

## Product datasheet for **RC207021**

### Hexokinase Type III (HK3) (NM\_002115) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hexokinase Type III (HK3) (NM_002115) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hexokinase Type III
Synonyms:	HKIII; HXK3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC207021 representing NM\_002115  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGACTCCATTGGTCTTCAGGGTTGCGGCAGGGGGAAGAAACCCTGAGTTGCTCTGAGGAGGGCTTGC  
 CCGGGCCCTCAGACAGCTCAGAGCTGGTGCAGGAGTGCCTGCAGCAGTTCAAGGTGACAAGGGCACAGCT  
 ACAGCAGATCCAAGCCAGCCTCTTGGGTTCCATGGAGCAGGCGCTGAGGGGACAGGCCAGCCCTGCCCT  
 GCGGTCCGGATGCTGCCTACATACGTGGGGTCCACCCACATGGCACTGAGCAAGGAGACTTCGTGGTGC  
 TGGAGCTGGGGCCACAGGGGCCCTACTGCGTGTTCCTGGTGGTACTCTAACTGGCATTGAGGGGCATAG  
 GGTGGAGCCAGAAGCCAGGAGTTGTGATCCCCAAGAGGTGATGCTGGGTGCTGGCCAGCAGCTTTT  
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**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGA**  
**TTACAAGGATGACGACGATAAGGTTTAA**

**Protein Sequence:** >RC207021 representing NM\_002115  
 Red=Cloning site Green=Tags(s)

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MDSIGSSGLRQGEETLSCSEGLPGPSDSSELVQECLQQFKVTRAQLQQIQASLLGSMEQALRGQASPAP
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DFAAHCLSEFLDAQPVNKQGLQLGFSFSPCHQTGLDRSTLISWTKGFRCSGVEGQDVVQLLRDAIRRQG
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ITSEIYIPETVAQSGGQQLFDHIVDCIVDFQQKQGLSGQSLPLGFTFSFPCRQLGLDQGILLNWTGFK
ASDCEGQDVVSLREAITRRQAVELNVVAIVNDTVGTMSCGYEDPRCEIGLIVGTNACYMEEELRNVA
GVPDGSGRMCINMEWAFGDDGSLAMLSTRFDASVDQASINPGKQRFKEMISGMYLGEIVRHILLHLTSL
GVLFRGQQIQRLQTRDIFKTKFLSEIESDSLALRQVRAILEDLGLPLTSDDALMVLEVCQAVSQRAAQLC
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```

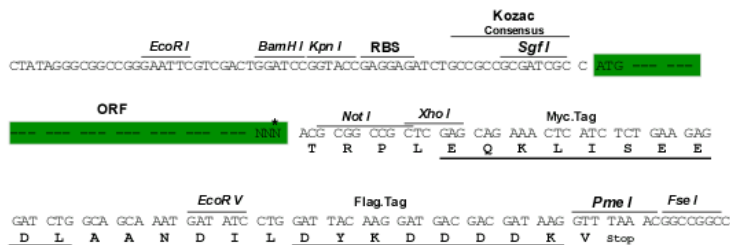
TRRL**E**QKL**I**SEED**L**AAND**I**LDYKDDDD**K**V

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg3457\\_b02.zip](https://cdn.origene.com/chromatograms/mg3457_b02.zip)

**Restriction Sites:** SgfI-NotI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



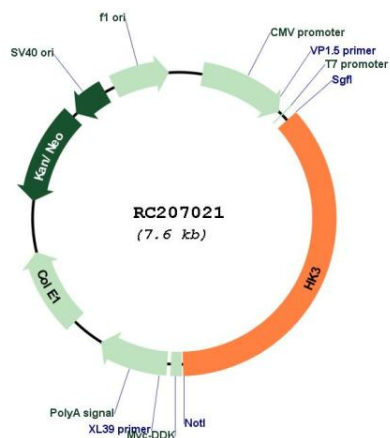
\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_002115

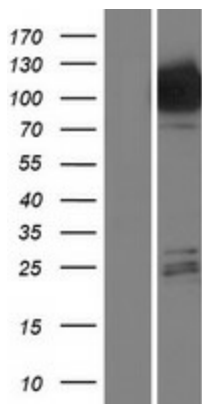
**ORF Size:** 2769 bp

<b>OTI Disclaimer:</b>	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_002115.3</a>
<b>RefSeq Size:</b>	3062 bp
<b>RefSeq ORF:</b>	2772 bp
<b>Locus ID:</b>	3101
<b>UniProt ID:</b>	<a href="#">P52790</a>
<b>Cytogenetics:</b>	5q35.2
<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>	98.8 kDa
<b>Gene Summary:</b>	Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. This gene encodes hexokinase 3. Similar to hexokinases 1 and 2, this allosteric enzyme is inhibited by its product glucose-6-phosphate. [provided by RefSeq, Apr 2009]

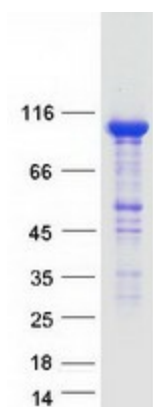
Product images:



Circular map for RC207021



Western blot validation of overexpression lysate (Cat# [LY419533]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207021 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HK3 protein (Cat# [TP307021]). The protein was produced from HEK293T cells transfected with HK3 cDNA clone (Cat# RC207021) using MegaTran 2.0 (Cat# [TT210002]).