

Product datasheet for **SC305645**

Hexokinase 1 (HK1) (NM_033498) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hexokinase 1 (HK1) (NM_033498) Human Untagged Clone
Tag:	Tag Free
Symbol:	HK1
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)



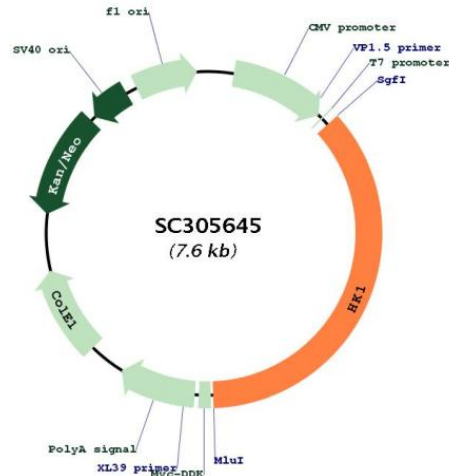
[View online »](#)

Fully Sequenced ORF: >SC305645 representing NM_033498.
 Blue=Insert sequence Red=Cloning site Green=Tag(s)

```

GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGGGGCAGATCTGCCAGCGAGAATCGGCTACAGCAGCTGAAAAACAAAACCTCATCTACTTGCTGAA
AGTGAGATTGACAAGTATCTCTATGCCATGCCGCTCTCCGATGAAACTCTCATAGATATCATGACTCGC
TTCAGGAAGGAGATGAAGAATGGCTCTCCCGGATTTTAAATCCAACAGCCACAGTCAAGATGTTGCCA
ACATTCGTAAGGTCCATTCTGTATGGCTCTGAAAAGGGAGATTTTCATTGCCCTGGATCTTGGTGGTCT
TCCTTTGAAATTCGCGGTGCAAGTGAATCATGAGAAAAACAGAATGTTACATGGAGTCCGAGGTT
TATGACACCCAGAGAACATCGTGCACGGCAGTGAAGCCAGCTTTTTGATCATGTTGCTGAGTGCCTG
GGAGATTCATGGAGAAAAGGAAGATCAAGGACAAGAAGTTACCTGTGGGATTCACGTTTTCTTTCT
TGCCAACAATCCAAAATAGATGAGGCCATCTGTACCTGGACAAGCGATTTAAAGCGAGCGGAGTG
GAAGGAGCAGATGTGGTCAAACCTGTTAAACAAAGCCATCAAAAAGCGAGGGGACTATGATGCCAACATC
GTAGCTGTGGTGAATGACACAGTGGCACCATGATGACCTGTGGCTATGACGACCAGCACGTGAAGTC
GGCTGATCATCGGCACTGGCACCAATGCTTGCTACATGGAGAACTGAGGCACATTGATCTGGTGGAA
GGAGACGAGGGGAGGATGTGTATCAATACAGAATGGGGAGCCTTTGGAGACGATGGATCATTAGAAGAC
ATCCGGACAGAGTTTGACAGGGAGATAGACCGGGATCCCTCAACCCTGGAAAACAGCTGTTTGAGAAG
ATGGTCAGTGGCATGTACTTGGGAGAGCTGGTTCGACTGATCCTAGTCAAGATGGCCAAGGAGGGCTC
TATTTGAAGGGCGGATCACCCCGAGCTGCTCACCCGAGGAAGTTAACACCAAGTGTGTGTCAGCC
ATCGAAAAGAATAAGGAAGGCCCCACAATGCCAAAGAAATCTGACCCGCTGGGAGTGGAGCCGTC
GATGATGACTGTGTCTCAGTCCAGCAGCTTTCACCATTTGCTCATTTTCGCTCAGCCAATTGGTGGT
GCCACACTGGGCGCCATTTGAACCGCTGCGTGATAACAAGGGCACACCCAGGCTGCGGACACGTT
GGTGTGACGGATCTCTTACAAGACGCACCCACAGTATTCCTCGCGTTCACACAAGACTCTAAGGCGC
TTGGTGCCAGACTCCGATGTGCGCTTCTCTCTCGGAGAGTGGCAGCGCAAGGGGCTGCCATGGTG
ACGGCGGTGGCTACCGCTTGGCCGAGCAGCACCGGCAGATAGAGGAGACCCTGGCTCATTTCCACCTC
ACCAAGGACATGCTGCTGGAGGTGAAGAAGAGGATGCGGGCCGAGATGGAGCTGGGGCTGAGGAAGCAG
