

Product datasheet for **RC202424**

ketohexokinase (KHK) (NM_000221) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ketohexokinase (KHK) (NM_000221) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ketohexokinase
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC202424 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAAGAGAAGCAGATCCTGTGCGTGGGGCTAGTGGTCTGGACGTCATCAGCCTGGTGGACAAGTACC
CTAAGGAGGACTCGGAGATAAGGTGTTTGTCCCAGAGATGGCAGCGCGGAGGCAACGCGTCCAACCTCTG
CACCATTCTCCCTGCTCGGAGCCCCCTGTGCCTTCAATGGCTCCTGGCCATGTTGCTGAT
TTTGTCTGGATGACCTCCGCCGTTATTCTGTGGACCTACGCTACACAGTCTTTCAGACCACAGGCTCCG
TCCCCATCGCCACGGTCATCATCAACGAGGCCAGTGGTAGCCGACCATCTATACTATGACAGGAGCCT
GCCAGATGTGTCTGCTACAGACTTTGAGAAGGTTGATCTGACCCAGTTCAAGTGGATCCACATTGAGGGC
CGAACGCATCGGAGCAGGTGAAGATGCTGCAGCGGATAGACGCACACAACACCAGGCAGCCTCCAGAGC
AGAAGATCCGGGTGTCCTGGAGGTGGAGAAGCCACGAGAGGAGCTCTTCCAGCTGTTTGGCTACGGAGA
CGTGGTGTGTCAGCAAAGATGTGGCCAAGCACTTGGGGTTCAGTCAGCAGAGGAAGCCTTGAGGGGC
TTGTATGGTCGTGTGAGGAAAGGGGCTGTGCTTGTCTGTGCCTGGGCTGAGGAGGGCGCCGACGCCCTGG
GCCCTGATGGCAAATTGCTCCACTCGGATGCTTCCC GCCACCCCGCTGGTGGATACACTGGGAGCTGG
AGACACCTTCAATGCCTCCGTCACTTTCAGCCTCTCCAGGGGAGGAGCGTGCAGGAAGCACTGAGATTC
GGGTGCCAGGTGGCCGGCAAGAAGTGTGGCCTGCAGGGCTTTGATGGCATCGT

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC202424 protein sequence
Red=Cloning site Green=Tags(s)

MEEKQILCVGLVVLDVISLVDKYPKEDSEIRCLSQRWQRGGNASNSCTILSLLGAPCAFMGSMAPGHVAD
 FVLDDLRRYSVDLRYTVFQTTGSVPIATVIINEASGSRITL YYDRSLPDVSATDFEKVDLTQFKWIIIEG
 RNASEQVKMLQRIDAHNTRQPPEQKIRVSVEVEKPREELFQLFGYGDVVFVSKDVAKHLGFQSAEEALRG
 LYGRVVRKGAVLVCAWAEEGADALGPDGKLLHSDAFPPPRVVDTLGAGDTFNASVIFSLSQGRSVQEALRF
 GCQVAGKKCGLQGFQFDGIV

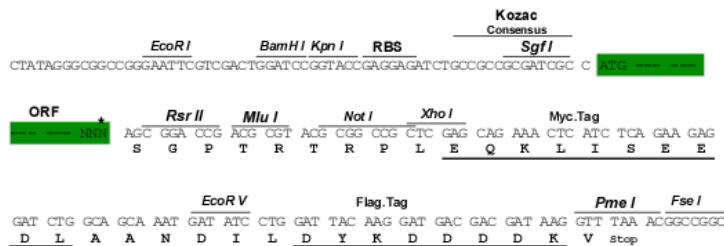
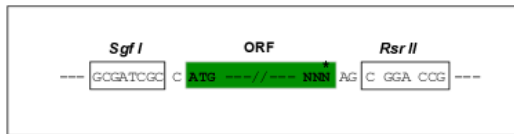
SGPTRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6183_g06.zip

Restriction Sites: SgfI-RsrII

Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

ACCN: NM_000221

ORF Size: 894 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_000221.3](#)

RefSeq Size: 2433 bp

RefSeq ORF: 897 bp

Locus ID: 3795

UniProt ID: [P50053](#)

Cytogenetics: 2p23.3

Domains: pfkB

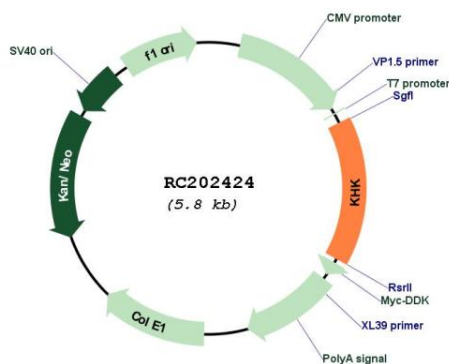
Protein Families: Druggable Genome

Protein Pathways: Fructose and mannose metabolism, Metabolic pathways

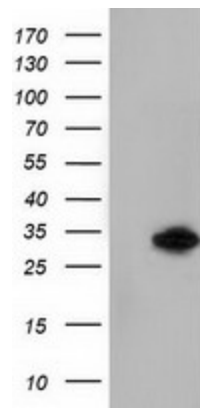
MW: 32.7 kDa

Gene Summary: This gene encodes ketoheksokinase that catalyzes conversion of fructose to fructose-1-phosphate. The product of this gene is the first enzyme with a specialized pathway that catabolizes dietary fructose. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008]

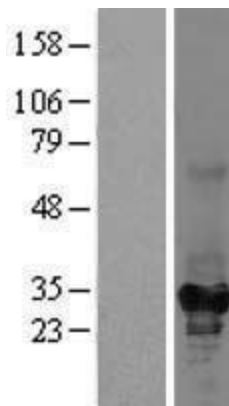
Product images:



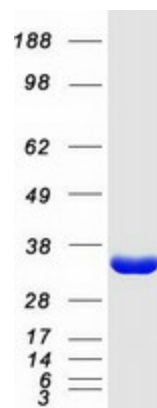
Circular map for RC202424



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY KHK (Cat# RC202424, 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-KHK (Cat# [TA501410]). Positive lysates [LY400082] (100ug) and [LC400082] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400082]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202424 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified KHK protein (Cat# [TP302424]). The protein was produced from HEK293T cells transfected with KHK cDNA clone (Cat# RC202424) using MegaTran 2.0 (Cat# [TT210002]).