

## Product datasheet for **RC209482**

### Hexokinase II (HK2) (NM\_000189) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hexokinase II (HK2) (NM_000189) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hexokinase II
Synonyms:	HKII; HXK2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC209482 representing NM\_000189  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGATTGCCTCGCATCTGCTTGCCTACTTCTTCACGGAGCTCAACCATGACCAAGTGCAGAAGTTGACC  
 AGTATCTCTACCATGCGCCTCTCTGATGAGACCCTCTTGAGATCTCTAAGCGTTCCGCAAGGAGAT  
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 ACAAGGATGACGACGATAAAGTTTAA

**Protein Sequence:** >RC209482 representing NM\_000189  
 Red=Cloning site Green=Tags(s)

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LQIKDKKLPLGFTFSFPCHQTKLDESFLVSWTKGFKSSGVEGRDVVALIRKAIQRRGDFDIDIVAVVNDT
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KAREVLMRLGLDPTQEDCVATHRICQIVSTRSASLCAATLA AVLQR IKENKGEERLRSTIGVDGSVYKHH
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IREAGQR
  
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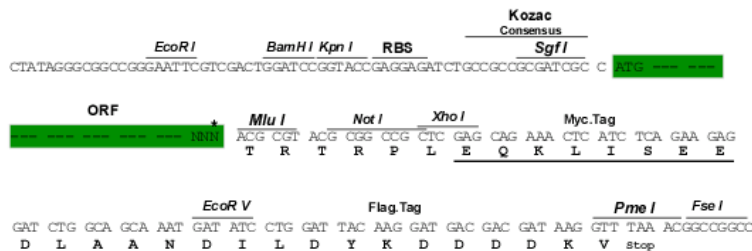
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg2453\\_c09.zip](https://cdn.origene.com/chromatograms/mg2453_c09.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\_000189

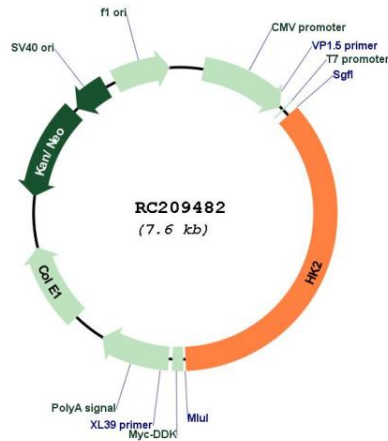
**ORF Size:** 2751 bp

<b>OTI Disclaimer:</b>	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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> 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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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>	<a href="#">NM_000189.5</a>
<b>RefSeq Size:</b>	7109 bp
<b>RefSeq ORF:</b>	2754 bp
<b>Locus ID:</b>	3099
<b>UniProt ID:</b>	<a href="#">P52789</a>
<b>Cytogenetics:</b>	2p12
<b>Domains:</b>	hexokinase
<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>MW:</b>	102.2 kDa

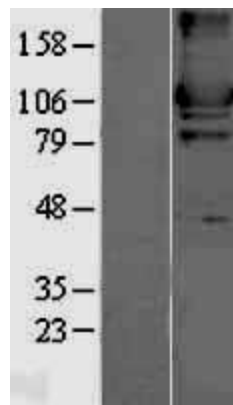
## Gene Summary:

Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. This gene encodes hexokinase 2, the predominant form found in skeletal muscle. It localizes to the outer membrane of mitochondria. Expression of this gene is insulin-responsive, and studies in rat suggest that it is involved in the increased rate of glycolysis seen in rapidly growing cancer cells. [provided by RefSeq, Apr 2009]

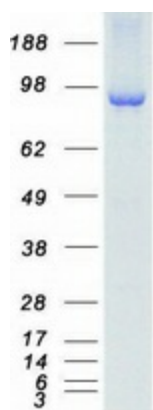
## Product images:



Circular map for RC209482



Western blot validation of overexpression lysate (Cat# [LY400068]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209482 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HK2 protein (Cat# [TP309482]). The protein was produced from HEK293T cells transfected with HK2 cDNA clone (Cat# RC209482) using MegaTran 2.0 (Cat# [TT210002]).