

Product datasheet for **RC216634**

Hexokinase 1 (HK1) (NM_033497) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hexokinase 1 (HK1) (NM_033497) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hexokinase 1
Synonyms:	hexokinase; HK; HK1-ta; HK1-tb; HK1-tc; HKD; HKI; HMSNR; HXK1; NEDVIBA; RP79
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC216634 representing NM_033497
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGGCAGATCTGCCAGCGAGAATCGGCTACAGCAGCTGAAAAACAAAACCTTCATCTACTTGGCTGAAA
 GTGAGATTGACAAGTATCTGTATGCCATGCGGCTCTCCGATGAAACTCTCATAGATATCATGACTCGCTT
 CAGGAAGGAGATGAAGAATGGCCTCTCCCGGATTTTAATCCAACAGCCACAGTCAAGATGTTGCCAACA
 TTCGTAAGGTCCATTCTGATGGCTCTGAAAAGGGAGATTTCAATGCCCTGGATCTTGGTGGGTCTTCT
 TTCGAATTCTGCGGGTGAAGTGAATCATGAGAAAAACAGAATGTTACATGGAGTCCGAGGTTTATGA
 CACCCAGAGAACATCGTGCACGGCAGTGAAGCCAGCTTTTTGATCATGTTGCTGAGTGCCTGGGAGAT
 TTCATGGAGAAAAGGAAGATCAAGGACAAGAAGTTACCTGTGGGATTCACGTTTTCTTTCTTCCCAAC
 AATCCAAAATAGATGAGGCCATCCTGATCACCTGGACAAAGCGATTTAAAGCGAGCGGAGTGAAGGAGC
 AGATGTGGTCAAACCTGCTTAACAAGCCATCAAAAAGCGAGGGGACTATGATGCCAACATCGTAGCTGTG
 GTGAATGACACAGTGGGACCATGATGACTGTGGCTATGACGACCAGCACTGTGAAGTCGGCTGATCA
 TCGGCACTGGCACCAATGCTTGCTACATGGAGAACTGAGGCACATTGATCTGGTGAAGGAGACGAGGG
 GAGGATGTGTATCAATACAGAATGGGGAGCCTTTGGAGACGATGGATCATTAGAAGACATCCGGACAGAG
 TTTGACAGGGAGATAGACCGGGGATCCCTCAACCTGGAAAACAGCTGTTTGAGAAGATGGTCAGTGGCA
 TGTACTTTGGGAGAGCTGGTTCGACTGATCCTAGTCAAGATGGCCAAGGAGGGCCTCTATTTGAAGGGCG
 GATCACCCCGAGCTGCTCACCCGAGGGAAGTTAACACCAGTGTGTGTCAGCCATCGAAAAGAATAAG
 GAAGGCCTCCACAATGCCAAAGAAATCCTGACCCGCTGGGAGTGGAGCCGTCCGATGATGACTGTGTCT
 CAGTCCAGCAGTTCGACCAATGCTCATTTTCGCTCAGCCAATTGGTGGCTGCCACACTGGGCGCCAT
 CTTGAACCGCCTGCGTGATAACAAGGGCACACCCAGGCTGCGGACCACGGTTGGTGTGACGGATCTCTT
 TACAAGACGCACCCACAGTATCCCGCGCTTCCACAAGACTCTAAGGCGCTTGGTGCCAGACTCCGATG
 TGCGCTTCTCTCTCGGAGAGTGGCAGCGGAAGGGGGCTGCCATGGTGACGGCGGTGGCTACCCTT
 GGCCGAGCAGCACCGGCAGATAGAGGAGACCCTGGCTCATTTCCACCTCACCAAAGACATGCTGCTGGAG
 GTGAAGAAGAGGATGCGGGCCGAGATGGAGCTGGGGCTGAGGAAGCAGACGCACAACAATGCCGTGGTTA
 AGATGCTGCCCTCTTCGTCGGGAGAACTCCCGACGGGACCGAGAATGGTACTTCTGGCCCTGGATCT
 TGGAGGAACCAATTTCCGTGTGCTGCTGGTAAAAATCCGTAGTGGGAAAAAGAGAACGGTGGAAATGCAC
 AACAAGATCTACGCCATTCCTATTGAAATCATGCAGGGCACTGGGGAAGAGCTGTTTGATCACATTTGCT
 CCTGCATCTCTGACTTCTTGGACTACATGGGGATCAAAGGCCCCAGGATGCCTCTGGGCTTACGTTCTC
 ATTTCCCTGCCAGCAGACGAGTCTGGACGCGGGAATCTTGATCACGTGGACAAAGGGTTTTAAGGCAACA
 GACTGCGTGGGCCACGATGTAGTCACCTTACTAAGGGATGCGATAAAAAGGAGAGAGGAATTTGACCTGG
 ACGTGGTGGCTGTGGTCAACGACACAGTGGGCACCATGATGACCTGTGCTTATGAGGAGCCACCTGTGA
 GGTTGGACTCATTGTTGGGACCGGCAGCAATGCCTGCTACATGGAGGAGATGAAGAACGTGGAGATGGTG
 GAGGGGGACCAGGGCAGATGTGCATCAACATGGAGTGGGGGGCCTTTGGGGACAACGGGTGTCTGGATG
 ATATCAGGACACACTACGACAGACTGGTGGACGAATATCCCTAAATGCTGGGAAAACAAAGGTATGAGAA
 GATGATCAGTGGTATGTACCTGGGTGAAATCGTCCGCAACATCTTAATCGACTTCAACAAGAGGGATTC
 CTCTCCGAGGGCAGATCTCTGAGACGCTGAAGACCCGGGGCATCTTTGAGACCAAGTTTCTCTCAGA
 TCGAGAGTGACCGATTAGCACTGCTCCAGTCCGGGCTATCCTCCAGCAGCTAGGTCTGAATAGCACCTG
 CGATGACAGTATCCTCGTCAAGACAGTGTGCGGGGTGGTGTCCAGGAGGGCCGCACAGCTGTGTGGCGCA
 GGCATGGCTGCGGTTGTGGATAAGATCCGCGAGAACAGAGGACTGGACCGTCTGAATGTGACTGTGGGAG
 TGGACGGGACACTCTACAAGCTTATCCACACTTCTCCAGAATCATGCACCAGACGGTGAAGGAAGTGTG
 ACCAAAATGTAACTGTCTTCTCTGTCTGAGGATGGCAGCGGCAAGGGGGCCGCCCTCATCACGGCC
 GTGGCGTGCGGTTACGCACAGAGGCAAGCAGC

ACGCGTACGCGGCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAAGTTTAA

Protein Sequence: >RC216634 representing NM_033497
 Red=Cloning site Green=Tags(s)

```

MGQICQRESATAAEKPKLHLLAESEIDKYLAMRLSDETLIDIMTRFRKEMKNGLSRDFNPTATVKMLPT
FVRSIPDGSEKGFIALDLGGSSFRILRVQVNHKQNVHMESEVYDTPENIVHGSGSQLFDHVAECLGD
FMEKRKIKDKKLPVGFTFSPFCQQSKIDEAILITWTKRFKASGVEGADVVKLLNKAIKKRGDYDANIVAV
VNDTVGTMMTTCGYDDQHCEVGLIIGTGTNACMEELRHIDLVEGDEGRMCINTEWAFGDDGSLEDIRTE
FDREIDRGS LNPGKQLFEKMVSGMYLGELVRLILVKMAKEGLLFEGRITPELLTRGKFNTSDVSAIEKNK
EGLHNAKEILTRLGVPEPDDDCVSVQHVCTIVSFRSANLVAATLGAILNRLRDNKGTPrLRRTTVGVDGSL
YKTHPQYSRRFHKTLRRLVPDSVDFLLSESGSGKGAAMVTAVAYRLAEQHRQIEETLAHFHLTKDMLLE
VKKRMRAEMELGLRKQTHNNAVVKMLPSFVRRTPDGTENGDFLALDLGGTNFRVLLVKIRSGKKRTVEMH
NKIYAIPIEIMQGTGEELFDHIVSCISDFLDYMGIKGPRMPLGFTFSFPCQQTSLDAGILITWTKGFKAT
DCVGHDEVVTLRLDAIKRREFDLDVVAVVNDTVGTMMTCAYEPTCEVGLIVGTGSNACMEEMKNVEMV
EGDQGMQMCINMEWGAFGDNGCLDDIRTHYDRLVDEYSLNAGKQRYEKMISGMYLGEIVRNILIDFTKKGF
LFRGQISETLKTGRGIFETKFLSQIESDRLALLQVRAILQQLGLNSTCDDSSILVKTVCVVSRRAAQLCGA
GMAAVVDKIRENRGLDRLNVTGVDGTLYKLHPHFSRIMHQTVKELSPKCNVSFLLSEDSGSGKAALITA
VGVRLRTEASS
  
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg5439_d01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



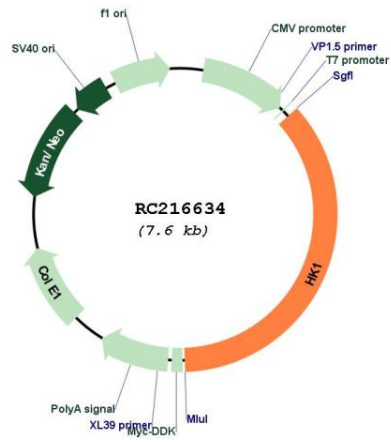
* The last codon before the Stop codon of the ORF

ACCN: NM_033497

ORF Size: 2763 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:	<ol style="list-style-type: none"> 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_033497.2 , NP_277032.1
RefSeq Size:	3832 bp
RefSeq ORF:	2766 bp
Locus ID:	3098
UniProt ID:	P19367
Cytogenetics:	10q22.1
Protein Families:	Druggable Genome
Protein Pathways:	Amino sugar and nucleotide sugar metabolism, Fructose and mannose metabolism, Galactose metabolism, Glycolysis / Gluconeogenesis, Insulin signaling pathway, Metabolic pathways, Starch and sucrose metabolism, Type II diabetes mellitus
MW:	102.7 kDa
Gene Summary:	Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. This gene encodes a ubiquitous form of hexokinase which localizes to the outer membrane of mitochondria. Mutations in this gene have been associated with hemolytic anemia due to hexokinase deficiency. Alternative splicing of this gene results in several transcript variants which encode different isoforms, some of which are tissue-specific. [provided by RefSeq, Apr 2016]

Product images:



Circular map for RC216634