

## Product datasheet for **MR211170**

### Hk2 (NM\_013820) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hk2 (NM_013820) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hk2
Synonyms:	A1642394; HKII
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>MR211170 representing NM\_013820  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGATCGCCTCGCATATGATCGCCTGCTTATTCACGGAGCTCAACCAAACCAAGTGCAGAAGGTTGACC  
 AGTATCTCTACCATGCGTCTCTCAGATGAGACCCTTCTGGAGATTTCTAGGCGGTTCCGGAAGGAGAT  
 GGAGAAGGGGCTAGGAGCTACCACACACCTACAGCAGCTGTGAAGATGCTGCCACCTTTGTGAGGTCA  
 ACTCCGGATGGGACAGAACATGGCGAGTTCCTGGCTCTGGACCTTGAGGAACCAACTCCGTGTCTCC  
 GAGTAAGGGTGACAGACAATGGTCTCCAGAGGGTGGAGATGGAGAACCAGATCTACGCCATCCCGAGGA  
 CATCATGCGGGGAGTGGAAACCCAGCTGTTTGACCACATTGCCGAATGCCTGGCCAACTTCATGGACAAG  
 CTACAGATCAAAGAGAAGAAGCTCCCGTGGGTTTACCTTCTCGTTCCCTGCCACCAGACGAACTGG  
 ATGAGAGTTTCTGGTCTCATGGACTAAGGGTTCAAGTCCAGTGGCGTGAAGGCAGAGATGTGGTGA  
 TCTGATCCGGAAGCCATCCAGCGCAGAGGGGACTTTGACATTGACATTGTGGCTGTGGTGAATGACACG  
 GTTGGGACCATGATGACTTGTGGTTATGATGATCAGAAGTGCAGAGATTGGTCTCATTGTGGGTACTGGCA  
 GTAATGCCTGCTACATGGAGGAGATGCGTCACATTGACATGGTGGAGGGCGACGAGGGACGGATGTGCAT  
 CAACATGGAGTGGGGGGCCTTTGGGGACGACGGTACACTCAATGACATCCGAACTGAGTTTGACAGAGAG  
 ATCGACATGGGCTCACTGAACCTGGGAAGCAGCTGTTTGAGAAGATGATCAGCGGGATGTACATGGGGG  
 AGCTGGTCAGACTCATCTGGTGAAGATGGCCAAGGCCGAGCTGCTGTTCCAAGGGAACTCAGCCCAGA  
 GCTCCTTACCACTGGCTCCTTCGAGACCAAGATGTCTCGGATATTGAAGACGATAAGGACGGAATTCAG  
 AAGGCCACCAGATCCTGGTGGCTGGTCTGAGCCCGCTGCAGGAGGACTGTGTGGCCACGCACCCGAA  
 TCTGACAGATTGTCCACGCGCTCAGCCAGCTGTGTGCAGCCACCCTGGCCCGGTGCTGTGGCGGAT  
 CAAAGAGAACAAGGGCGAGGAGCGACTCCGCTCCACCATCGGCGTGGATGGCTCTGTCTACAAGAAACAT  
 CCCCATTTTGCCAAAGCGTCTCCATAAGGAGTGGAGAGGCTGGTCCCGATTGTGATGTCGCTTCTCC  
 GCTCTGAGGATGGCAGCGCAAGGGGGCGGCTATGGTACGCGGCTGGCTTACCCTGCTGGCTGACCAACA  
 CCGGGCCCGCAGAAGACCCTGGAGTCTCTGAAGCTGAGCCATGAACAGCTGCTGGAGGTTAAGAGAAGG  
 ATGAAGGTGAAATGGAGCAGGGTCTGAGCAAGGAGACGCATGAGGCCGCCCTGTGAAGATGTTGCCCA  
 CTTATGTGTGTCCTCCAGACGGTACAGAGAAAGGAGACTTCTGGCCTTGGATCTTGGAGGAACAAA  
 CTTCCGGTCTGCTGGTGGCGTGGTAAATGGCAAGCGAAGGGGCTAGAGATGCATAACAAGATCTAC  
 TCCATCCACAGGAAGTCATGCATGGCACTGGAGAAGAGCTTTTCGACCACATTGTCAGTGCATCGCGG  
 ACTTCTTGGATACATGGGCATGAAGGGCGTGCCTACCTTTGGGTTTACCTTCTCCTCCCTTGCCA  
 GCAGAACAGCCTGGACCAGAGCATCCTCCTCAAGTGGACAAGGGATTCAAGGCATCCGGCTGCGAGGGT  
 GAAGATGTGGTACCTTGTGAAGGAAGCCATTCGCCGCGAGAGGAGTTTACCTGGATGTGGTGGCCG  
 TGGTAAATGACACAGTTGGGACTATGATGACTTGTGGCTATGAAGACCCTCACTGTGAAGTTGGCCTCAT  
 TGTTGGCACTGGAAGCAATGCCTGCTACATGGAGGAGATGCGTAAATGTGGAAGTGGTGGACGGAGAGGAG  
 GGGCGGATGTGTGCAACATGGAGTGGGAGCGTTCGGGGACAACGGCTGCCTGGATGACCTGCGCACAG  
 TGTTTACGTCGCTGTGGACGAGCTCTCTCAACCCTGGCAAACAGAGGTTTGAGAAGATGATCAGCGG  
 CATGTAATTGGGCGAGATTGTGCGCAACATCCTGATCGATTTTCAAAAGCGGGGGCTGCTTCCGTGGC  
 CGCATCTCAGAGCGCCTCAAGACAAGGGGAATCTCGAAACTAAGTTCTGTCTCAGATCGAGAGTGACT  
 GCCTGGCCCTGCTACAGTCCGAGCCATCTTGGCCACCTAGGGCTGGAGAGCACGTGTGACGACAGCAT  
 CATTGTGAAGGAGGTGTGCACTGTGGTCCCGCGCGCGGCCAGCTCTGTGGCGCAGGCATGGCCGCC  
 GTGGTGGACAAGATAAGAGAGAACCCTGGACTGGACAACCTCAAAGTGCAGGTGGGCGTGGACGGGACAC  
 TGTACAAGCTTCACTCCTCACTTTGCCAAAGTCATGCATGAGACGGTGGAGATCTGGCTCCGAAATGTGA  
 CGTGTCTTCTGGAATCCGAGGACGGCAGTGGGAAGGGAGCGGCTCTCATCTGCTGTGGCCTGTCCG  
 ATCCGGGAGGCCGGCAGAGA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR211170 representing NM\_013820  
 Red=Cloning site Green=Tags(s)

