

Product datasheet for **RR217246**

Clock (NM_001289832) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Clock (NM_001289832) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Clock
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RR217246 representing NM_001289832
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTTGTTTACCCTAAGCTGTAGTAAAATGAGCTCAATTGTTGACAGAGATGACAGTAGTATTTTTGATG
 GATTGGTGAAGAAGATGACAAGGACAAAGCAAAAAGAGTATCTAGAAACAAATCAGAAAAGAAAGTAG
 AGATCAGTTCAATGTACTCATTAAAGGAAGTGGGTCTATGCTTCCGGTAAATGCTAGAAAGATGGACAAG
 TCTACTGTTTACAGAAGAGCATTGATTTTTTACGCCAAACATAAAGAGATCACTGCACAGTCAGATGCTA
 GTGAAATTCGACAGGACTGGAAACCTACATTCCTTAGTAAATGAAGAGTTTACACAATTAATGTTAGAGGC
 TCTTGATGGTTTTTTTTAGCGATCATGACAGATGGAAGTATAATATATGTATCTGAGACGGTAACCTCG
 TTAAGTGAACATTTACCATCTGATCTTGTGGATCAAAGTATATTTAATTTTATCCAGAGGGAGAACATT
 CAGAGGTTTATAAGATACTATCTACTCACCTGCTGGAAAGTACTCCTTAACCCCGAGGACTTAAATC
 AAAAAATCAGTTAGAATCTGTTGTACATGCTTCGAGGAACAATAGACCCAAAGGAGCCATCCACCTAT
 GAATATGTGAGATTTATAGGAAATTTAAATCTTTAAACAGTGTATCAACTTCAACACATAATGGTTTCG
 AAGGAACATACAGCGCACACACAGGCCTTCTTATGAAGATAGAGTTTGTTCGTAGCTACTGTCAGATT
 AGCTACCCCTCAGTTCATCAAGGAAATGTGACTGTTGAAGAACCGAATGAAGAGTTCACATCTAGACAC
 AGTTTAGAATGGAAGTTTCTATTTCTAGATCACAGGGCGCCCAATCATAGGCTATCTGCCGTTTGAAG
 TCCTGGGAACATCAGGCTATGATTACTATCATGTGGACGACCTAGAAAGTCTGGCAAAATGTCATGAGCA
 CTTAATGCAATATGGAAGGCAATCATGTTACTATAGGTTCTTGACCAAGGACAGCAGTGGATTTGG
 CTTGAGACTCATTACTATACCTTACCATCAGTGGAACTCAAGGCCAGAGTTCATCGTTTGTACTCACA
 CTGTAGTAAGTTATGCAGAAGTTAGGGCTGAAAGACGGGAGAACTTGGCGTTGAGGAGTCTTCCCGA
 GACAGCTGCTGACAAAAGCCAAGATTCTGGGTCTGACAATCGTATAAACACAGTGTAGTCTCAAGGAAGCA
 CTGGAAGGTTTCGATCACAGCCCAACTCCTTCTGCCTCCTCCAGAAGCTCAAGAAAGTCTCGCACACAG
 CAGTCTCAGACCTTCTCAACGCCGACAAAGTCCCACTGATACTAGCACTCCTCCAGACCCGACCT
 GCCAGCTCATGAGAAGATGACACAGCGGAGGTCATCCTTCAGTAGTCAGTTTCAGCTTTCAGCTCAGTTA
 GGAGCCATGCAGCATCTCAAAGACCAGCTAGAGCAGCGGACACGCATGATAGAAGCAAATATTCATCGGC
 AGCAAGAAGAATAAGGAAAATTAAGAACAACCTCAAATGGTCCATGGTCAAGGGCTACAGATGTTTTT
 GCAGCAATCAAACCTGGACTGAATCTTGGTTCTGTTCAACTTTCCTCTGGAAATCCAATATCCAGCAA
 CTCACACCTATAAATATGCAAGGCAAGTTGTCCCTGTTAACCAGATTCAGAGTGGGGTGAATGCTGGCC
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 TGTAATGAGTGGACACAGTCAGCCAACGCTCTTCCAAACCAGACGCGGAGCACTCTGACAGCCCACTG
 TACAATACGATGGTGATCTCTCAGCCTGCGGCTGGGAGCATGGTCCCATTCCATCCAGTATGCCGAGA
 ATAGCACCCAGAGTGCTACAGTACCACGTTCACTCAGGACAGACAGATAAGGTTTTCTCAAGGTGACGA
 ACTTGTGACCAAATAGTGACTGCTCCTGTAGCTTGTGGGGCCGTATGGTGCCAAGTACCATGCTTATG
 GGTGAGTGTGACTGCCTATCCTACTTTTCCACACAACAGCAGCAGGCACAGGCTTGTGAGTAAACAC
 AGCAACAGCAGCAGCAGCAGCAGCAGCAACAGCAGCAGCAGCAGCAGCCGACAGGCGCAGCAGCC
 CCAGTCACAGCAGAGTTCCAGGACCAGCCGATCCTTCAAGTTCAGCAGCCAGCTCAGTGACCCAGCCA
 CCACAACAGTTCTTACAGACATCTCGGTTGCTCCATGGGAATCCTTCGACACAGCTCATCTCTCCGCTG
 CCTTCCACTACAACAGAGCACTTCCCTCCTTGCACACCAGCAACACCAGCAACAGCAGCTCCATCG
 GCACAGGACTGACAGCCTGACTGACCCTTCCAAGGTCCAGCCACAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR217246 representing NM_001289832
 Red=Cloning site Green=Tags(s)

