

Product datasheet for **RG201831**

PDHA1 (NM_000284) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PDHA1 (NM_000284) 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:	>RG201831 representing NM_000284 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGGAAGATGCTCGCCCGCTCTCCCGCTGCTGTCTGGCGTTCTCAGAAGCCGGCAAGCAGAGTGC
TGGTAGCATCCCCTAATTTGCAAATGATGCTACATTTGAAATTAAGAAATGTGACCTTCACCGGCTGGA
AGAAGGCCCTCTGTCAACAGTGTCTACCAGGGAGGATGGGCTCAAATACTACAGGATGATGCAGACT
GTACGCCGAATGGAGTTGAAAGCAGATCAGCTGTATAAACAGAAAATTATTCGTGGTTTCTGTCACCTGT
GTGATGGTCAGGAAGCTTGTGTGTGGCCTGGAGGCCGCATCAACCCACAGACCATCTCATCACAGC
CTACCGGCTCACGGCTTACTTTACCCGGGGCCTTTCGTCGAGAAATTCGCGAGAGCTTACAGGA
CGAAAAGGAGGTTGTGCTAAAGGAAAGGAGGATCGATGCACATGTATGCCAAGAACTTCTACGGGGCA
ATGGCATCGTGGGAGCGCAGGTGCCCTGGGCGCTGGGATTGCTCTAGCCTGTAAGTATAATGAAAAGA
TGAGGTCTGCCTGACTTTATATGGCGATGGTGTGCTAACCAGGGCCAGATTCGAAGCTTACAACATG
GCAGCTTTGTGGAATTACCTTGATTTTCATCTGTGAGAATAATCGCTATGGAATGGGAACGTCTGTTG
AGAGAGCGGCAGCCAGCACTGATTACTACAAGAGAGGCCGATTTTCATTCTGGGCTGAGAGTGGATGGAAT
GGATATCTGTGCGTCCGAGAGGCAACAAGGTTTGCTGCTGCCTATTGTAGATCTGGGAAGGGGCCATC
CTGATGGAGCTGCAGACTTACCGTTACCACGGACACAGTATGAGTGACCCTGGAGTCAGTTACCGTACAC
GAGAAGAAATTCAGGAAGTAAGAAGTAAGAGTGACCCTATTATGCTTCTCAAGGACAGGATGGTGAACAG
CAATCTTGCCAGTGTGGAAGAACTAAAGGAAATGATGTGGAAGTGAGGAAGGAGATTGAGGATGCTGCC
CAGTTTGCCACGGCCGATCCTGAGCCACCTTTGGAAGAGCTGGGCTACCACATCTACTCCAGCGACCCAC
CTTTTGAAGTTCGTGGTCCCAATCAGTGGATCAAGTTTAAAGTCAGTCAGT

ACCGTACCGGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG201831 representing NM_000284
Red=Cloning site Green=Tags(s)

MRKMLAAVSRVLSGASQKPA SRVLVSRNFANDATFEIKKCDLHRLEEGPPVTTVLTREDGLKYYRMMQT
 VRRMELKADQLYKQKIIRGFCHLCDGQEACCVGLEAGINPTDHLITAYRAHGFTFTRGLSVREILAEITG
 RKGGCAKGGKSSMHMYAKNFYGGNGIVGAQVPLGAGIALACKYNGKDEVCLTYGDGAANQGQIFEAAYNM
 AALWKLPCIFICENNRYGMGTSVERAAASTDYKRGDFIPGLRVDGMDILCVREATRFAAAYCRSGKGP
 LMELQTYRYHGHMSDPGVSYRTREEIQEVRSKSDPIMLLKDRMVNSNLASVEELKEIDVEVRKEIEDAA
 QFATADPEPPLEELGYHIYSSDPPFEVRGANQWIKFKSVS

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000284

ORF Size: 1170 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_000284.4](#)

RefSeq Size: 1472 bp

RefSeq ORF: 1173 bp

Locus ID: 5160

UniProt ID: [P08559](#)

Cytogenetics: Xp22.12

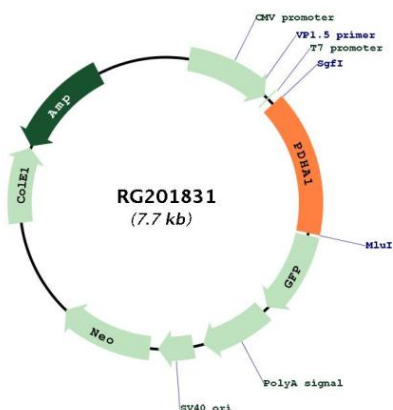
Domains: E1_dehydrog

Protein Families: Druggable Genome

Protein Pathways: Butanoate metabolism, Citrate cycle (TCA cycle), Glycolysis / Gluconeogenesis, Metabolic pathways, Pyruvate metabolism, Valine, leucine and isoleucine biosynthesis

Gene Summary: The pyruvate dehydrogenase (PDH) complex is a nuclear-encoded mitochondrial multienzyme complex that catalyzes the overall conversion of pyruvate to acetyl-CoA and CO₂, 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]

Product images:



Circular map for RG201831