MIASHMIACLFTELNQNVQKVDQYL YHMRLSDETLLEISRRFRKEMEKGLGATTHPTAAVKMLPTFVRS  
 TPDGTEHGEFLALDLGGTNFRVLRVVRTDNLQVRVEMENQIYAIPIEDIMRSGTQLFDHIAECLANFMDK  
 LQIKEKLLPLGFTFSFPCHQTKLDESFLVSWTKGFKSSGVEGRDVLIRKAIQRRGDFDIDIVAVVNDT  
 VGTMMTCGYDDQNCIEGLIVGTGSNACYMEEMRHIDMVEGDEGRMCINMEWGAFGDDGTLNDRTEFDRE  
 IDMGSLNPGKQLFEKMI SGM YMGELVRLILVKMAKAELLFQGKLSPELLTTGSFETKDVSDIEDDKDGIQ  
 KAYQILVRLGLSPLQEDCVATHRICQIVSTRSASLCAATLA AVLWRIKENKGEERLRSTIGVDGSVYKHH  
 PHFAKRLHKAVRRLVPDCDVRFLRSEDGSGKGAAMVTAVAYRLADQHRARQKTLESKLSHEQLLEVKRR  
 MKVEMEQLSKETHEAAPVKMLPTYVCATPDGTEKGDFLALDLGGTNFRVLLVRVRNGKRRGVEMHNKIY  
 SIPQEVMHGTGEELFDHIVQCIADFL EYMGKGVSLPLGFTFSFPCQQNSLDQSILLKWKGFKASGCEG  
 EDVVTLLEKAI RRREFDL DVAVVNDTVGTMMTCGYEDPHCEVGLIVGTGSNACYMEEMRNVELVDGEE  
 GRMCVNMEWGAFGDNGLDDLRTVFDVADEL SLNPGKQRF EKMI SGM YLGEIVRNILIDFKRGLLFRG  
 RISERLKRTRGIFETKFLSQIESDCLALLQVRAILRHLGLESTCDDSIIVKEVCTVARRAAQLCGAGMAA  
 VVDKIRENRGLDNLKVTVGVDGTYK LHPHFAKVMHETVRDLAPKCDVSFLESEDGSGKGAALITAVACR  
 IREAGQR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9032\\_c02.zip](https://cdn.origene.com/chromatograms/mm9032_c02.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



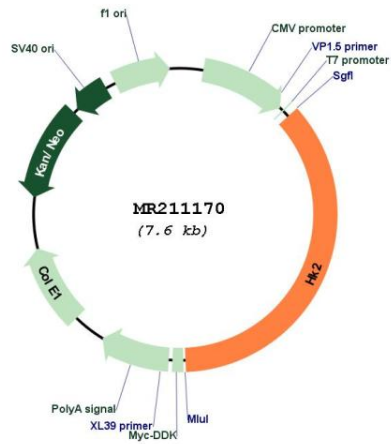
\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_013820

**ORF Size:** 2751 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_013820.3</a> , <a href="#">NP_038848.1</a>
<b>RefSeq Size:</b>	5524 bp
<b>RefSeq ORF:</b>	2754 bp
<b>Locus ID:</b>	15277
<b>UniProt ID:</b>	<a href="#">O08528</a>
<b>Cytogenetics:</b>	6 35.94 cM
<b>MW:</b>	103 kDa
<b>Gene Summary:</b>	Catalyzes the phosphorylation of hexose, such as D-glucose and D-fructose, to hexose 6-phosphate (D-glucose 6-phosphate and D-fructose 6-phosphate, respectively) (By similarity). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (By similarity). Plays a key role in maintaining the integrity of the outer mitochondrial membrane by preventing the release of apoptogenic molecules from the intermembrane space and subsequent apoptosis (PubMed:18350175).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR211170