

## Product datasheet for **MR226315**

### Clock (NM\_007715) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Clock (NM_007715) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Clock
Synonyms:	5330400M04Rik; KAT13D
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR226315 representing NM\_007715  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGTGTTTACCCTAAGCTGTAGTAAAATGAGCTCAATTGTTGACAGAGATGACAGTAGTATTTTTGATG  
 GATTGGTGAAGAAGATGACAAGGACAAAAGCAAAGAGTATCTAGAAACAAATCAGAAAAGAAAGTAG  
 AGATCAGTTCAATGTCCTCATTAAAGGAGCTGGGGTCTATGCTTCCGGTAAACGCGAGAAAGATGGACAAG  
 TCTACTGTTTACAGAAGAGCATTGATTTTTGCGCAAACATAAAGAGACCACTGCACAGTCAGATGCTA  
 GTGAGATTCGACAGGACTGGAACCCACATTCCTTAGTAATGAAGAGTTTACACAGTTAATGTTAGAGGC  
 TCTTGATGGTTTTTTTTAGCGATCATGACAGATGGAAGTATAATATATGTATCTGAGAGTGAACCTCG  
 TTAAGTGAACATTTACCATCTGATCTTGTGGATCAAAGTATATTTAATTTTATCCAGAGGGAGAATC  
 CAGAGGTTTATAAGATACTCTACTCATCTGCTGGAAAGTGACTCATTAAACCCCTGAGTACTTAAATC  
 AAAAAATCAGTTAGAATCTGTTGTACATGCTTCGAGGAACAATAGACCCAAAGGAGCCATCCACCTAT  
 GAATATGTGAGATTTATAGGAAATTTAAATCTTTAACCAAGTGTATCAACTTCAACACACAATGGTTTTG  
 AAGGAACATACAACGCACACATAGGCCTTCTTATGAAGATAGAGTTTGTGTTTGTAGCTACTGTCAGATT  
 AGCTACACCTCAGTTCATCAAGGAAATGTGACTGTTGAAGAACCAATGAAGAGTTTACATCTAGACAC  
 AGTTTAGAATGGAAGTTTCTATTTTTAGATCACAGGGCACCACCAATAATAGGCTATTTGCCATTTGAAG  
 TCTTGGGAACATCAGGCTATGATTACTATCATGTGGATGACCTAGAAAATCTGGCAAAATGTCACGAGCA  
 CTTAATGCAATATGGAAGGCAATCGTGTTACTATAGATTCCTGACCAAGGCCAGCAGTGGATATGG  
 CTTCAGACTCATTATTATATTACTTACCATCAGTGGAAATCAAGGCCAGAGTTCATTGTTGTACTCACA  
 CTGTAGTAAGTTATGCAGAAGTTAGGGCTGAAAGACGGGAGAAGTTGGCATTGAAGAGTCTCTTCTGTA  
 GACAGCTGCTGACAAAAGCCAAGATTCTGGGTCTGACAATCGTATCAACACAGTGAAGTCTCAAGGAAGCA  
 CTGGAAGGTTTGTATCACAGCCCAACTCCTTCTGCCTCCTCTAGAAGCTCACGAAAGTATCTCACACCG  
 CAGTCTCAGACCTTCTCCACACCGACAAGATCCCTACTGATACTAGCACTCCTCCAGACAGCATT  
 GCCAGCTCATGAAAAGATGACACAGCGGAGGTCGCTCCTCAGCAGTCAGTCCATAAACTCCAGTCAGTT  
 GGTCCATCATTAAACACAGCCAGCGATGTCTCAAGCTGCAAATTTACCAATCCACAAGGCATGTCACAGT  
 TTCAGTTTTCAGCTCAGTTAGGAGCCATGCAGCATCTAAAAGACCAGCTAGAGCAGCGGACACGGATGAT  
 AGAGGCAATATTCATCGGCAGCAAGAAGAACTAAGGAAAATTCAGAGCAACTTCAGATGGTCCATGGT  
 CAAGGGCTACAGATGTTTTGCAGCAATCAAACCTGGATTGAATTTGGTTCTGTTCAACTTTCTCTG  
 GAAATCTAATATCCAGCAACTCACACCTGTAATATGCAAGGCCAGGTTGTCCCTGCTAACCAAGTTCA  
 GAGTGGACATATCAGCACAGGCCAGCACATGATACAGCAACAGACTTTACAAAGTACATCAACTCAGCAG  
 AGTCAACAGAGTGAATGAGTGGACACAGTCAGCAGACGTCCTTCCAAGTCAGACACCGAGCACTCTCA  
 CAGCCCCACTGTACAATACGATGGTGATTTCCAGCCTGCAGCTGGGAGCATGGTCCAGATTCATCCAG  
 TATGCCACAGAACAGTACCCAGAGTGCTACAGTCACTACGTTCACTCAGGACAGACAGATAAGATTTTCT  
 CAAGGTCAGCAACTTGTGACCAATAGTGACTGCTCCTGTAGCTTGTGGGGCCGTCATGGTACCAAGTA  
 CCATGCTTATGGGTCAGGTGGTACTGCCTATCCTACCTCGCCACACAACAGCAGCAGGACAGACATT  
 ATCGGTAACACAACAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGT  
 TCCCAGGAACAGCAGCTTCTTCAAGTTCAGCAGCCAGCTCAGGCCAGCTGGGCCAGCCACACAGCAGT  
 TCTTACAGACATCTAGGTTGCTCCACGGGAATCCTTCGACACAGCTCATCCTCTGCTGCCTTTCCACT  
 ACAACAGAGCACTTTCCCTCCTTCGACACCAGCAACACCAGCCTCAGCAGCAACAGCAGCTTCTCGG  
 CACAGGACTGACAGCCTGACTGACCTTCCAAGTCCAGCCACAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR226315 representing NM\_007715  
 Red=Cloning site Green=Tags(s)