ACGCACAACAATGCCGTGGTTAAGATGCTGCCCTCCTTCGTCCGGAAGTCCCGACGGGACCGAGAAT
GGTGACTTCTGGCCCTGGATCTGGAGGAACCAATTTCCGTGTGCTGCTGGTAAAATCCGTAGTGGG
AAAAAGAGAACGGTGAATGCACAACAAGATCTACGCCATTCTATTGAAATCATGACGGGCACTGGG
GAAGAGCTGTTTGATCACATTGTCTCCTGCATCTGACTTCTTGGACTACATGGGGATCAAAGGCCCC
AGGATGCCTCTGGGCTTACGTTCTCATTTCCCTGCCAGCAGACGAGTCTGGACGCGGAATCTTGATC
ACGTGGACAAAAGGGTTTTAAGGCAACAGACTGCGTGGGCCACGATGTAGTCACCTTACTAAGGGATGCG
ATAAAAAGGAGAGAGGAATTTGACCTGGACGTGGTGGCTGTGGTCAACGACACAGTGGGCACCATGATG
ACCTGTGCTTATGAGGAGCCACCTGTGAGGTTGGACTCATTGTTGGGACCGGCAGCAATGCCTGTAC
ATGGAGGAGATGAAGAACGTGGAGATGGTGGAGGGGACCAGGGGAGATGTGCATCAACATGGAGTGG
GGGGCTTTGGGGACAACGGGTGTCTGGATGATATCAGGACACACTACGACAGACTGGTGGACGAATAT
TCCCTAAATGCTGGGAACAAGGATGAGAAGATGATCAGTGGTATGTACCTGGGTGAAATCGTCCGC
AACATCTTAATCGACTTCAACAAGAAGGATTCCTCTCCGAGGGCAGATCTCTGAGACGCTGAAGACC
CGGGGCATCTTTGAGACCAAGTTTCTCTCAGATCGAGAGTACCGATTAGCACTGCTCCAGGTCGGG
GCTATCTCCAGCAGCTAGGTCTGAATAGCACCTGCGATGACAGTATCCTCGTCAAGACAGTGTGCGGG
GTGGTGTCCAGGAGGGCCGCACAGCTGTGTGGCGCAGGCATGGCTGCGGTTGTGGATAAGATCCGCGAG
AACAGAGGACTGGACCGTCTGAATGTGACTGTGGGAGTGGACGGGACACTCTACAAGCTTCATCCACAC
TTCTCCAGAATCATGCACCAGACGGTGAAGGAACTGTACCAAAATGTAACGTGCTCTCTCTGTCT
GAGGATGGCAGCGCAAGGGGGCCGCCCTCATCACGGCCGTGGGCGTGGGTTACGCACAGAGGCAAGC
AGCTAA
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGCGC
  
```

Restriction Sites: SgfI-MluI

Plasmid Map:


ACCN: NM_033498

Insert Size: 2766 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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_033498.2
RefSeq Size:	3886 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:	<p>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]</p> <p>Transcript Variant: Variant 4 (HK1-tb) has four testis-specific exons in the 5' end, one of which includes an additional 54 nt fragment unique to variants 4 and 5. Variants 3, 4, 6 and 10 all encode isoform HK1-ta/tb, which has a unique N-terminus. Isoform HK1-ta/tb lacks the porin binding domain (PBD) required for association with the mitochondrial membrane.</p>