

## Product datasheet for **RG224183**

### OGDH (NM\_001003941) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	OGDH (NM_001003941) 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:	>RG224183 representing NM_001003941 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTTTCATTTAAGGACTTGTGCTGCTAAGTTGAGGCCATTGACGGCTTCCCAGACTGTTAAGACATTTT  
CACAAAACAGACCAGCAGCAGCTAGGACATTTCAACAGATTCCGGTGTATTCTGCACCTGTTGCTGCTGA  
GCCCTTCTCAGTGGGACTAGTTCGAATATGTGGAGGAGATGTACTGTGCTTGGCTGGAAAACCCAAA  
AGTGTACATAAGTCATGGGACATTTTTTTTCGCAACACGAATGCCGGAGCCCCACCGGGCACTGCCTACC  
AGAGTCCCCTTCCCCTGAGCCGAGGCTCCCTGGTGTCTGTGGCCATGCACAGTCCCTGGTAGAAGCACA  
GCCCAACGTGGACAAGCTCGTGGAGGACCACCTGGCAGTGCAGTCGCTCATCAGGGCATATCAGATACGA  
GGGCACCATGTAGCACAGCTGGACCCCTGGGGATTTTGGATGCTGATCTGGACTCCTCCGTGCCCGCTG  
ACATTATCTCATCCACAGACAACTTGGGTTCTATGGCCTGGATGAGTCTGACCTCGACAAGGTCTTCCA  
CTTGCCACCACCCTTTCATCGGGGACAGGAATCAGCACTTCCCTGCGGGAGATCATCCGTCCGGCTG  
GAGATGGCCTACTGCCAGCATATTGGGGTGGAGTTCATGTTCAATGACCTGGAGCAGTGCCAGTGGA  
TCCGGCAGAAGTTTGGACCCCTGGGATCATGCAGTTCACAAATGAGGAGAAACGGACCCCTGCTGGCCAG  
GCTTGTGGCTCCACCAGTTTGAGGAGTTCCTACAGCGGAAGTGGTCTCTGAGAAGCGCTTTGGTCTA  
GAAGGCTGCGAGGTAAGTCCCTGCCCTCAAGACCATTGACAAGTCTAGTGAAGTGGCGTGGGAT  
ACGTGATCATGGGCATGCCACACAGAGGGCGGCTGAACGTGCTTGCAAAATGTCATCAGGAAGGAGCTGGA  
ACAGATCTTCTGTCAATTCGATTCAAAGCTGGAGGCAGCTGATGAGGGCTCCGGAGATGTGAAGTACCAC  
CTGGGCATGTATCACCAGGATCAATCGTGTACCCGACAGGAACATTACCTTGTCTTGGTGGCCAACC  
CTTCCCACCTTGGAGCCGCTGACCCCGTGGTGTGGGCAAGACCAAGCCGAACAGTTTTACTGTGGCGA  
CACTGAAGGGAAAAAGGTAAGGCCAGAGAGGGCGTGAAGGCAGATCGTCAAGCCCCATGTTCCAGC  
ATGGAGTCCGCTACCAACA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG224183 representing NM\_001003941  
 Red=Cloning site Green=Tags(s)

MFHLRTCAAKLRPLTASQTVKTF SQNRPAARTFQQIRCYSAPVAAEPFLSGTSSNYVEEMYCAWLENPK  
 SVHKSWDIFFRNTNAGAPPGTAYQSPLPLSRGSLAAVAHAQSLVEAQPNDKLVEDHLAVQSLIRAYQIR  
 GHHVAQLDPLGILDADLDSSVPADIISSTDKLGIFYGLDESDLDKVFHLPTTTFIGGQESALPLREIIRRL  
 EMAYCQHIGVEFMFINDLEQCQWIRQKFETPGIMQFTNEEKRTLLARLVRSTRFEEFLQRKWSSEKRFGL  
 EGCEVLIPALKTIIDKSSENGVDYVIMGMPHRGRLLNVLANVIRKELEQIFCQFDSKLEAADEGSGDVKYH  
 LGMYHRRINRVTDNRNITLSLVANPSHLEADPVVMGKTKAEQFYCGDTEGKVRPRERRARQIVKAPCSS  
 MEFRSPT

TRTRPLE - GFP Tag - V

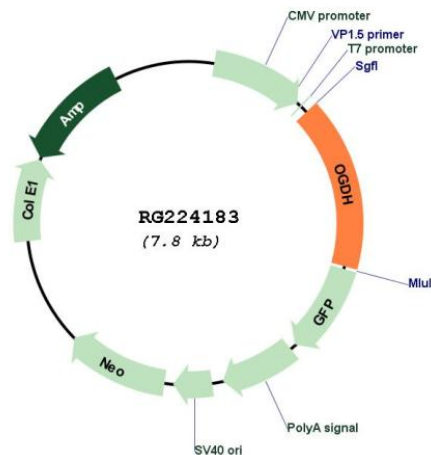
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_001003941

<b>ORF Size:</b>	1281 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001003941.3</a>
<b>RefSeq Size:</b>	1791 bp
<b>RefSeq ORF:</b>	1284 bp
<b>Locus ID:</b>	4967
<b>UniProt ID:</b>	<a href="#">Q02218</a>
<b>Cytogenetics:</b>	7p13
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Citrate cycle (TCA cycle), Lysine degradation, Metabolic pathways, Tryptophan metabolism
<b>Gene Summary:</b>	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 <sub>2</sub> 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]