

Product datasheet for **RC200464**

Hexokinase 1 (HK1) (NM_000188) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hexokinase 1 (HK1) (NM_000188) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hexokinase 1
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)



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ORF Nucleotide Sequence:

>RC200464 representing NM_000188
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

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Protein Sequence: >RC200464 representing NM_000188
 Red=Cloning site Green=Tags(s)

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LRTEASS
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg3235_g01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



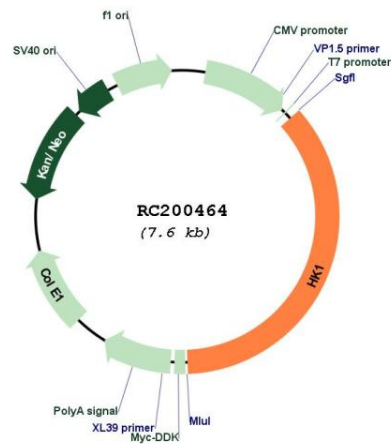
* The last codon before the Stop codon of the ORF

ACCN: NM_000188

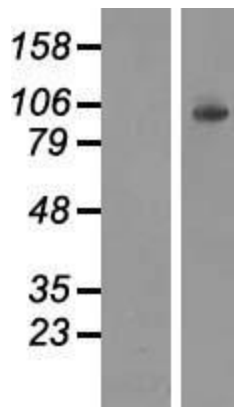
ORF Size: 2751 bp

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_000188.3
RefSeq Size:	3580 bp
RefSeq ORF:	2754 bp
Locus ID:	3098
UniProt ID:	P19367
Cytogenetics:	10q22.1
Domains:	hexokinase
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:	102.3 kDa
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]

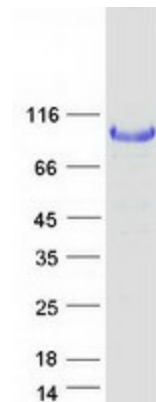
Product images:



Circular map for RC200464



Western blot validation of overexpression lysate (Cat# [LY424884]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200464 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HK1 protein (Cat# [TP300464]). The protein was produced from HEK293T cells transfected with HK1 cDNA clone (Cat# RC200464) using MegaTran 2.0 (Cat# [TT210002]).