

Product datasheet for **RC234957**

CLOCK (NM_001267843) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | CLOCK (NM_001267843) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | CLOCK |
| Synonyms: | bHLHe8; KAT13D |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |



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ORF Nucleotide Sequence:

>RC234957 representing NM_001267843
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTTGTTTACCCTAAGCTGTAGTAAAATGAGCTCGATTGTTGACAGAGATGACAGTAGTATTTTTGATG
 GGTGGTGAAGAAGATGACAAGGACAAAGCGAAAAGAGTATCTAGAAACAAATCTGAAAAGAAAGTAG
 AGATCAATTTAATGTTCTCATTAAAGAAGCTGGGATCCATGCTTCTGGTAAATGCTAGAAAGATGGACAAA
 TCTACTGTTCTGCAGAAAAGCATTGATTTTTTACGAAAACATAAAGAAATCACTGCACAGTCAGATGCTA
 GTGAAATTCGACAGGACTGGAAACCTACATTCCTTAGTAAATGAAGAGTTTACACAATTAATGTTAGAGGC
 TCTTGATGGTTTTTTTTAGCAATCATGACAGATGGAAGCATAATATATGTGTCTGAGAGTGAACCTCA
 TTAAGTGAACATTTACCATCTGATCTTGTGGATCAAAGTATATTTAATTTATCCAGAAGGGGAACATT
 CAGAGGTTTATAAAATACTCTACTCATCTGCTGGAAAGTGATTCATTAACCCAGAATATTTAAATC
 AAAAAATCAGTTAGAATCTGTTGTACATGCTGCGAGGAACAATAGACCCAAAGGAGCCATCTACCTAT
 GAATATGTAAATTTATAGGAAATTTCAAATCTTTAAACAGTGTATCCTCTTCAGCACACAATGGTTTTG
 AAGGAACATACAACGCACACATAGGCCATCTTATGAAGATAGAGTTTGTGTTTGTAGCTACTGTCAGGTT
 AGCTACACCTCAGTTCATCAAGGAAATGTGCATGTTGAAGAACCAATGAAGAGTTTACATCTAGACAT
 AGTTTAGAATGGAAGTTTCTGTTCTAGATCACAGGGCACCACCATAATAGGGTATTTGCCATTTGAAG
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 CTTAATGCAATATGGGAAAGGCAATCATGTTATTATAGGTTCTGACTAAGGGGCAACAGTGGATTTGG
 CTTCAGACTCATTATTATCACTTACCATCAGTGGAAATCAAGGCCAGAGTTTATTGTTGTACTCACA
 CTGTATAAGTTATGCAGAAGTTAGGGCTGAAAGACGACGAGAAGTTGGCATTGAAGAGTCTTCTCTGA
 GACAGCTGCTGACAAAAGCCAAGATTCTGGGTCAGATAATCGTATAAACACAGTCAGTCTCAAGGAAGCA
 TTGGAAAGGTTTGTATCACAGCCCAACCCCTTCTGCCTTCTCTCGAGTTCAAGAAAATCATCTCACACGG
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 ACCAGCTCATGAGAAGATGGTGCAAGAAGGTCATCATTAGTAGTCAAGTCCATAAATCCAGTCTGTT
 GGTTTCATTAACACAGCCAGTGTCTCAAGCTACAAATTTACCAATCCACAAGGCATGTCCAGT
 TTCAGTTTTCAGCTCAATTAGGAGCCATGCAACATCTGAAAGACCAATTTGGAACAACGGACAGCATGAT
 AGAAGCAATATTCATCGCAACAAGAAGAACTAAGAAAAATTCAGAACAACCTCAGATGGTCCATGGT
 CAGGGGCTGCAGATGTTTTGCAACAATCAAATCTGGGTTGAATTTGGTTCCGTTCAACTTTCTCTG
 GAAATTCATCTAATATCCAGCAACTTGACCTATAAATATGCAAGGCCAAGTTGTTCCACTAACAGAT
 TCAAAGTGAATGAATACTGGACACATTGGCACAACCTCAGCACATGATACAACAACAGACTTTACAGAGT
 ACATCAACTCAGAGTCAACAAAATGACTGAGTGGGCACAGTCAGCAAACATCTCTACCCAGTCAGACAC
 AGAGCACTCTTACAGCCCCTGTATAACACTATGGTATTTCTCAGCCTGCAGCCGGAAGCATGGTCCA
 GATTCATCTAGTATGCCACAAAACAGCACCCAGAGTGTGCAGTAACTACATTCAGTACAGGACAGGCA
 ATAAGATTTTCAAGGTCAACAACCTTGTGACCAATTAGTGACTGCTCCTGTAGCTTGTGGGCAGTCA
 TGGTACCTAGTACTATGCTTATGGGCCAGTGGTACTGCATATCCTACTTTTGTACACAACAGCAACA
 GTCACAGACATTTGTCAGTAACGCAGCAGCAGCAGCAGAGCTCCAGGAGCAGCAGCTCACTTCAGTT
 CAGCAACCATCTCAGGCTCAGTGCACCCAGCCAGCCGCAACAATTTTACAGACTTCTAGGTTGCTCCATG
 GGAATCCCTCAACTCAACTCATTCTCTCTGCTGATTTCTCTACAACAGAGCACCTTCCCTCAGTCACA
 TCACCAGCAACATCAGTCTCAGCAACAGCAGCAACTCAGCCGGCACAGGACTGACAGCTTGCCCGACCT
 TCCAAGGTTCAACCACAG

ACGCGTACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC234957 representing NM_001267843
 Red=Cloning site Green=Tags(s)

MLFTVSCSKMSSIVDRDDSSIFDGLVEEDDKDKAKRVS RNKSEKKRRDQFNVLIKELGSMLPGNARKMDK
 STVLQKSIDFLRKHKEITAQSDASEIRQDWKPTFLSNEEFQLMLEALDGFFLAIMTDGSIYVSESVTS
 LLEHLPSDLVDQSI FNF IPEGEHSEVYKILSTHLLSDSLTPEYLKSKNQLEFCCHMLRGTIDPKEPSTY
 EYVKFIGNFKSLNSVSSSAHNGFEGTIQRTHRPSYEDRVCFVATVRLATPQFIKEMCTVEEPNEEFTSRH
 SLEWKFLFLDHRAPPIIGYLPFEVLGTSYDYHVDLENLAKCHEHLMQYGGKSCYYRFLTKGQQWIW
 LQTHYYITYHQWNSRPEFIVCTHTVVSYAERRELGIEESLPETAADKSQDSGSDNRINTVSLKEA
 LERFDHSPTPSASSRSSRKSHTAVSDPSSTPTKIPTDTSTPPRQHLPAHEKMVQRRSSFSSQSINSQSV
 GSSLTQPVMSQATNLPPIQGMSQFQFSAQLGAMQHLKDQLEQRTRMIEANIHRQQEELRKIQEQLMVHG
 QGLQMFLQQSNPGLNFGSVQLSSGSSNIQQ LAPINMQGQVVPNTNIQSGMNTGHIGTTQHMIQQQTLQS
 TSTQSQNVLSGHSQQTSLPSQTQSTLTAPLYNTMVISQPAAGSMVQIPSSMPQNSTQSAAVTFTQDRQ
 IRFSQGGQLVTKLVTAPVACGAVMVPSTMLMGQVVTAYPTFATQQQSSQLSVTQQQQQSSSQEQQLTSV
 QQPSSAQLTQPPQQFLQTSRLLHGNPSTQLILSAAPLQQSTFPQSHHQHQSQQQQLSRHRTDSLDPD
 SKVQPQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

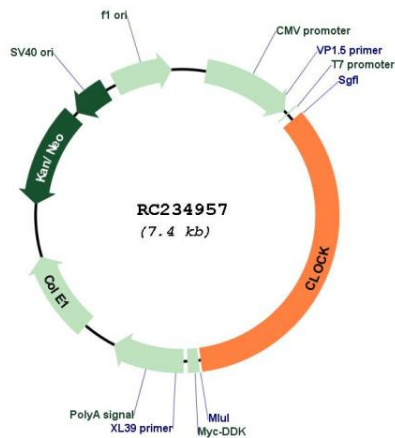
Cloning Scheme:



| | |
|-------------------------------|--|
| ACCN: | NM_001267843 |
| ORF Size: | 2538 bp |
| OTI Disclaimer: | <p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p> |
| 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. |
| RefSeq: | NM_001267843.1 , NP_001254772.1 |
| RefSeq Size: | 10981 bp |
| RefSeq ORF: | 2541 bp |
| Locus ID: | 9575 |
| UniProt ID: | O15516 |
| Cytogenetics: | 4q12 |
| Protein Families: | Druggable Genome, Transcription Factors |
| Protein Pathways: | Circadian rhythm - mammal |
| MW: | 95.8 kDa |

Gene Summary:

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 in certain populations and with obesity and metabolic syndrome. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2014]

Product images:


Circular map for RC234957