MLFTVSCSKMSSIVDRDDSSIFDGLVEEDDKAKRVS RNKSEKKRRDQFNVLIKELGSMLPGNARKMDK
 STVLQKSIDFLRKHKEITAQSDASEIRQDWKPTFLSNEEFTQLMLEALDGFFLAIMTDGSIYVSETVTS
 LLEHLPSDLVDQSIFNF IPEGEHSEVYKILSTHLLSDSLTPEDLKSKNQLEFCCHMLRGTIDPKEPSTY
 EYVRFIGNFKSLNSVSTSTHNGFEGTIQRTHRPSYEDRVCFVATVRLATPQFIKEMCTVEEPNEEFTSRH
 SLEWKFLFLDHRAPPIIGYLPFEVLGTSYDYHVDLESLAKCHELMQYGKKGKSCYYRFLTKGQQWIW
 LQTHYYITYHQWNSRPEFIVCTHTVVSYA EVRAERRRELGVESLPETAADKSQDSGSDNRINTVSLKEA
 LERFDHSPTPSASSRSSRKSSTAVSDPSSTPTKIPTDTSTPPRPHLPAHEKMTQRRSSFSSQFQLSAQL
 GAMQHLKDQLEQRTRMIEANIHRQEEELRKIQEQLQMVHGQGLQMFLLQSNPGLNLG SVQLSSGNSNIQQ
 LTPINMQGQVVPVNIQSGVNAGHVSTGQHMIQQQTLQSTSTQSQQSVMSGHSQPTSLPNQTPSTLTAPL
 YNTMVISQPAAGSMVPIPSMPQNSTQSATVTTFTQDRQIRFSQGGQLVTKLVTAPVACGAVMVPSTMLM
 GQVVTAYPTFATQQQQAALSVTQQQQQQQQQQQQQQQPQQAQQPQSQQSSQDQPHPSVQQAQLTQP
 PQQFLQTSRLLHGNPSTQLILSAAFPLQQSTFPPSHHQHQQQQLHRHRTDSLTDPSKVQPQ

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-MluI

Cloning Scheme:


ACCN: NM_001289832

ORF Size: 2496 bp

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_001289832.1](#), [NP_001276761.1](#)

RefSeq Size: 9201 bp

RefSeq ORF: 2499 bp

Locus ID: 60447

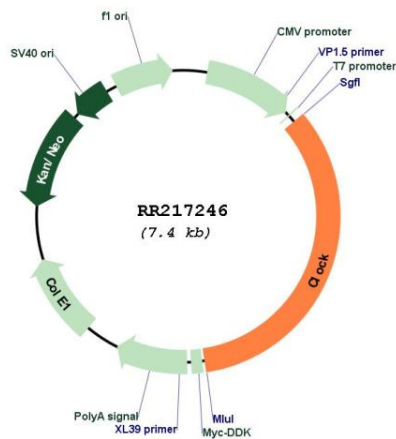
UniProt ID: [Q9WVS9](#)

Cytogenetics: 14p11

MW: 94 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, obesity, and metabolic syndrome. Two transcripts encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2014]

Product images:



Circular map for RR217246