGGACAAAATCAAT
GAAGGTGACCTAATTGCAGAGGTTGAAACTGATAAAGCCACTGTTGGATTGAGAGCCTG
GAGGAGTGTATATGGCAAAGATACTTGTGCTGAAGGTACCAGGGATGTTCCCATCGGA
GCGATCATCTGTATCACAGTTGGCAAGCCTGAGGATATTGAGGCCTTTAAAAATTATACA
CTGGATTCTCAGCAGCACCTACCCACAAGCGGCCCCAGCACCAACCCCTGCTGCCACT
GCTTCGCCACCTACACCTTCTGCTCAGGCTCCTGGTAGCTCATATCCCCCTCACATGCAG
GTACTTCTTCTGCCCTCTCTCCACCATGACCATGGGCACAGTTCAGAGATGGGAAAAA
AAAGTGGGTGAGAAGCTAAGTGAAGGAGACTTACTGGCAGAGATAGAACTGACAAAGCC
ACTATAGTTTTTGAAGTACAGGAAGAAGTTATCTGGCAAAAATCCTGGTCCCTGAAGGC
ACAAGAGATGTCCCTCTAGGAACCCCACTCTGTATCATTGTAGAAAAAGAGGCAGATATA
TCAGCATTTGCTGACTATAGGCCAACCGAAGTAACAGATTTAAAACCACAAGCGCCACCA
CCTACCCACCCCGGTGGCCGCTGTTCCCTCCAACCTCCCCAGCCTTTAGCTCCTACACCT
TCAGCACCTGCCAGCTACTCTGCTGGACCAAAGGGGAGGGTGTGGTTAGCCCTCTT
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GATGGTAGAATCACCAAGAAGGATATCGACTCTTTTGTGCCTAGTAAAGTTGCTCCTGCT
CCGGCAGCTGTTGTGCCCTCCACAGGTCCTGGAATGGCACCAGTTCCTACAGGTGCTTC
ACAGATATCCCAATCAGCAACATTCGTCGGGTTATTGCACAGCGATTAATGCAATCAAAG
CAAACCATACCTCATTATTACCTTTCTATCAATGTAATATGGGAGAAAGTTTTGTTGGTA
CGGAAAGAACTTAATAAGATATTAGAAGGGAGAAGCAAAATTTCTGTCAATGACTTCATC
ATAAAAGTTCAGCTTTGGCATGTTTAAAAGTTCCCGAAGCAAATTTCTTCTGGATGGAC
ACAGTTATAAGACAAAATCATGTTGTTGATGTCAGTGTTCGGTCCAGTACTCCTGCAGGA
CTCATCACACCTATTGTGTTAATGCACATATAAAAGGAGTGGAAACCATTGCTAATGAT
GTTGTTTTCTTAGCAACCAAAGCAAGAGGGTAAACTACAGCCACATGAATCCAGGGT
GGCACTTTTACGATCTCCAATTTAGGAATGTTTGAATTAAGAATTTCTCTGCTATTATT
AACCCACCTCAAGCATGTATTTGGCAATTGGTGTTCAGAGGATAAACTGGTCCCTGCA
GATAATGAAAAAGGGTTTGTATGTGGCTAGCATGATGTCTGTTACACTCAGTTGTGATCAC
CGGGTGGTGGATGGAGCAGTTGGAGCCAGTGGCTTGCTGAGTTAGAAAGTACCTTGAA
AAACCTATCACTATGTTGTTGTAA

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Clone variation with respect to NM_001931.4
 128 c=>t;953 t=>c;1351 g=>a

5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_001931 unedited</p> <pre> NGGGTTTCGATTTGTATCCGATTTCTATAGGCGGCCGCGCATTTCGGCACGAGATTTCTC CCAAACTTGCGCCCGCACAGGCCCTCTGGAACACTCCTGCCCGTAGTGCCCTCGTCC CCGCTCCGTAGAGAAAGAGCGTGCCTGCCGCGCATTCTGGCCTGGGGAGCGGGTGGAGT AAACCTGCGGGAACCATTTTACGACAACGTGCGGCTGTGCGGTGTGGCTGACGGCAACGC CGCTGCTCTTGGAGAGGTCACTCCGGAGACGGCGTTGGTTTTGGGGTGTGGGGGGTGGT GGCACTATGTGGCGCGTCTGTGCGCGACGGGCTCAGAATGTAGCCCCATGGGCGGGACTC GAGGCTCGGTGGACGGCCTTGCAGGAGGTACCCGGAACCTCACGAGTGACCTCGCGATCT GGCCCGGCTCCCGTTCGTCGCAACAGCGTGACTACAGGGTATGGCGGGTCCGGGCACTG TGCGGCTGGACCCCAAGTTCTGGGGCCACGCCGGAACCGCTTACTGCTGCAGCTTTTG GGGTCGCCCGCCCGCTATTACAGTCTTCCCCGCATCAGAAAGTTCCATTGCCCTCT CTTTCCCCACATGCAGGCAGGCACCATAGCCCGTTGGGAAAAAAAAAAGAGGGGGACAAA ATCAATGAAGTGACCCTATTTGCAGAGTTGAACTGATAAAGCCACTGTTGGATTGAGA GCCTGGNAGGAGTGTATATGGCAAAGATACTTGTGGCTGAAGTACCAGGGATGTTCC TTCGGACGATCATCTGTTTCAACAGTGGGAAGCCCTGAAGATATTGAGGCTTTTAAAT TTACATGGGATTCCTAAGAAGCACCTACCCAAAAGGGGGCCCGGACCAAACCTTGT </pre>
Restriction Sites:	NotI-NotI
ACCN:	NM_001931
Insert Size:	4700 bp
OTI Disclaimer:	<p>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 or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p>
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:	<ol style="list-style-type: none"> 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:	<u>NM_001931.2</u> , <u>NP_001922.2</u>
RefSeq Size:	3321 bp

RefSeq ORF:	1944 bp
Locus ID:	1737
UniProt ID:	P10515
Cytogenetics:	11q23.1
Domains:	biotin_lipoyl, 2-oxoacid_dh, e3_binding
Protein Families:	Druggable Genome
Protein Pathways:	Citrate cycle (TCA cycle), Glycolysis / Gluconeogenesis, Metabolic pathways, Pyruvate metabolism
Gene Summary:	<p>This gene encodes component E2 of the multi-enzyme pyruvate dehydrogenase complex (PDC). PDC resides in the inner mitochondrial membrane and catalyzes the conversion of pyruvate to acetyl coenzyme A. The protein product of this gene, dihydrolipoamide acetyltransferase, accepts acetyl groups formed by the oxidative decarboxylation of pyruvate and transfers them to coenzyme A. Dihydrolipoamide acetyltransferase is the antigen for antimitochondrial antibodies. These autoantibodies are present in nearly 95% of patients with the autoimmune liver disease primary biliary cirrhosis (PBC). In PBC, activated T lymphocytes attack and destroy epithelial cells in the bile duct where this protein is abnormally distributed and overexpressed. PBC eventually leads to cirrhosis and liver failure. Mutations in this gene are also a cause of pyruvate dehydrogenase E2 deficiency which causes primary lactic acidosis in infancy and early childhood.[provided by RefSeq, Oct 2009]</p>