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Product datasheet for MR211174

Hk1 (NM_001146100) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hk1 (NM_001146100) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hk1
Synonyms:	BB404130; dea; Hk-1; Hk1-s; mHk1-s
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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ORF Nucleotide Sequence:

>MR211174 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGATCGCCGCGCAACTACTGGCATATTACTTCACCGAGCTGAAGGATGACCAAGTCAAAAAGATTGATA
AGTATCTGTATGCCATGCGGCTCTCTGATGAAATTCTGATAGATATCCTGACACGCTTCAAGAAAGAGAT
GAAGAATGGCCTCTCCCGGGATTATAACCCAACGGCCTCCGTCAAGATGCTGCCAACCTTTGTCCGGTCC
ATTCCGGACGGCTCAGAAAAGGGGGATTTCATTGCACTGGATCTCGGCGGGTCTTCCTTTCGAATCCTGC
GGGTGCAGGTGAACCACGAGAAGAGTCAGAACGTCAGCATGGAGTCTGAGGTCTACGACACCCCAGAGAA
CATCGTGCACGGCAGTGGAAGCCAGCTTTTTGATCACGTCGCTGAATGCCTCGGAGACTTCATGGAGAAA
AGGAAGATCAAGGACAAGAAATTACCCGTGGGATTCACGTTTTCCTTCCCGTGCCGACAATCCAAAATAG
ACGAGGCCGTACTGATCACGTGGACAAAGCGGTTCAAAGCCAGTGGCGTGGAAGGGGCGGATGTGGTCAA
GCTGCTGAATAAAGCCATTAAGAAGCGAGGGGACTATGACGCTAACATTGTAGCTGTGGTGAATGACACA
GTGGGGACCATGATGACCTGCGGCTACGATGACCAACAGTGTGAAGTCGGCCTGATCATTGGCACTGGCA
CCAATGCTTGCTACATGGAGGAACTGCGACACATCGACCTGGTGGAAGGCGATGAGGGGAGGATGTGTAT
TAACACGGAATGGGGAGCCTTTGGGGATGATGGGTCCCTGGAAGACATTCGAACAGAGTTTGACAGAGAG
TTAGACCGGGGATCCCTCAACCCTGGGAAACAGCTGTTCGAGAAGATGGTGAGCGGCATGTACATGGGGG
AGCTGGTCCGGCTGATCCTGGTGAAGATGGCCAAGGAAAGCCTCTTATTTGAAGGGCGCATTACTCCAGA
GCTGCTCACGAGGGGCAAGTTCACCACTAGCGACGTAGCCGCCATTGAAACGGATAAGGAAGGCGTTCAA
AATGCCAAGGAAATCTTGACCCGCCTGGGAGTGGAGCCGTCTCACGATGACTGCGTATCGGTCCAGCACG
TATGCACGATCGTCTCCTTCCGATCAGCCAACCTGGTGGCTGCCACGCTCGGTGCCATCTTGAACCGCCT
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TCTCGGAGAGTGGCAGTGGCAAGGGAGCCGCCATGGTGACCGCTGTGGCCTACCGCCTGGCCGAGCAGCA
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GCAGACGAGCCTAGATTGCGGAATCTTGATCACGTGGACAAAGGGATTCAAAGCCACCGACTGTGTGGGT
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CGTGGGGACTGGCAGCAATGCCTGCTACATGGAGGAGATGAAAAACGTGGAGATGGTGGAGGGGAACCAG
GGCCAGATGTGCATCAATATGGAATGGGGTGCCTTTGGTGACAACGGCTGTCTGGACGACATCAGAACAG
ACTTCGACAAAGTGGTGGACGAATATTCTCTAAACAGTGGGAAACAAAGGTTTGAGAAGATGATCAGTGG
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CAGATCTCTGAGCCACTCAAGACCCGAGGCATCTTCGAGACCAAGTTTCTCTCTCAGATCGAGAGTGACC
GATTAGCGCTGCTCCAGGTGCGGGCCATCCTTCAGCAGCTGGGTCTAAACAGCACGTGCGACGACAGTAT
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GTGGTGGAAAAGATCCGAGAGAACAGAGGCCTAGACCACCTGAATGTAACCGTGGGCGTGGACGGGACGC
TCTACAAACTCCATCCACACTTCTCCAGAATCATGCACCAAACAGTGAAGGAACTGTCACCAAAGTGTAC
CGTGTCCTTCCTCCTGTCTGAAGACGGCAGCGGCAAGGGGGCCGCCCTTATCACAGCTGTGGGCGTGCGG
CTCAGAGGAGACCCTACGAACGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

