

Product datasheet for **RC228630**

OGDH (NM_001165036) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: OGDH (NM_001165036) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: OGDH
Synonyms: AKGDH; E1k; KGD1; OGDC; OGDH2
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC228630 representing NM_001165036
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGGATCGCC

ATGTTTCATTTAAGGACTTGTGCTGCTAAGTTGAGGCCATTGACGGCTTCCCAGACTGTTAAGACATTTT
CACAAAACAGACCAGCAGCAGCTAGGACATTTCAACAGATTCCGGTGTATTCTGCACCTGTTGCTGCTGA
GCCCTTCTCAGTGGGACTAGTTCGAACATGTGGAGGAGATGTACTGTGCTTGGCTGGAAAACCCAAA
AGTGTACATAAGTCATGGGACATTTTTTTTCGCAACACGAATGCCGAGCCCCACCGGGCACTGCCTACC
AGAGTCCCCTTCCCCTGAGCCGAGGCTCCCTGGTGTGTGGCCATGCACAGTCCCTGGTAGAAGCACA
GCCCAACGTGGACAAGCTCGTGGAGGACCCTGGCAGTGCAGTCGCTCATCAGGGCATATCAGGTCAAG
GGTCACCACATTGCAAACTTGATCCTCTCGGAATTAGTTGTGTAATTTTATGATGATGCTCCAGTAACTG
TTTCTTCAAACGTGGGGTCTATGGCCTGGATGAGTCTGACCTCGACAAGGTCTTCCACTTGCCACCAC
CACTTTCATCGGGGACAGGAATCAGCACTTCTCTGCGGGAGATCATCCGTCGGCTGGAGATGGCCTAC
TGCCAGCATATGGGGTGGAGTTCATGTTCAATGACCTGGAGCAGTGCCAGTGGATCCGGCAGAAGT
TTGAGACCCTGGGATCATGCAGTTCACAAATGAGGAGAAACGGACCCTGCTGGCCAGGCTTGTGCGGTC
CACCAGGTTTGGAGGTTCTACAGCGGAAGTGGTCTCTGAGAAGCGCTTTGGTCTAGAAGGCTGCGAG
GTACTGATCCCTGCCCTCAAGACCATCATTGACAAGTCTAGTGAAGTGGCGTGGACTACGTGATCATGG
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TCAATTCGATTCAAAGCTGGAGGAGCTGATGAGGGCTCCGGAGATGTGAAGTACCACCTGGGCATGTAT
CACCAGGATCAATCGTGTACCGACAGGAACATTACCTTGTCTTGGTGGCCAACCTTCCCACCTTG
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AAAGGTGATGTCATCCTGTTGCATGGGATGCTGCATTTGCTGGCCAGGGCATTGTGTACGAGACCTTC
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CATTTTCCAGTGAACCTCAGATGACCCGAGGCTGTCATGTACGTGTGCAAAGTGGCGGCCGAGTGGAGG



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AGCACCTTCCACAAGGACGTGGTTGTCGATTTGGTGTGTTACCGGCGCAACGGCCACAACGAGATGGATG
 AGCCCATGTTACGCAGCCGCTCATGTACAAGCAGATCCGCAAGCAGAAGCCTGTGTTACAGAAGTACGC
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 TATGCCGCGGGGACCCAGCGGCTGCTCCAGCCACCGGCAACAAGAAGACCCACCTGACGGAGCTGCAGC
 GCCTCTGGACACGGCCTTCGACCTGGACGTCTTCAAGAACTTCTCG

ACGCGTACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC228630 representing NM_001165036
 Red=Cloning site Green=Tags(s)

MFHLRTCAAKLRPLTASQTVKTF SQNRPAARTFQQIRCYSAPVAAEPFLSGTSSNYVEEMYCAWLENPK
 SVHKSWDIFFRNTNAGAPPGTAYQSPLPLSRGSLAAVAHAQSLVEAQPNVDKLVEDHLAVQSLIRAYQVR
 GHIIAKLDPLGISCVNFDDAPVTVSSNVGFYGLDESDLDKVFHLPPTTFIGGQESALPLREIIRRLEMAY
 CQHIGVEFMFINDLEQCQWIRQKFETPGIMQFTNEEKRTLLARLVRSTRFEEFLQRKWSSEKRFLEGECE
 VLIPALKTIIDKSENGVDYVIMGMPHRGRLNVLANVIRKELEQIFCQFDSKLEAADESGDVKYHLGMY
 HRRINRVTDNRNITLSLVANPSHLEAADPVVMGKTKAEQFYCGDTEGKKVMSILLHGDAAFAGQGIYVETF
 HLSLDPSYTHGTVHVNNQIGFTTDPMARSSPYPTDVARVNAPIFHVNSDDPEAVMYVCKVAAEWR
 STFHKDVVVDLVCYRRNGHNEMDEPMFTQPLMYKQIRKQKPVLPQYAEALLVSQGVVNQPEYEEIISKYDK
 ICEEAFARSKDEKILHIKHWLDSWPGFFTLDGQPRSMSCPSTGLTEDILTHIGNVASSVPVENFTIHGG
 LSRILKTRGEMVKNRTVDWALAEYMAFGSLLKEGIHIRLSGQDVERGTFSHRHHVLDQNVDKRTCIPMN
 HLWPNQAPYTVCNSSLSEYGVLFELGFAMASPNALVLWEAQGFDFHNTAQCIIDQFICPGQAKWVRQNG
 IVLLLPHGMEGMGPEHSSARPERFLQMCNDDPDVLPDLKEANFDINQLYDCNWWVNCSTPGNFFHVLRR
 QILLPFRKPLIIFTPKSLLRHPEARSSFDEMLPGTHFQRVIPEDGPAAQNPENVKRLLFCTGKVYYDLTR
 ERKARDMVGQVAITRIEQLSPFPDLLLLKEVQKYPNAELAWCQEEHKNQGYDYVVKPRLRTTISRAPVW
 YAGRDPAAAPATGNKKTHLTELQRLLDTAFDLDFKNFS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_001165036

ORF Size: 3057 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 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 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_001165036.2](#)

RefSeq ORF: 3060 bp

Locus ID: 4967

UniProt ID: [Q02218](#)

Cytogenetics: 7p13

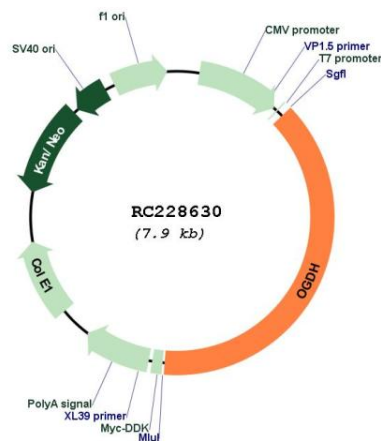
Protein Families: Druggable Genome

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

MW: 115.51 kDa

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 CO(2) 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]

Product images:



Circular map for RC228630