

Product datasheet for **RG212337**

Pyruvate Kinase (PKLR) (NM_181871) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pyruvate Kinase (PKLR) (NM_181871) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Pyruvate Kinase
Synonyms:	PK1; PKL; PKRL; RPK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG212337 representing NM_181871
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGAAGGGCCAGCGGGTATCTGCGGCGGCCAGTGTGGCCAACTGACCCAGGAGCTGGGCACTGCCT
 TCTTCCAGCAGCAGCAGCTGCCAGCTGCTATGGCAGACACCTTCTGGAACACCTCTGCCTACTGGACAT
 TGACTCCGAGCCCGTGGCTGCTCGCAGTACCAGCATCATTGCCACCATCGGGCCAGCATCTCGCTCCGTG
 GAGCGCCTCAAGGAGATGATCAAGGCCGGGATGAACATTGCGCGACTCAACTTCTCCACGGCTCCCACG
 AGTACCATGCTGAGTCCATCGCCAACGTCGGGAGGCGGTGGAGAGCTTTGCAGGTTCCCCTACTAGCTA
 CCGGCCGTGGCCATCGCCCTGGACACCAAGGGACCGGAGATCCGCACTGGGATCCTGCAGGGGGTCCA
 GAGTCGGAAGTGGAGCTGGTGAAGGGCTCCAGGTGCTGGTACTGTGGACCCCGCTTCCGGACCGGG
 GGAACCGGAACACCGTGTGGGTGGACTACCCCAATATTGTCCGGTCTGCGGGTGGGGGCGCATCTA
 CATTGACGACGGGCTCATCTCCCTAGTGGTCCAGAAAATCGGTCCAGAGGGACTGGTACCCAAGTGGAG
 AACGGCGCGCTCCTGGGAGCCGGAAGGGCGTGAACCTGCCAGGGGCCAGGTGGACTTGCCCGGGCTGT
 CCGAGCAGGACGTCGAGACCTGCGCTTCGGGGTGGAGCATGGGGTGGACATCGTCTTGGCTCCTTTGT
 GCGGAAAGCCAGCGACGTGGCTGCCGTCAGGGCTGCTCTGGTCCGGAAGGACACGGCATCAAGATCATC
 AGCAAAATTGAGAACCACGAAGGCGTGAAGAGGTTTGTGAAATCCTGGAGGTGAGCGACGGCATCATGG
 TGGCACGGGGGACCTAGGCATCGAGATCCCAGCAGAGAAGGTTTTCTGGCTCAGAAGATGATGATTGG
 GCGCTGCAACTTGGCGGCAAGCCTGTTGTCTGTGCCACACAGATGCTGGAGAGCATGATTACCAAGCCC
 CGGCCAACGAGGGCAGAGACAAGCGATGTCGCCAATGCTGTGCTGGATGGGGTACTGCATCATGCTGT
 CAGGGGAGACTGCCAAGGGCAACTTCCCTGTGGAAGCGTGAAGATGCAGCATGCGGATGCCCGGGAGGC
 AGAGGCCGAGTGTACCACCGGACGCTGTTTGAAGAGCTACGTCGGGCAGCGCCACTAAGCCGTGATCCC
 ACTGAGGTCAACGCCATTGGTGTGTGGAGGCTGCCTTCAAGTGTGTGCTGCTGCCATCATTGTGCTGA
 CCACAAGTGGCCGCTCAGCCAGCTTCTGTCTCGGTACCGACCTCGGCAGCAGTCATTGCTGTACCCG
 CTCTGCCAGGCTGCCCGCCAGTCCACTATGCCAGGAGTCTTCCCCTTGCTTACCCTGAACCTCCA
 GAAGCCATCTGGGAGATGATGTAGATCGCCGGTGAATTTGGCATTGAAAGTGGAAAGCTCCGTGGCT
 TCCTCCGTGTTGGAGACCTGGTATTGTGGTACAGGCTGGCGACCTGGCTCCGGCTACACCAACATCAT
 GCGGGTGCTAAGCATATCC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG212337 representing NM_181871
 Red=Cloning site Green=Tags(s)

MEGPAGYLRRASVAQLTQELGTAFFQQQLPAAMADTFLEHLCLLDIDSEPVAARSTSIATIGPASRSV
 ERLKEMIKAGMNIARLNFSHGSHEYHAESIANVREAVESFAGSPLSYRPVAIALDTKGPEIRTGILQGGP
 ESEVELVKGSQVLVTVDPAFRTRGNANTVWVDYPNIVRVVPGGRIYIDDGLISLVVQKIGPEGLVTQVE
 NGGVLGSRKGVNLPQAQVDLPGLSEQDVRDLRFVGEHGVDIVFASFVRKASDVAAVRAALGPEGHGKII
 SKIENHEGVKRFDEILEVSDGIMVARGDLGIEIPA EKVF LAQKMMIGRCNLAGKPVVCA TQMLSEMITKP
 RPTRAETSDVANAVLDGADCIMLSGETAKGNFPVEAVKMQHAIAREAEAAVYHRQLFEELRRAAPLSRDP
 TEVTAIGAVEAAFKCAAIIIVLTTTGRSAQLLSRYRPRAAVIAVTRSAQAARQVHLCRGVFPLL YREPP
 EAIWADDVDRRVQFGIESGKLRGFLRVGDLVIVVTGWRP GSGYTNIMRVL SIS

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_181871

ORF Size: 1629 bp

OTI Disclaimer: 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.

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](#)

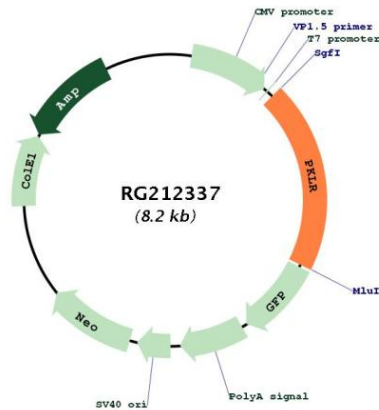
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_181871.1 , NP_870986.1
RefSeq Size:	2433 bp
RefSeq ORF:	1632 bp
Locus ID:	5313
UniProt ID:	P30613
Cytogenetics:	1q22
Protein Families:	Druggable Genome
Protein Pathways:	Glycolysis / Gluconeogenesis, Insulin signaling pathway, Maturity onset diabetes of the young, Metabolic pathways, Purine metabolism, Pyruvate metabolism, Type II diabetes mellitus
Gene Summary:	The protein encoded by this gene is a pyruvate kinase that catalyzes the transphosphorylation of phosphoenolpyruvate into pyruvate and ATP, which is the rate-limiting step of glycolysis. Defects in this enzyme, due to gene mutations or genetic variations, are the common cause of chronic hereditary nonspherocytic hemolytic anemia (CNSHA or HNSHA). Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG212337