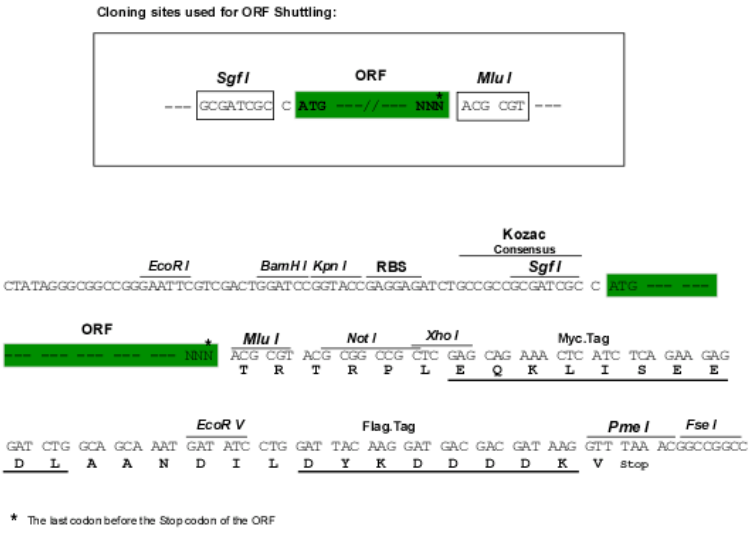
>MR211174 protein sequence
Red=Cloning site Green=Tags(s)

MIAAQLLAYYFTELKDDQVKKIDKYLYAMRLSDEILIDILTRFKKEMKNGLSRDYNPTASVKMLPTFVRS
IPDGSEKGDFIALDLGGSSFRILRVQVNHEKSQNVSMESEVYDTPENIVHGSGSQLFDHVAECLGDFMEK
RKIKDKKLPVGFTFSFPCRQSKIDEAVLITWTKRFKASGVEGADVVKLLNKAIKKRGDYDANIVAVVNDT
VGTMMTCGYDDQQCEVGLIIGTGTNACYMEELRHIDLVEGDEGRMCINTEWGAFGDDGSLEDIRTEFDRE
LDRGSLNPGKQLFEKMVSGMYMGELVRLILVKMAKESLLFEGRITPELLTRGKFTTSDVAAIETDKEGVQ
NAKEILTRLGVEPSHDDCVSVQHVCTIVSFRSANLVAATLGAILNRLRDNKGTPRLRTTVGVDGSLYKMH
PQYSRRFHKTLRRLVPDSDVRFLLSESGSGKGAAMVTAVAYRLAEQHRQIEETLSHFRLSKQALMEVKKK
LRSEMEMGLRKETNSRATVKMLPSYVRSIPDGTEHGDFLALDLGGTNFRVLLVKIRSGKKRTVEMHNKIY
SIPLEIMQGTGDELFDHIVSCISDFLDYMGIKGPRMPLGFTFSFPCKQTSLDCGILITWTKGFKATDCVG
HDVATLLRDAVKRREEFDLDVVAVVNDTVGTMMTCAYEEPSCEIGLIVGTGSNACYMEEMKNVEMVEGNQ
GQMCINMEWGAFGDNGCLDDIRTDFDKVVDEYSLNSGKQRFEKMISGMYLGEIVRNILIDFTKKGFLFRG
QISEPLKTRGIFETKFLSQIESDRLALLQVRAILQQLGLNSTCDDSILVKTVCGVVSKRAAQLCGAGMAA
VVEKIRENRGLDHLNVTVGVDGTLYKLHPHFSRIMHQTVKELSPKCTVSFLLSEDGSGKGAALITAVGVR
LRGDPTNA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_001146100

ORF Size: 2757 bp

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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:	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.
RefSeq:	NM_001146100.1, NP_001139572.1
RefSeq Size:	4157 bp
RefSeq ORF:	2757 bp
Locus ID:	15275
Cytogenetics:	10 32.37 cM
MW:	102.3 kDa
Gene Summary:	Catalyzes the phosphorylation of various hexoses, such as D-glucose, D-glucosamine, D-fructose, D-mannose and 2-deoxy-D-glucose, to hexose 6-phosphate (D-glucose 6-phosphate, D-glucosamine 6-phosphate, D-fructose 6-phosphate, D-mannose 6-phosphate and 2-deoxy-D-glucose 6-phosphate, respectively). Does not phosphorylate N-acetyl-D-glucosamine (By similarity). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (By similarity). Involved in innate immunity and inflammation by acting as a pattern recognition receptor for bacterial peptidoglycan. When released in the cytosol, N-acetyl-D-glucosamine component of bacterial peptidoglycan inhibits the hexokinase activity of HK1 and causes its dissociation from mitochondrial outer membrane, thereby activating the NLRP3 inflammasome (PubMed:27374331).[UniProtKB/Swiss-Prot Function]

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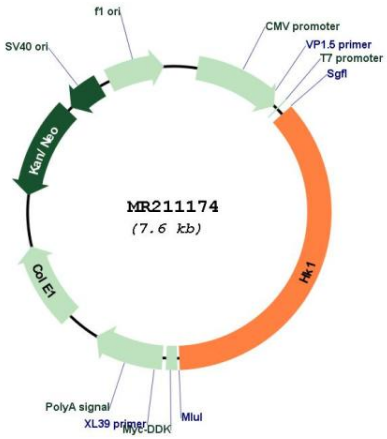
Product images:



Circular map for MR211174

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