

Product datasheet for **SC327265**

OGDH (NM_001165036) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	OGDH (NM_001165036) Human Untagged Clone
Tag:	Tag Free
Symbol:	OGDH
Synonyms:	AKGDH; E1k; KGD1; OGDC; OGDH2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001165036, the custom clone sequence may differ by one or more nucleotides

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ATGTTTCATTTAAGGACTTGTGCTGCTAAGTTGAGGCCATTGACGGCTTCCCAGACTGTT
AAGACATTTTACAAAACAGACCAGCAGCAGCTAGGACATTTCAACAGATTCGGTGCTAT
TCTGCACCTGTTGCTGCTGAGCCCTTCTCAGTGGGACTAGTTCGAACTATGTGGAGGAG
ATGTAAGTGTGCTTGGCTGGAAAACCCAAAAGTGTACATAAAGTCATGGGACATTTTTTTT
CGCAACACGAATGCCGGAGCCCCACCGGGCACTGCCTACCAGAGTCCCCTTCCCCTGAGC
CGAGGCTCCCTGGCTGCTGTGGCCCATGCACAGTCCCTGGTAGAAGCACAGCCCAACGTG
GACAAGCTCGTGGAGGACCACCTGGCAGTGCAGTGCCTCATCAGGGCATATCAGGTCAGG
GGTCACCACATTGCAAACTTGATCCTCTCGGAATTAGTTGTGTAATTTTGTATGATGCT
CCAGTAACTGTTTCTTCAAACGTGGGGTCTATGGCCTGGATGAGTCTGACCTCGACAAG
GTCTTCCACTTGCCACCACCCTTTCATCGGGGGACAGGAATCAGCACTTCTCTGCGG
GAGATCATCCGTGCGCTGGAGATGGCCTACTGCCAGCATATTGGGGTGGAGTTTATGTTT
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CAGTTCACAAATGAGGAGAAACGGACCCTGCTGGCCAGGCTTGTGCGGTCCACCAGGTTT
GAGGAGTTCCTACAGCGGAAGTGGTCTCTGAGAAGCGCTTTGGTCTAGAAGGCTGCGAG
GTACTGATCCCTGCCCTCAAGACCATCATTGACAAGTCTAGTGAAGTGGCGTGGACTAC
GAGCTGGAACAGATCTTCTGTCAATTCGATTCAAAGCTGGAGGCGAGCTGATGAGGGCTCC
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AACATTACCTTGTCTTGGTGGCCAACCCTTCCACCTTGAGGCCGCTGACCCCGTGGTG
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TCCATCTGTTGCATGGGGATGCTGCATTTGCTGGCCAGGGCATTGTGTACGAGACCTTC
CACCTCAGCGACCTGCCATCCTACACAACCTCATGGCACCGTGCACGTGGTCTGCAACAAC
CAGATCGGCTTACCACCGACCTCGGATGGCCCGCTCCTCCCCCTACCCCACTGACGTG
GCCCGAGTGGTGAATGCCCCATTTTCCACGTGAACTCAGATGACCCCGAGGCTGTGATG
TACGTGTGCAAAGTGGCGCCGAGTGGAGGAGCACCTTCCACAAGGACGTGGTTGTCGAT

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TTGGTGTGTTACCGGCGCAACGGCCACAACGAGATGGATGAGCCCATGTTACGCAGCCG
CTCATGTACAAGCAGATCCGCAAGCAGAAGCCTGTGTTACAGAAGTACGCTGAGCTGCTG
GTGTCCGAGGGTGTGGTCAACCAGCCTGAGTATGAGGAGGAAATTTCCAAGTATGATAAG
ATCTGTGAGGAAGCTTTTGCCAGATCTAAAGATGAGAAGATCTTGACATTAAGCACTGG
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CCCTCCACGGGTCTGACGGAGGATATTCTGACACACATCGGGAATGTGGCTAGTTCTGTG
CCTGTGGAAAACTTTACTATTCATGGAGGGCTGAGCCGGATCTTGAAGACTCGTGGGGAA
ATGGTGAAGAACCGGACTGTGGACTGGGCTCTAGCGGAGTACATGGCGTTTGGCTCGCTC
CTGAAGGAGGGCATCCACATTTCGGCTGAGCGGCCAGGACGTGGAGCGGGGCACATTCAGC
CACCGCCACCATGTGCTCCATGACCAGAATGTGGACAAGAGAACCTGCATCCCCATGAAC
CATCTCTGGCCCAATCAGGCCCCCTATACTGTGTGCAACAGCTCACTGTCTGAGTACGGC
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GCCCAATTTGGTACTTCCACAACACGGCCAGTGTATCATCGACCAGTTCATCTGCCCCG
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GACCCAGATGTCTGCCAGACCTTAAAGAAGCCAACTTCGACATCAATCAGCTATATGAC
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CAGATCCTGCTGCCATTCGGAAGCCGTTAATTATCTTACCCCCAAATCCCTGTTGCGC
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ATCCCAGAAGATGGCCCTGCAGCTCAGAAGCCAGAAAAATGTCAAAGGCTTCTCTCTGC
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GTGCAGAAGTACCCCAATGCTGAGCTGGCCTGGTCCAGGAGGAGCACAAGAAGCAAGGC
TACTATGACTACGTGAAGCCAAGACTTCGGACCACCATCAGCCGCGCCAAGCCCGTCTGG
TATGCCGCGCGGGACCCAGCGGCTGCTCCAGCCACCGGCAACAAGAAGACCCACCTGACG
GAGCTGCAGCGCCTCCTGGACACGGCCTTCGACCTGGACGTCTTCAAGAACTTCTCG

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Restriction Sites:

Please inquire

ACCN:

NM_001165036

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 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](#)

OTI Annotation:

This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_001165036.1](#), [NP_001158508.1](#)

RefSeq Size: 4307 bp

RefSeq ORF: 3060 bp

Locus ID: 4967

UniProt ID: [Q02218](#)

Cytogenetics: 7p13

Protein Families: Druggable Genome

Protein Pathways: Citrate cycle (TCA cycle), Lysine degradation, Metabolic pathways, Tryptophan metabolism

Gene Summary: This gene encodes one subunit of the 2-oxoglutarate dehydrogenase complex. This complex catalyzes the overall conversion of 2-oxoglutarate (alpha-ketoglutarate) to succinyl-CoA and CO₂ during the Krebs cycle. The protein is located in the mitochondrial matrix and uses thiamine pyrophosphate as a cofactor. A congenital deficiency in 2-oxoglutarate dehydrogenase activity is believed to lead to hypotonia, metabolic acidosis, and hyperlactatemia. Alternative splicing results in multiple transcript variants encoding distinct isoforms.[provided by RefSeq, Sep 2009]

Transcript Variant: This variant (3) has multiple differences in the presence and absence of exons in the 5' coding region, compared to variant 1. These differences result in a shorter protein (isoform 3), compared to isoform 1.