

Product datasheet for **RG216182**

Hexokinase 1 (HK1) (NM_033500) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hexokinase 1 (HK1) (NM_033500) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Hexokinase 1
Synonyms:	hexokinase; HK; HK1-ta; HK1-tb; HK1-tc; HKD; HKI; HMSNR; HXK1; NEDVIBA; RP79
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG216182 representing NM_033500
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCAAAAAGAGCCCTGCATGATTTTATTGACAAGTATCTCTATGCCATGCGGCTCTCCGATGAAACTC
 TCATAGATATCATGACTCGCTTCAGGAAGGAGATGAAGAATGGCCTCTCCCGGATTTTAAATCCAACAGC
 CACAGTCAAGATGTTGCCAACATTTCGTAAGGTCCATTCTGATGGCTCTGAAAAGGGAGATTTTCATTGCC
 CTGGATCTTGGTGGTCTTCTTTTGAATTCTGCGGGTGAAGTGAATCATGAGAAAAACAGAATGTTT
 ACATGGAGTCCGAGGTTTATGACACCCAGAGAACATCGTGCACGGCAGTGAAGCCAGCTTTTTGATCA
 TGTTGCTGAGTGCCTGGGAGATTTATGGAGAAAAAGGAAGATCAAGGACAAGAAGTTACCTGTGGGATTC
 ACGTTTTCTTTCTTGGCAACAATCCAAAATAGATGAGGCCATCCTGATCACCTGGACAAAAGCGATTTA
 AAGCGAGCGGAGTGAAGGAGCAGATGTGGTCAAACCTGTTAACAAGCCATCAAAAAGCGAGGGGACTA
 TGATGCCAACATCGTAGCTGTGGTGAATGACACAGTGGGCACCATGATGACCTGTGGCTATGACGACCAG
 CACTGTGAAGTCGGCCTGATCATCGGCACTGGCACCAATGCTTGTACATGGAGGAACTGAGGCACATTG
 ATCTGGTGAAGGAGACGAGGGGAGGATGTGTATCAATACAGAATGGGGAGCCTTTGGAGACGATGGATC
 ATTAGAAGACATCCGGACAGAGTTTACAGGGAGATAGACCGGGGATCCCTCAACCTGGAAAACAGCTG
 TTTGAGAAGATGGTCAGTGGCATGTACTTGGGAGAGCTGGTTCGACTGATCCTAGTCAAGATGGCCAAGG
 AGGGCCTCTTATTTGAAGGGCGGATCACCCCGGAGCTGCTCACCCGAGGGAAAGTTAACACCAGTGTGT
 GTCAGCCATCGAAAAGAATAAGGAAGGCCTCCACAATGCCAAAGAAATCCTGACCCGCTGGGAGTGGAG
 CCGTCCGATGACTGTGTCTCAGTCCAGCACGTTTGCACCATTGTCTCATTTTCGCTCAGCCAATTGG
 TGGTCCACACTGGGCGCCATCTTGAACCGCCTGCGTGATAACAAGGGCACACCCAGGTCGGGACCAC
 GGTTGGTGTGACGGATCTCTTTACAAGACGCACCCACAGTATTCCCGGGGTTTCCACAAGACTCTAAGG
 CGTTGGTGCCAGACTCCGATGTGCGCTTCTCTCTCGAGAGTGGCAGCGCAAGGGGCTGCCATGG
 TGACGGCGGTGGCTACCGCTTGGCCGAGCAGCACCGGCAGATAGAGGAGACCCTGGCTCATTTCCACCT
 CACCAAGGACATGCTGCTGGAGGTGAAGAAGAGGATGCGGGCCGAGATGGAGCTGGGGCTGAGGAAGCAG
 ACGCACAACAATGCCGTGGTAAAGATGCTGCCCTCCTTCGTCGGGAGAACTCCCGACGGGACCGAGAATG
 GTGACTTCTTGGCCCTGGATCTTGGAGGAACCAATTTCCGTGTGCTGCTGGTGAATCCGTAGTGGGAA
 AAAGAGAACGGTGAATGCACAACAAGATCTACGCCATTCTATTGAAATCATGCAGGGCACTGGGGAA
 GAGCTGTTTGTACATTGTCTCTGATCTCTGACTTCTTGGACTACATGGGGATCAAAGGCCCCAGGA
 TGCTCTGGGCTTACGTTCTCATTCCCTGCCAGCAGACGAGTCTGGACGCGGGAATCTTGATCACGTG
 GACAAAGGGTTTTAAGGCAACAGACTGCGTGGGCCACGATGTAGTCACCTTACTAAGGGATGCGATAAAA
 AGGAGAGAGGAATTTGACCTGGACGTGGTGGTGTGGTCAACGACACAGTGGGCACCATGATGACCTGTG
 CTTATGAGGAGCCACCTGTGAGGTTGGACTCATTGTTGGGACCGGCAGCAATGCCTGCTACATGGAGGA
 GATGAAGAACGTGGAGATGGTGGAGGGGACCAGGGCAGATGTGCATCAACATGGAGTGGGGGGCCTTT
 GGGGACAACGGGTGTCTGGATGATATCAGGACACACTACGACAGACTGGTGGACGAATATCCCTAAATG
 CTGGGAAACAAAGGTATGAGAAGATGATCAGTGGTATGTACCTGGGTGAAATCGTCCGCAACATCTTAA
 CGACTTCAACAAAGGGATTCCTCTTCCGAGGGCAGATCTCTGAGACGCTGAAGACCCGGGGCATCTTT
 GAGACCAAGTTTCTCTCAGATCGAGAGTGACCGATTAGCACTGCTCCAGGTCCGGGCTATCCTCCAGC
 AGCTAGGTCTGAATAGCACCTGCGATGACAGTATCCTCGTCAAGACAGTGTGCGGGTGGTGTCCAGGAG
 GGCCGCACAGCTGTGTGGCGCAGGCATGGCTGCGGTTGTGGATAAGATCCGCGAGAACAGAGGACTGGAC
 CGTCTGAATGTGACTGTGGGAGTGGACGGGACACTCTACAAGCTTATCCACACTTCTCCAGAATCATGC
 ACCAGACGGTGAAGGAACTGTCACCAAAATGTAACGTGTCCTTCTCTGCTGAGGATGGCAGCGGCA
 GGGGGCCGCCCTCATCACGGCCGTGGCGTGGGTTACGCACAGAGGCAAGCAGC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – **GTTTAA**

