

Product datasheet for **RG228630**

OGDH (NM_001165036) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	OGDH (NM_001165036) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	OGDH
Synonyms:	AKGDH; E1k; KGD1; OGDC; OGDH2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG228630 representing NM_001165036 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTTTCATTTAAGGACTTGTGCTGCTAAGTTGAGGCCATTGACGGCTTCCCAGACTGTTAAGACATTTT
CACAAAACAGACCAGCAGCAGCTAGGACATTTCAACAGATTCGGTGTATTCTGCACCTGTTGCTGCTGA
GCCCTTCTCAGTGGGACTAGTTCGAATATGTGGAGGAGATGTACTGTGCTTGGCTGGAAAACCCAAA
AGTGTACATAAGTCATGGGACATTTTTTTTCGCAACACGAATGCCGAGCCCCACCGGGCACTGCCTACC
AGAGTCCCCTTCCCCTGAGCCGAGGCTCCCTGGTGTGTGGCCATGCACAGTCCCTGGTAGAAGCACA
GCCCAACGTGGACAAGCTCGTGGAGGACCCTGGCAGTGCAGTCGCTCATCAGGGCATATCAGGTCAAG
GGTCAACCATTGCAAACTTGATCCTCTCGGAATTAGTTGTGTAATTTTATGATGATGCTCCAGTAACTG
TTTCTTCAAACGTGGGGTCTATGGCCTGGATGAGTCTGACCTCGACAAGGTCTTCCACTTGCCACCAC
CACTTTCATCGGGGGACAGGAATCAGCACTTCTCTGCGGGAGATCATCCGTCGGCTGGAGATGGCCTAC
TGCCAGCATATGGGGTGGAGTTCATGTTCAATGACCTGGAGCAGTGCCAGTGGATCCGGCAGAAGT
TTGAGACCCTGGGATCATGCAGTTCACAAATGAGGAGAAACGGACCCTGCTGGCCAGGCTTGTGCGGT
CACCAGGTTTGGAGGTTCTACAGCGGAAGTGGTCTCTGAGAAGCGCTTTGGTCTAGAAGGCTGCGAG
GTACTGATCCCTGCCCTCAAGACCATTGACAAGTCTAGTGAGAATGGCGTGGACTACGTGATCATGG
GCATGCCACACAGAGGGCGGCTGAACGTGCTTGCAAATGTCATCAGGAAGGAGCTGGAACAGATCTTCTG
TCAATTCGATTCAAAGCTGGAGGAGCTGATGAGGGCTCCGGAGATGTGAAGTACCACCTGGGCATGTAT
CACCAGGATCAATCGTGTACCGACAGGAACATTACCTTGTCTTGGTGGCCAACCCCTCCACCTTG
AGGCCGCTGACCCGTTGGTATGGGCAAGACCAAGCCGAACAGTTTTACTGTGGCGACTGAAGGGAA
AAAGGTATGTCCATCCTGTTGCATGGGATGCTGCATTTGCTGGCCAGGGCATTGTGTACGAGACCTTC
CACCTCAGCGACCTGCCATCCTACACAACCTCATGGCACCGTGCACGTGGTGTCAACAACAGATCGGCT
TACCACCGACCCTCGGATGGCCGCTCCTCCCCCTACCCCACTGACGTGGCCCGAGTGGTGAATGCCCC
CATTTTCCAGTGAACCTCAGATGACCCGAGGCTGTCATGTACGTGTCAAAGTGGCGCCGAGTGGAGG



[View online »](#)

AGCACCTTCCACAAGGACGTGGTTGTCGATTTGGTGTGTTACCGGCGCAACGGCCACAACGAGATGGATG
 AGCCCATGTTACGCAGCCGCTCATGTACAAGCAGATCCGCAAGCAGAAGCCTGTGTTACAGAAGTACGC
 TGAGCTGCTGGTGTGCGCAGGGTGTGGTCAACCAGCCTGAGTATGAGGAGGAAATTTCCAAGTATGATAAG
 ATCTGTGAGGAAGCTTTTGCCAGATCTAAAGATGAGAAGATCTTGACATTAAGCACTGGCTGGACTCTC
 CCTGGCCTGGCTTCTTACCCTGGACGGGCAGCCAGGAGCATGTCTGCCCTCCACGGGTCTGACGGA
 GGATATTCTGACACACATCGGGAATGTGGCTAGTTCTGTGCCTGTGAAAACTTTACTATTATCATGGAGG
 CTGAGCCGGATCTGAAGACTCGTGGGAAATGGTGAAGAACCGACTGTGGACTGGCTCTAGCCGGAGT
 ACATGGCGTTTGCTCGCTCCTGAAGGAGGCATCCACATTCGGCTGAGCGGCCAGGACGTGGAGCGGGG
 CACATTACGCCACCGCCACCATGTGCTCCATGACCAGAATGTGGACAAGAGAACCTGCATCCCCATGAAC
 CATCTCTGGCCCAATCAGGCCCCCTATACTGTGTGCAACAGCTCACTGTCTGAGTACGGCGTCTGGGCT
 TTGAGCTGGGCTTCGCCATGGCCAGTCTAATGCCCTGGTCTCTGGGAAGCCCAATTTGGTGACTTCCA
 CAACACGGCCAGTGTATCATCGACCAGTTCATCTGCCCGGACAAGCCAAGTGGTGCGGCAGAATGGC
 ATCGTGTGCTGCTGCCCATGGCATGGAGGCATGGGTCCAGAACATTCCTCCGCCGCCAGAGCGGT
 TCTTGAGATGTGCAACGATGACCCAGATGTCTGCCAGACCTTAAGAAGCCAACCTTCGACATCAATCA
 GCTATATGACTGCAATTGGGTTGTGCAACTGCTCCACTCCTGGCAACTCTTCCAGTGTCTACGACGC
 CAGATCCTGCTGCCATTCGGAAGCCGTTAATTATCTTACCCCCAAATCCTGTGCGCCACCCCGAGG
 CCAGATCCAGCTTTGATGAGATGCTTCCAGGAACCCACTTCCAGCGGGTATCCCAGAAGATGGCCCTGC
 AGCTCAGAACCCAGAAAATGTCAAAAGGCTTCTTCTGCACCGGCAAAGTGATTATGACCTCACCCGG
 GAGCGCAAAGCACGCGACATGGTGGGCAGGTGGCCATCAAGGATTGAGCAGCTGTGCCATTCCTT
 TTGACCTCCTGCTGAAGGAGGTGCAAGTACCCCAATGCTGAGCTGGCTGGTGGCAGGAGGAGACAA
 GAACCAAGGCTACTATGACTACGTGAAGCAAGACTTCGACCACCATCAGCCGCCAAGCCCGCTGCG
 TATGCCGGCCGGGACCCAGCGGCTGCTCCAGCCACCGCAACAAGAAGACCCACCTGACGGAGCTGCAGC
 GCCTCTGGACACGGCCTTCGACCTGGACGTCTTCAAGAACTTCTCG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG228630 representing NM_001165036
 Red=Cloning site Green=Tags(s)

