

Product datasheet for **MC220727**

Hk1 (NM_001146100) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hk1 (NM_001146100) Mouse Untagged Clone
Tag:	Tag Free
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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Fully Sequenced ORF: >MC220727 representing NM_001146100
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGATCGCCGCGCAACTACTGGCATATTACTTCACCGAGCTGAAGGATGACCAAGTCAAAAAGATTGATA
 AGTATCTGTATGCCATGCGGCTCTCTGATGAAATTCTGATAGATATCCTGACACGCTTCAAGAAAGAGAT
 GAAGAATGGCCTCTCCCGGATTATAACCCAACGGCCTCCGTCAAGATGCTGCCAACCTTTGTCCGGTCC
 ATTCGGACGGCTCAGAAAAGGGGATTTCATTGCACTGGATCTCGGCGGGTCTTCTTTTGAATCCTGC
 GGGTGCAGGTGAACCACGAGAAGAGTCAGAACGTGAGTCTGAGGTCTACGACACCCAGAGAA
 CATCGTGCACGGCAGTGAAGCCAGCTTTTGGATCACGTCGCTGAATGCCTCGGAGACTTCATGGAGAAA
 AGGAAGATCAAGGACAAGAAATTACCCGTGGGATTCACGTTTTCTTCCCGTGCCGACAATCCAAAATAG
 ACGAGGCCGTAAGTACGTCGACGAAAGCGGTTCAAAGCCAGTGGCGTGAAGGGGCGGATGTGGTCAA
 GCTGCTGAATAAAGCCATTAAGAAGCGAGGGGACTATGACGCTAACATTGTAGCTGTGGTGAATGACACA
 GTGGGGACCATGATGACCTGCGGCTACGATGACCAACAGTGTGAAGTCCGGCTGATCATTGGCACTGGCA
 CCAATGCTTGCTACATGGAGGAAGTGCACACATCGACCTGGTGGAAAGCGATGAGGGGAGGATGTGTAT
 TAACACGGAATGGGGAGCCTTTGGGGATGATGGGTCCCTGGAAGACATTCGAACAGAGTTTGACAGAGAG
 TTAGACCGGGGATCCCTCAACCTGGGAAACAGCTGTTGAGAAGATGGTGAAGCGCATGTACATGGGGG
 AGCTGGTCCGGCTGATCCTGGTGAAGATGGCAAGGAAAGCCTCTTATTTGAAGGGCGCATTACTCCAGA
 GCTGCTCACGAGGGGCAAGTTACCACAGCGAGTGGAGCCGCTCAGCATGACTGCGTATCGGTCCAGCAGC
 TATGCACGATCGTCTCCTCCGATCAGCAACCTGGTGGTGGCAGCTCGGTGCCATCTTGAACCGCCT
 CGGGGACAATAAGGGCACGCCCAGGCTGCGGACCACAGTTGGCGTAGACGGTTCTCTACAAGATGCAC
 CCACAGTATTCGCGGCTTCCACAAGACCCTGAGGCGCCTGGTGCCTGACTCGGACGTCGCGTTCTCC
 TCTCGGAGAGTGGCAGTGGCAAGGGAGCCGCATGGTACCGCTGTGGCCTACCGCCTGGCCGAGCAGCA
 CCGGCAGATTGAGGAAACCCTGTCCACTTCCGCCTCAGCAAGCAGGCACTGATGGAGGTGAAGAAGAAG
 CTGCGGTGAGAGATGAAATGGGGTGAAGAGGAGACCAACAGCAGAGCTACGGTCAAAATGCTGCCTT
 CTTATGTTCCGAGCATCCAGATGGGACTGAGCATGGTACTTCTGGCCTTGGATCTCGGAGGAACGAA
 TTTCCGAGTCTACTGGTAAAGATCCGTAGTGGGAAAAAGAGAACAGTGGAGATGCACAACAAGATCTAC
 TCCATTCCTGGAAATCATGCAGGGCACCGGGATGAGCTGTTGATCACATTGTCTCCTGCATCTCCG
 ACTTCTGGACTACATGGGGATCAAAGGCCCGGATGCCTCTGGGCTTACCTTCTCGTTCCCTGCCAA
 GCAGACGAGCCTAGATTGCGGAATCTTGATCACGTGGACAAGGGATTCAAAGCCACCGACTGTGTGGGT
 CACGATGTAGCCACTTTACTGAGGGATGCTGTAAGAGGAGAGAGGAATTTGACCTGGATGTGGTGGCTG
 TGGTCAACGACACCGTGGGCACCATGATGACTTGTGCTTATGAAGAACCTTCTTGTGAGATTGGACTCAT
 CGTGGGGACTGGCAGCAATGCCTGCTACATGGAGGAGATGAAAAACGTGGAGATGGTGGAGGGGAACCA
 GGCCAGATGTGCATCAATATGGAATGGGGTGCCTTTGGTGACAACGGCTGTCTGGACGACATCAGAACAG
 ACTTCGACAAAGTGGTGGACGAATATCTCTAACAGTGGGAAACAAAGTTTGAAGAAGATGATCAGTGG
 AATGTACCTGGGTGAGATCGTCCGTAACATCCTGATTGACTTACCAAGAAAGGCTTCTCTTCCGGGGA
 CAGATCTCTGAGCACTCAAGACCCGAGGCATCTCGAGACCAAGTTTCTCTCAGATCGAGAGTGACC
 GATTAGCGCTGCTCCAGGTGCGGGCCATCCTTACGAGCTGGGTCTAACAGCACGTGCGACGACAGTAT
 CCTGGTCAAGACCGTGTGTGGGGTGGTGTCCAAGCGGGCGGCCAGCTGTGTGGTGCCGGCATGGCCGCC
 GTGGTGGAAAAGATCCGAGAGAACAGAGGCCTAGACCACCTGAATGTAACCGTGGGCGTGGACGGGACGC
 TCTACAACTCCATCCACTTCTCCAGAATCATGCACCAACAGTGAAGGAACTGTACCAAAGTGTAC
 CGTGTCTTCTCTGTGAAGACGGCAGCGCAAGGGGGCCGCTTATCACAGCTGTGGCGTGGCG
 CTCAGAGGAGACCCTACGAACGCCTAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN:	NM_001146100
Insert Size:	2757 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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.
RefSeq:	<u>NM_001146100.1</u> , <u>NP_001139572.1</u>
RefSeq Size:	4157 bp
RefSeq ORF:	2757 bp
Locus ID:	15275
Cytogenetics:	10 32.37 cM
Gene Summary:	<p>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]</p> <p>Transcript Variant: This variant (1) represents the ubiquitously expressed transcript and encodes isoform HK1. Its 5' end includes an exon that is unique to this transcript and encodes a distinct N-terminus containing the porin binding domain (PBD). The porin binding domain mediates association with the mitochondrial membrane.</p>