MVFTVSCSKMSSIVDRDDSSIFDGLVEEDDKDKAKRVS RNKSEKKRRDQFNVLIKELGSMLPGNARKMDK  
 STVLQKSIDFLRKHKETTAQSDASEIRQDWKPTFLSNEEFTQLMLEALDGFFLAIMTDGSIIVVSESVTS  
 LLEHLPSDLVDQSI FNF IPEGEHSEVYKILSTHLLSDSL TPEYLKSKNQLEFCCHMLRGTIDPKEPSTY  
 EYVRFIGNFKSLTSVSTSTHNGFEGTIQRTHRPSYEDRVCFVATVRLATPQFIKEMCTVEEPNEEFTSRH  
 SLEWKFLFLDHRAPPIIGYLPFEVLGTSYDYHVDLENLAKCHEHLMQYGKGSYRFLTKGQQWIW  
 LQTHYYITYHQWNSRPEFIVCTHTVVSYA EVAERRREL GIEESLPETAADKSQDSGSDNRINTVSLKEA  
 LERFDHSPTPSASSRSSRSKSSHTAVSDPSSTPTKIPTDTSTPPRQHLPAHEKMTQRRSSFSSQSINSQSV  
 GPSLTQPAMSAANLPI PQGMSQFQFSAQLGAMQHLKDQLEQRTRMIEANIHRRQEELRKIQEQQLMVHG  
 QGLQMFLQSNPGLNFGSVQLSSGNSNIQQLTPVNMQQGVVPANQVQSGHISTGQHMIQQQTLQSTSTQQ  
 SQQSVMSGHSQQTSLPSQTPSTLTAPLYNTMVISQPAAGSMVQIPSSMPQNSTQSATVTTFTQDRQIRFS  
 QQQLVTKLVTAPVACGAVMVPSTMLMGQVVTAYPTFATQQQQAQTL SVTQQQQQQQQPPQQQQQQQS  
 SQEQQLPSVQPPAQAQLGPPQQFLQTSRLLHGNPSTQLILSAAFPLQQSTFPPSHHQHQPPQQQQQLPR  
 HRTDSLTDPSKVQPQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9033\\_d04.zip](https://cdn.origene.com/chromatograms/mm9033_d04.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

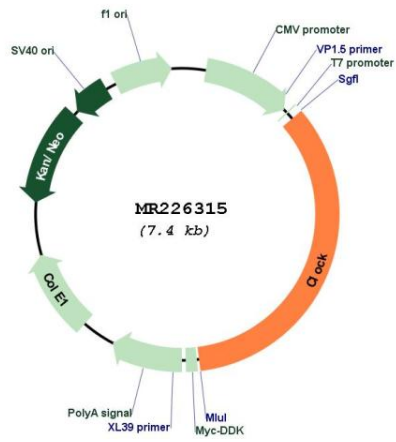
Cloning sites used for ORF Shuttling:



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

<b>ACCN:</b>	NM_007715
<b>ORF Size:</b>	2565 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_007715.6</a>
<b>RefSeq Size:</b>	7478 bp
<b>RefSeq ORF:</b>	2568 bp
<b>Locus ID:</b>	12753
<b>UniProt ID:</b>	<a href="#">O08785</a>
<b>Cytogenetics:</b>	5 40.63 cM
<b>MW:</b>	96.8 kDa
<b>Gene Summary:</b>	The protein encoded by this gene plays a central role in the regulation of circadian rhythms. The protein encodes a transcription factor of the basic helix-loop-helix (bHLH) family and contains DNA binding histone acetyltransferase activity. The encoded protein forms a heterodimer with Arntl (Bmal1) that binds E-box enhancer elements upstream of Period (Per1, Per2, Per3) and Cryptochrome (Cry1, Cry2) genes and activates transcription of these genes. Per and Cry proteins heterodimerize and repress their own transcription by interacting in a feedback loop with Clock/Arntl complexes. Polymorphisms in this gene may be associated with behavioral changes, obesity, and metabolic syndrome. Two transcripts encoding the same protein have been found for this gene. [provided by RefSeq, Jan 2014]

Product images:



Circular map for MR226315