Protein Sequence: >RG216182 representing NM_033500
 Red=Cloning site Green=Tags(s)

```

MAKRALHDFIDKYLAMRLSDETLIDIMTRFRKEMKNGLSRDFNPTATVKMLPTFVRSIPDGSEKGFIA
LDLGGSSFRILRVQVNHKQNVHMESEVYDTPENIVHSGSQFLDHVAECLGDFMEKRKIKDKKLPVGF
TFSFPCQQSKIDEAILITWTKRFKASGVEGADVVKLLNKAIKKRGDYDANIVAVVNDTVGTMTCGYDDQ
HCEVGLIIGTGTNACYMEELRHIDLVEGDEGRMCINTEWGAFGDDGSLEDIRTEFDREIDRGS LNPGKQL
FEKMVSGMYLGELVRLILVKMAKEGLLFEGRITPELLTRGKFNTSDVSAIEKNKEGLHNAKEILTRLGVE
PSDDDCVSVQHVCTIVSFRSANLVAATLGAILNRLRDNKGTPLRRTTVGVVDGSLYKTHPQYSRRFHKTLR
RLVPDSVVRFLLESVSGKGAAMVTAVAYRLAEQHRQIEETLAHFHLTKDMLLEVKKRMRAEMELGLRKQ
THNNAVVKMLPSFVRRTPDGTENGDFLALDLGGTNFRVLLVKIRSGKKRTVEMHNKIYAIPIEIMQGTGE
ELFDHIVSCISDFLDYMGIKGPRMPLGFTFSFPCQQTSLDAGILITWTKGFKATDCVGHVTVLLRDAIK
RREEFDLDDVAVVNDTVGTMTCAYEPTCEVGLIVGTGSNACYMEEMKNVEMVEGDQGMCMINMEWGA
FDGNGCLDDIRTHYDRLVDEYSLNAGKQRYEKMISGMYLGEIVRNILIDFTKKGFLFRGQISETLKRIGIF
ETKFLSQIESDRLLALLQVRAILQQLGLNSTCDDSIKVTKVCGVSRRAAQLCGAGMAAVVDKIRENRGLD
RLNVTVGVVDGTLVKLHPHFSRIMHQTVKELSPKCNVSFLLSEDGSGKGAALITAVGVRLRTEASS
  
```

TRTRPLE - GFP Tag - V

Restriction Sites:

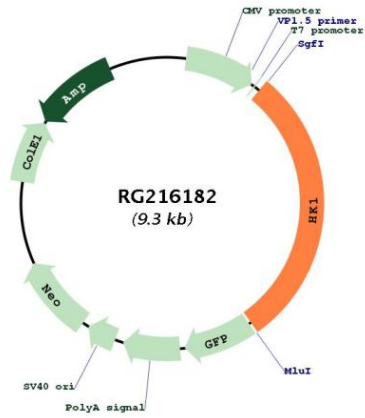
SgfI-MluI

Cloning Scheme:



ACCN:	NM_033500
ORF Size:	2715 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_033500.2 , NP_277035.2
RefSeq Size:	3979 bp
RefSeq ORF:	2718 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
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 RG216182