

## Product datasheet for **SC305646**

### Hexokinase 1 (HK1) (NM\_033500) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hexokinase 1 (HK1) (NM_033500) Human Untagged Clone
Tag:	Tag Free
Symbol:	Hexokinase 1
Synonyms:	hexokinase; HK; HK1-ta; HK1-tb; HK1-tc; HKD; HKI; HMSNR; HXK1; NEDVIBA; RP79
Vector:	<u>pCMV6 series</u>



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_033500, the custom clone sequence may differ by one or more nucleotides

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ATGGCAAAAAGAGCCCTGCATGATTTTATTGACAAGTATCTCTATGCCATGCGGCTCTCC
GATGAAACTCTCATAGATATCATGACTCGCTTCAGGAAGGAGATGAAGAATGGCCTCTCC
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GAGGTTGGACTCATTGTTGGACCGGCAGCAATGCCTGTACATGGAGGAGATGAAGAAC
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CGTCTGAATGTGACTGTGGGAGTGGACGGGACACTCTACAAGCTTCATCCACACTTCTCC
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TCTGAGGATGGCAGCGGCAAGGGGGCCGCCCTCATCACGGCCGTGGGCGTGGGTTACGC
ACAGAGGCAAGCAGCTAA

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**Restriction Sites:** Please inquire

**ACCN:** NM\_033500

<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>OTI Annotation:</b>	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.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<u><a href="#">NM_033500.1</a></u> , <u><a href="#">NP_277035.1</a></u>
<b>RefSeq Size:</b>	3962 bp
<b>RefSeq ORF:</b>	2718 bp
<b>Locus ID:</b>	3098
<b>UniProt ID:</b>	<u><a href="#">P19367</a></u>
<b>Cytogenetics:</b>	10q22.1
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	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
<b>Gene Summary:</b>	<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 5 (HK1-td) has five testis-specific exons in the 5' end, one of which includes an additional 54 nt fragment unique to variants 4 and 5. Isoform HK1-td has a unique N-terminus and lacks the porin binding domain (PBD) required for association with the mitochondrial membrane.</p>