

Product datasheet for **RC206455**

Pyruvate Kinase (PKLR) (NM_000298) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pyruvate Kinase (PKLR) (NM_000298) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pyruvate Kinase
Synonyms:	PK1; PKL; PKRL; RPK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC206455 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCGATCCAGGAGAACATATCATCCCTGCAGCTTCGGTCATGGGTCTCTAAGTCCCAAAGAGACTTAG
 CAAAGTCCATCCTGATTGGGGCTCCAGGAGGGCCAGCGGGTATCTGCGCGGGCCAGTGTGCCCAACT
 GACCCAGGAGCTGGGCACTGCCTTCTTCCAGCAGCAGCAGCTGCCAGCTGCTATGGCAGACACCTTCCTG
 GAACACCTCTGCCTACTGGACATTGACTCCGAGCCGTGGCTGCTCGCAGTACCAGCATATTGCCACCA
 TCGGGCCAGCATCTCGCTCCGTGGAGCGCTCAAGGAGATGATCAAGGCCGGGATGAACATTGCGCGACT
 CAATTCTCCCACGGCTCCCACGAGTACCATGCTGAGTCCATCGCCAACGTCCGGGAGGCGGTGGAGAGC
 TTTGCAGTTCCCACTCAGCTACCGGCCGTGGCCATCGCCCTGGACACCAAGGACCGGAGATCCGCA
 CTGGGATCCTGCAGGGGGTCCAGAGTCGGAAGTGGAGCTGGTGAAGGGCTCCAGGTGCTGGTACTGT
 GGACCCCGCTCCGGACGCGGGGAACCGAACACCGTGTGGGTGGACTACCCCAATATTGTCCGGGTC
 GTGCCGTGGGGGCCGATCTACATTGACGACGGGCTCATCTCCCTAGTGGTCCAGAAAATCGGCCAG
 AGGGACTGGTGACCCAAGTGGAGAACGGCGGCGTCTGGGCAGCCGGAAGGGCGTGAAC TTGCCAGGGGC
 CCAGGTGGACTTGCCCGGGCTGTCCGAGCAGGACGTCCGAGACCTGCGCTTCGGGGTGGAGCATGGGGT
 GACATCGTCTTTGCCCTCTTTGTGCGGAAAGCCAGCGAGTGGCTGCCGTGAGGGCTGCTCTGGTCCGG
 AAGGACACGGCATCAAGATCATCAGCAAAATTGAGAACCAGGAAGGCGTGAAGAGTTTGTGAAATCCT
 GGAGGTGAGCGACGGCATCATGGTGGCACGGGGGACCTAGGCATCGAGATCCCAGCAGAGAAGGTTTTTC
 CTGGCTCAGAAGATGATGATTGGGCGCTGCAACTTGGCGGGCAAGCCTGTTGTCTGTGCCACACAGATGC
 TGGAGCATGATTACCAAGCCCGGCCAACGAGGGCAGAGACAAGCGATGTCGCAATGCTGTGCTGGA
 TGGGGTACTGCATCATGCTGTGACGGGAGACTGCCAAGGGCAACTCCCTGTGGAAGCGGTGAAGATG
 CAGCATGCGATTGCCCGGAGGCAGAGGCCGAGTGTACCACCGCAGCTGTTTGAGGAGCTACGTCGGG
 CAGCGCCACTAAGCCGTGATCCCACTGAGGTCAACGCCATTGGTGTGTGGAGGCTGCCTTCAAGTGCTG
 TGCTGCTGCCATATTGTGCTGACCACAAC TGCCCGCTCAGCCAGCTTCTGTCTCGGTACCGACCTCGG
 GCAGCAGTCATTGCTGTACCCGCTCTGCCAGGCTGCCCGCAGGTCCACTTATGCCGAGGAGTCTTCC
 CCTTGCTTTACCGTGAACCTCCAGAAGCCATCTGGGCAGATGATGATAGATCGCCGGTGCATTTGGCAT
 TGAAGTGGAAAGCTCCGTGGCTTCTCCGTGTTGGAGACCTGGTATTGTGGTACAGGCTGGCGACCT
 GGCTCCGGCTACACCAACATCATGAGGGTGCTAAGCATATCC

ACGCGTACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC206455 protein sequence
 Red=Cloning site Green=Tags(s)

MSIQENISSQLRSWVSKSQRDLAKSILIGAPGGPAGYLRRASVAQLTQELGTAFFQQQLPAAMADTFL
 EHLCLLDIDSEPVAARSTSIATIGPASRSVERLKEMIKAGMNIARLNF SHGSHEYHAESIANVREAVES
 FAGSPLSYRPVAIALDTKGPEIRTGILQGGPESEVELVKGSQVLVTVDPAFRTRGNANTVWDYPNIVRV
 VPVGGRIYIDDGLISLVVQKIGPEGLVTQVENGVLGSRKGVNLPQAQVDLPGLSEQDVRDLRFVGEHGV
 DIVFASFVRKASDVAAVRAALGPEGHGKIIISKIENHEGVKRFDEILEVSDGIMVARGDLGIEIPA EKVF
 LAQKMMIGRCNLAGKPVVCATQMLESMITKPRPTRAETSDVANAVLDGADCIMLSGETAKGNFPVEAVKM
 QHAIAREAEAAYVHRQLFEELRRAAPLSRDPTEVTAIGAVEAAFKCCAAAIIIVLTTTGRSAQLLSRYRPR
 AAVIAVTRSAQAARQVHLCRGVFLLYREPPEAIWADDVDRRVQFGIESGKLRGFLRVGDLVIVVTGWRP
 GSGYTNIMRVLSIS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6015_c10.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_000298

ORF Size: 1722 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_000298.2](#)

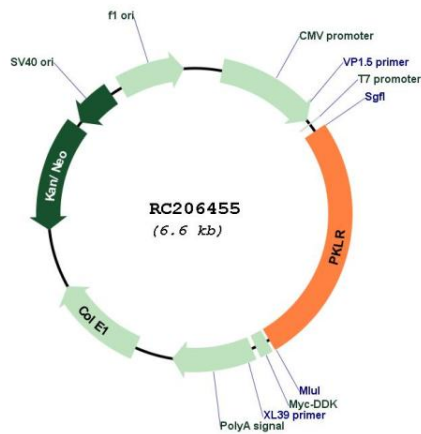
RefSeq Size: 3053 bp

RefSeq ORF: 1725 bp

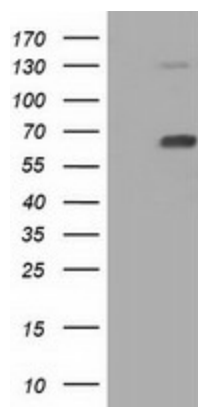
Locus ID: 5313

UniProt ID: [P30613](#)
Cytogenetics: 1q22
Domains: PK
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
MW: 61.8 kDa
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]

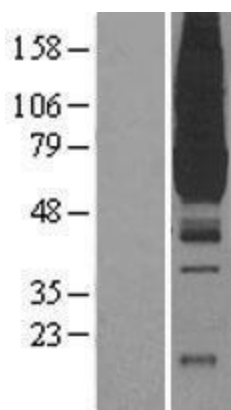
Product images:



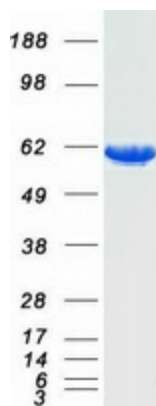
Circular map for RC206455



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PKLR (Cat# RC206455, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PKLR antibody (Cat# [TA501413]). Positive lysates [LY400113] (100ug) and [LC400113] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400113]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206455 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PKLR protein (Cat# [TP306455]). The protein was produced from HEK293T cells transfected with PKLR cDNA clone (Cat# RC206455) using MegaTran 2.0 (Cat# [TT210002]).