

Product datasheet for **RC224183**

OGDH (NM_001003941) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	OGDH (NM_001003941) 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)



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ORF Nucleotide Sequence:

>RC224183 representing NM_001003941
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTTTCATTTAAGGACTTGTGCTGCTAAGTTGAGGCCATTGACGGCTTCCAGACTGTTAAGACATTTT
 CACAAAACAGACCAGCAGCAGCTAGGACATTTCAACAGATTCGGTGTATTCTGCACCTGTTGCTGCTGA
 GCCCTTCTCAGTGGGACTAGTTCGAACATGTGGAGGAGATGACTGTGCTTGGCTGGAAAACCCCAAA
 AGTGTACATAAGTCATGGGACATTTTTTTTCGCAACACGAATGCCGGAGCCCCACCGGGCACTGCCTACC
 AGAGTCCCCTTCCCCTGAGCCGAGGCTCCCTGGCTGCTGTGGCCATGCACAGTCCCTGGTAGAAGCACA
 GCCCAACGTGGACAAGCTCGTGGAGGACCCTGGCAGTGCAGTCGTCATCAGGGCATATCAGATACGA
 GGGCACCATGTAGCACAGCTGGACCCCTGGGGATTTGGATGCTGATCTGGACTCCTCCGTGCCCGCTG
 ACATTATCTCATCCACAGACAACTTGGGTTCTATGGCCTGGATGAGTCTGACCTCGACAAGGTCTTCCA
 CTTGCCACCACCACTTTCATCGGGGACAGGAATCAGCACTTCTCTGCGGGAGATCATCCGTGCGCTG
 GAGATGGCCTACTGCCAGCATATTGGGGTGGAGTTCATGTTTCATCAATGACCTGGAGCAGTGCCAGTGGA
 TCCGGCAGAAGTTTGAGACCCCTGGGATCATGCAGTTCACAAATGAGGAGAAACGGACCCTGCTGGCCAG
 GCTTGTGCGGTCCACCAGGTTTGGAGAGTTCCTACAGCGGAAGTGGTCTCTGAGAAGCGCTTTGGTCTA
 GAAGGCTGCGAGGTAAGTATCCCTGCCCTCAAGACCATCATTGACAAGTCTAGTGAGAATGGCGTGGACT
 ACGTGATCATGGGCATGCCACACAGAGGGCGGCTGAACGTGCTTGCAAATGTCATCAGGAAGGAGCTGGA
 ACAGATCTTGTCAATTCGATTCAAAGCTGGAGGAGCTGATGAGGGCTCCGGAGATGTGAAGTACCAC
 CTGGGCATGTATACCCGAGGATCAATCGTGTCCACGACAGGAACATTACCTTGTCTTGGTGGCCAACC
 CTTCCCACCTTGAGGCCGCTGACCCCGTGGTGTGGGCAAGACCAAGCCGAACGTTTTACTGTGGCGA
 CACTGAAGGGAAAAAGGTAAGGCCACAGAGAGGCGTGCAAGGCAGATCGTCAAGGCCCATGTTCCAGC
 ATGGAGTTCGGCTCACCACAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC224183 representing NM_001003941
 Red=Cloning site Green=Tags(s)

MFHLRTCAAKLRPLTASQTVKTF SQNRPAARTFQQIRCYSAPVAAEPFLSGTSSNYVEEMYCAWLENPK
 SVHKSWDIFFRNTNAGAPPGTAYQSPLPLSRGSLAAVAHAQSLVEAQPNDKLVEDHLAVQSLIRAYQIR
 GHHVAQLDPLGILDADLDSSVPADIISSDKLGFYGLDESDLDKVFHLP TTTFFIGGQESALPLREIIRRL
 EMAYCQHIGVEFMFINDLEQCQWIRQKFETPGIMQFTNEEKRTLLARLVRSTRFEFFLQRKWSSEKRFGL
 EGCEVLIPALKTIIDKSSSENGVDYVIMGMPHRGRLNVLANVIRKELEQIFCQFDSKLEAADEGSGDVKYH
 LGMYHRRINRVTDRNITLSLVANPSHLEAADPVVMGKTKAEQFYCGDTEGKVRPRERRARQIVKAPCSS
 MEFRSPT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8059_b07.zip

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_001003941

ORF Size: 1281 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.

RefSeq: [NM_001003941.3](#)

RefSeq Size: 1791 bp

RefSeq ORF: 1284 bp

Locus ID: 4967

UniProt ID: [Q02218](#)

Cytogenetics: 7p13

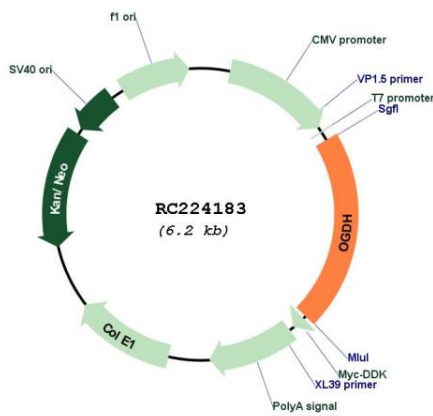
Protein Families: Druggable Genome

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

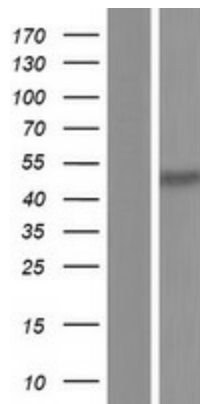
MW: 48.18 kDa

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 RC224183



Western blot validation of overexpression lysate (Cat# [LY424041]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224183 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).