MFHLRTCAAKLRPLTASQTVKTF SQNRPAARTFQQIRCYSAPVAAEPFLSGTSSNYVEEMYCAWLENPK
 SVHKSWDIFFRNTNAGAPPGTAYQSPLPLSRGSLAAVAHAQSLVEAQPNDKLVEDHLAVQSLIRAYQVR
 GHIIAKLDPLGISCVNFDDAPVTVSSNVGFYGLDESDLKVFHLP TTTFIGGQESALPLREIIRREEMAY
 CQHIGVEFMFINDLEQCQWIRQKFETPGIMQFTNEEKRTLLARLVRSTRFEEFLQRKWSSEKRFGLGCE
 VLIPALKTIIDKSENGVDYVIMGMPHRGRLNVLANVIRKELEQIFCQFDSKLEAADESGDVKYHLGMY
 HRRINRVTDNRNITLSLVANPSHLEAADPVVMGKTKAEQFYCGDTEGKKVMSILLHGDAAFAGQGIYETF
 HLDLPSYTHGTVHVNNQIGFTTDPMARSSPYPTDVARVFNAPIFHVNSDDPEAVMYVCKVAAEWR
 STFHKDVVVDLVCYRRNGHNEMDEPMFTQPLMYKQIRKQKPVLPKYAELLVSQGVVNQPEYEEEISKYDK
 ICEEAFARSKDEKILHIKHWLDSWPWGF TLDGQPRMSMCPSTGLTEDILTHIGNVASSVPVENFTIHGG
 LSRILKTRGEMVKNRTVDWALAEYMAFGSLLKEGIHRLSGQDVERGTF SHRHHVLHDQNVDKRTCIPMN
 HLWPNQAPYTVCNSSLSEYGVLFELGFAMASPVALVWEAQFGDFHNTAQCIIDQFICPGQAKWVRQNG
 IVLLLPHGMEGMGPEHSSARPERFLQMCNDDPDVLPDLKEANFDINQLYDCNWWVNCSTPGNFFHVLR
 QILLPFRKPLIIFTPKSLLRHPEARSSFDEMLPGTHFQRVIPEDGPAAQNPENVKRLLFCTGKVYYDLTR
 ERKARDMVGQVAITRIEQLSPFPDLLLLKEVQKYPNAELAWCQEEHKNQGYDYVVKPRLRTTISRAPVW
 YAGRDPAAAPATGNKKTHLTELQRLLDTAFDLDFVFNFS

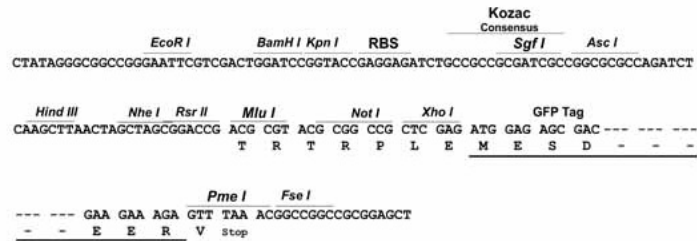
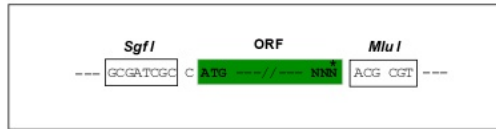
TRTRPLE – GFP Tag – V

Restriction Sites:

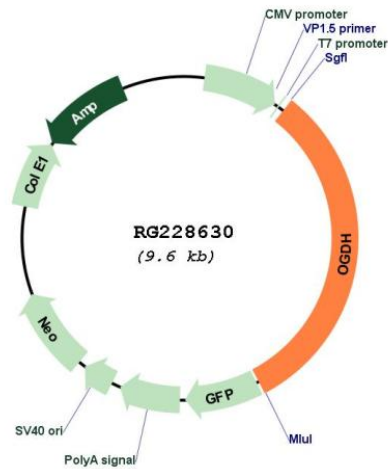
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_001165036
 ORF Size: 3057 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>
OTI Annotation:	<p>This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.</p>
Components:	<p>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).</p>
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:	NM_001165036.2
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:	<p>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]</p>