

Product datasheet for **RN204229**

Clock (NM_021856) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Clock (NM_021856) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Clock
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >RN204229 representing NM_021856
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGTTGTTTACCCTAAGCTGTAGTAAAATGAGCTCAATTGTTGACAGAGATGACAGTAGTATTTTTGATG
 GATTGGTGAAGAAGATGACAAGGACAAAAGAAAAGAGTATCTAGAAACAAATCAGAAAAGAAAGTAG
 AGATCAGTTCAATGTACTCATTAAAGGAAGTGGGTCTATGCTTCCGGTAAATGCTAGAAAGATGGACAAG
 TCTACTGTTTACAGAAGAGCATTGATTTTTTACGCCAAACATAAAGAGATCACTGCACAGTCAGATGCTA
 GTGAAATTCGACAGGACTGGAAACCTACATTCCTTAGTAATGAAGAGTTACACAATTAATGTTAGAGGC
 TCTTGATGGTTTTTTTTAGCGATCATGACAGATGGAAGTATAATATATGTATCTGAGACGGTAACCTCG
 TTAAGTGAACATTTACCATCTGATCTTGTGGATCAAAGTATATTTAATTTTATCCAGAGGGAGAATC
 CAGAGGTTTATAAGATACTATCTACTCACCTGCTGGAAAGTACTCCTTAACCCCGAGGACTTAAATC
 AAAAAATCAGTTAGAATCTGTTGTACATGCTTCGAGGAACAATAGACCCAAAGGAGCCATCCACCTAT
 GAATATGTGAGATTTATAGGAAATTTAAATCTTTAAACAGTGTATCAACTTCAACACATAATGGTTTCG
 AAGGAACTATACAGCGCACACAGGCCTTCTTATGAAGATAGAGTTGTTTCGTAGCTACTGTCAGATT
 AGCTACCCCTCAGTTCATCAAGGAAATGTGACTGTTGAAGAACCGAATGAAGAGTTCACATCTAGACAC
 AGTTTAGAATGGAAGTTTCTATTTCTAGATCACAGGGCGCCCAATCATAGGCTATCTGCCGTTTGAAG
 TCCTGGGAACATCAGGCTATGATTACTATCATGTGGACGACCTAGAAAGTCTGGCAAAATGTCATGAGCA
 CTTAATGCAATATGGAAGGCAATCATGTTACTATAGGTTCTTGACCAAGGACAGCAGTGGATTTGG
 CTTCAGACTCATTACTATACCTTACCATCAGTGGAACTCAAGGCCAGAGTTCATCGTTGTACTCACA
 CTGTAGTAAGTTATGAGAAGTTAGGGCTGAAAGACGGGAGAAGTGGCGTTGAGGAGTCTCTCCCGA
 GACAGCTGCTGACAAAAGCCAAGATTCTGGGTCTGACAATCGTATAAACACAGTGAAGTCTCAAGGAAGCA
 CTGAAAGGTTTCGATCACAGCCCAACTCCTTCTGCCTCCTCCAGAAGCTCAAGAAAGTCTCGCACACAG
 CAGTCTCAGACCTTCTCAACGCCGACAAAGATCCCACTGATACTAGCACTCCTCCAGACCGCACCT
 GCCAGCTCATGAGAAGATGACACAGCGGAGGTCATCCTTCAGTAGTCAGTCCATAAACTCCAGTCAAGT
 GGTTTCATTAACACAGCCAGCGATGTCTCAAGCTGCAATTTACCAATCCCAAGGCATGTCACAGT
 TTCAGCTTTCAGTCAAGTAGGAGCCATGCAGCATCTCAAAGACCAGCTAGAGCAGCGGACACGCATGAT
 AGAAGCAATATTCATCGGCAGCAAGAAGAACTAAGGAAAATTCAGAACAACCTCAAATGGTCCATGGT
 CAAGGGCTACAGATGTTTTGCAGCAATCAAACCTGGACTGAATCTTGGTTCTGTTCAACTTTCCTCTG
 GAAATTCGAATATCCAGCAACTCACACCTATAAATATGCAAGGCCAAGTTGTCCCTGTTAACAGATTCA
 GAGTGGGGTGAATGCTGGCCATGTCAGCACAGGCCAGCACATGATCCAGCAGCAGACTTTACAAAGTACA
 TCAACTCAGAGTCAACAGAGTGAATGAGTGGACACAGTCAGCCAACGTCTCTTCCAAACAGACGCCGA
 GCACTCTGACAGCCCCACTGTACAATACGATGGTGATCTCTCAGCCTGCGGCTGGGAGCATGGTCCCGAT
 TCCATCCAGTATGCCGAGAATAGCACCCAGAGTGCTACAGTCAACAGTTCCTCAGGACAGACAGATA
 AGGTTTTCTCAAGGTCAAGCAACTTGTGACCAAAATAGTGACTGCTCCTGTAGCTTGTGGGGCCGTCATGG
 TGCCAAGTACCATGCTTATGGGTCAGGTAGTGACTGCCTATCCTACTTTTGCCACACAACAGCAGCAGGC
 ACAGGCCTTGTAGTAAACACAGCAACAGCAGCAGCAGCAGCAGCAGCAACAGCAGCAGCAGCAGCAGC
 CCGCAGCAGGCGCAGCAGCCCCAGTACAGCAGAGTTCAGGACCAGCCGATCCTTCAGTTCAGCAGC
 CAGCTCAGCTGACCCAGCCACCACAACAGTTCTTACAGACATCTCGGTTGCTCCATGGGAATCCTTCGAC
 ACAGCTCATCCTCTCCGCTGCCTTTCCACTACAACAGAGCACTTTCCCTCCTTCGCACCACCAGCAACAC
 CAGCAACAGCAGCTCCATCGGCACAGGACTGACAGCCTGACTGACCCTTCAAGTCCAGCCACAGTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_021856
Insert Size: 2589 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:	NM_021856.2 , NP_068628.1
RefSeq Size:	9291 bp
RefSeq ORF:	2589 bp
Locus ID:	60447
UniProt ID:	Q9WVS9
Cytogenetics:	14p11
Gene Summary:	<p>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]</p> <p>Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.</p>