

## Product datasheet for **RG230066**

### PDHA1 (NM\_001173454) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PDHA1 (NM_001173454) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PDHA1
Synonyms:	PDHA; PDHAD; PDHCE1A; PHE1A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG230066 representing NM_001173454 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAGGAAGATGCTCGCCGCGTCTCCCGGTGCTGTCTGGCGTCTCTCAGAAGCCGAGACATGGTCTTG  
CTACGTTGCCAGTCTGGTCTCCATCTCCAGGCTCAAGCAGTCTCCACCTCGGCTCCCAAAGTCTG  
GGATTACTCTCACTCTCTAAAACCAGGCAGGCAAGCAGAGTCTGGTAGCATCCCGTAATTTTGCAAT  
GATGCTACATTTGAAATTAAGAAATGTGACCTTACCAGGCTGGAAGAAGGCCCTCTGTCAACAGTGC  
TCACCAGGAGGATGGGCTCAAATACTACAGGATGATGCAGACTGTACGCCGAATGGAGTTGAAAGCAGA  
TCAGCTGTATAAACAGAAAATTATTCGTGGTTTCTGTCACTTGTGTGATGGTCAGGAAGCTTGTGTGTG  
GGCCTGGAGGCCGGCATCAACCCACAGACCATCTCATCACAGCCTACCGGGCTCACGGCTTACTTTCA  
CCCGGGGCTTTCCGTCCGAGAAATTCGCGAGAGCTTACAGGACGAAAAGGAGGTTGTGCTAAAGGGAA  
AGGAGGATCGATGCACATGTATGCCAAGAATTCTACGGGGCAATGGCATCGTGGGAGCGCAGGTGCC  
CTGGGCGTGGGATTGCTTAGCCTGTAAGTATAATGGAAAAGATGAGGTCTGCCTGACTTTATATGGCG  
ATGGTGTGCTAACCCAGGCCAGATATTCGAAGCTTACAACATGGCAGCTTTGTGAAATTACCTTGTAT  
TTTCATCTGTGAGAATAATCGCTATGGAATGGGAACGCTGTTGAGAGAGCGGCAGCCAGCACTGATTAC  
TACAAGAGAGGCGATTTCACTTGGGCTGAGAGTGGATGGAATGGATATCCTGTGCGTCCGAGAGGCCAA  
CAAGTTTGTGCTGCCTATTGTAGATCTGGGAAGGGGCCATCCTGATGGAGCTGCAGACTTACCGTTA  
CCACGGACACAGTATGAGTGACCCTGGAGTCAGTTACCGTACACGAGAAGAAATTCAGGAAGTAAGAAGT  
AAGAGTGACCCTATTATGCTTCTCAAGGACAGGATGGTGAACAGCAATCTTGCCAGTGTGGAAGAACTAA  
AGGAAATTGATGTGGAAGTGAGGAAGGAGATTGAGGATGCTGCCAGTTTGCCACGGCCGATCCTGAGCC  
ACCTTTGGAAGAGCTGGGCTACCACATCTACTCCAGCGACCCACCTTTTGAAGTTCGTGGTCCCAATCAG  
TGGATCAAGTTTAAGTCAGTCAGT

**ACCGTACGGCGCCGCTCGAG** - GFP Tag - GTTTAA



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Protein Sequence: >RG230066 representing NM\_001173454  
 Red=Cloning site Green=Tags(s)

MRKMLAAVSRVLSGASQKPRHGLATLPSLVSISRLKQSSHLGLPKCWDYSHSLKTRQASRVLVASRNFAN  
 DATFEIKKCDLHRL EEGPPVTTVL TREDGLKYRMMQT VRRMELKADQL YKQKIIRGFCHLCDGQEACCV  
 GLEAGINPTDHLITAYRAHGFTFTRGLSVREILAE LTGRKGCCAKGKGGSMHMYAKNFYGGNGIVGAQVP  
 LGAGIALACKYNGKDEVCLTLYGDGAANQGQIF EAYNMAALWKLPCIF ICENNR YGMGTSVERAAASTDY  
 YKRGDFIPGLRVGMDILCVREATRF AAAYCRSGKGPILMELQTYRYHGHSMSPDGVSYRTREEIQEVRS  
 KSDPIMLLKDRMVNSNLASVEELKEIDVEVRKEI EDAAQFATADPEPPLEELGYHIYSSDPPFEVRGANQ  
 WIKFKSVS

TRTRPLE - GFP Tag - V

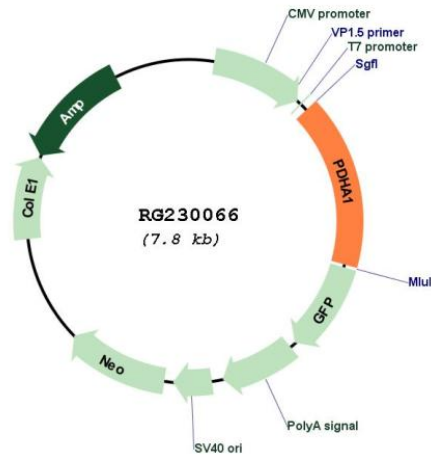
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_001173454

<b>ORF Size:</b>	1284 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_001173454.2</a>
<b>RefSeq Size:</b>	3504 bp
<b>RefSeq ORF:</b>	1287 bp
<b>Locus ID:</b>	5160
<b>UniProt ID:</b>	<a href="#">P08559</a>
<b>Cytogenetics:</b>	Xp22.12
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Butanoate metabolism, Citrate cycle (TCA cycle), Glycolysis / Gluconeogenesis, Metabolic pathways, Pyruvate metabolism, Valine, leucine and isoleucine biosynthesis
<b>Gene Summary:</b>	The pyruvate dehydrogenase (PDH) complex is a nuclear-encoded mitochondrial multienzyme complex that catalyzes the overall conversion of pyruvate to acetyl-CoA and CO <sub>2</sub> , and provides the primary link between glycolysis and the tricarboxylic acid (TCA) cycle. The PDH complex is composed of multiple copies of three enzymatic components: pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (E2) and lipoamide dehydrogenase (E3). The E1 enzyme is a heterotetramer of two alpha and two beta subunits. This gene encodes the E1 alpha 1 subunit containing the E1 active site, and plays a key role in the function of the PDH complex. Mutations in this gene are associated with pyruvate dehydrogenase E1-alpha deficiency and X-linked Leigh syndrome. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Mar 2010]