

Product datasheet for **SC117088**

CLOCK (NM_004898) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CLOCK (NM_004898) Human Untagged Clone
Tag:	Tag Free
Symbol:	CLOCK
Synonyms:	bHLHe8; KAT13D
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC117088 sequence for NM_004898 edited (data generated by NextGen Sequencing)

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ATGTTGTTTACCGTAAGCTGTAGTAAAATGAGCTCGATTGTTGACAGAGATGACAGTAGT
ATTTTTGATGGGTTGGTGGAGAAGATGACAAGGACAAAGCGAAAAGAGTATCTAGAAAC
AAATCTGAAAAGAAACGTAGAGATCAATTTAATGTTCTCATTAAAGAACTGGGATCCATG
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TTACGAAAACATAAAGAAATCACTGCACAGTCAGATGCTAGTGAATTCGACAGGACTGG
AAACCTACATTCCTTAGTAATGAAGAGTTTACACAATTAATGTTAGAGGCTCTTGATGGT
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TTACTTGAACATTTACCATCTGATCTTGTGGATCAAAGTATATTTAATTTTATCCAGAA
GGGGAACATTCAGAGGTTTATAAAATACTCTACTCATCTGCTGGAAAGTGATTCATTA
ACCCAGAAATATTTAAAATCAAAAAATCAGTTAGAATTCTGTTGTCACATGCTGCGAGGA
ACAATAGACCCAAAGGAGCCATCTACCTATGAATATGTAATTTATAGGAAATTTCAA
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CATAGGCCATCTTATGAAGATAGAGTTTGTGTTTGTAGCTACTGTCAGGTTAGCTACACCT
CAGTTTCATCAAGGAAATGTGCACCTGTTGAAGAACCAATGAAGAGTTTACATCTAGACAT
AGTTTAGAATGGAAGTTTCTGTTTCTAGATCACAGGGCACCACCATAATAGGGTATTTG
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GACAAAAGCCAAGATTCTGGGTCAGATAATCGTATAAACACAGTCAGTCTCAAGGAAGCA
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CAAGCTACAAATTTACCAATCCACAAGGCATGTCCCAGTTTCAGTTTTCAGCTCAATTA
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CAGGGGCTGCAGATGTTTTGCAACAATCAAATCCTGGGTTGAATTTTGGTTCCGTTCAA
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ATTCTCTGCTGCATTTCTCTACAACAGAGCACCTTCCCTCAGTCACATCACCAGCAA
CATCAGTCTCAGCAACAGCAGCAACTCAGCCGGCACAGGACTGACAGCTTGCCCCGACCT
TCCAAGGTTCAACCACAGTAG
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Clone variation with respect to NM_004898.2

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_004898 unedited
 NNTGGTTCGNATTTGTATACGACTCACTATAGGGCGGCCGCAATTCGCACGAGCACCCG
 AGCGGGAGACCTGGGTGGGGGAGGGAAGAAGCCGGAGCCGCCGAAGCCACACGAATTCT
 GAGACTTATGGTTGGTCATATAGAAGAGTACCTTGAACCTATAGTTTCTGAAGAATCAG
 TTTAAAAGATCCAAGGAGTACAAAAGGAGAAGTACAAATGTCTACTACAAGACGAAAACG
 TAGTATGTTATGTTGTTTACCGTAAGCTGTAGTAAAATGAGCTCGATTGTTGACAGAGAT
 GACAGTAGTATTTTTGATGGGTTGGTGAAGAAGATGACAAGGACAAAGCGAAAAGAGTA
 TCTAGAAACAAATCTGAAAAGAAACGTAGAGATCAATTTAATGTTCTCATTAAAGAACTG
 GGATCCATGCTTCTGGTAAATGCTAGAAAGATGGACAAATCTACTGTTCTGCAGAAAAGC
 ATTGATTTTTTACGAAAACATAAAGAAATCACTGCACAGTCAGATGCTAGTGAAATTCGA
 CAGGACTGGAAACCTACATTCCTTAGTAATGAAGAGTTTACACAATTAATGTTAGAGGCT
 CTTGATGGTTTTTTTTAGCAATCATGACAGATGGAAGCATAATATATGTGTCTGAGAGT
 GTAACCTCATTACTTGAACATTTACCATCTGATCTTGTGGATCAAAGTATATTTAATTTT
 ATCCCAGAAGGGGAACATTCAGAGGTTTATAAAATACTCTCTACTCATCTGCTGGAAAGT
 GATTCATTAACCCAGAATATTTNAAAAACAAAATCAGTTAGAATTCTGTTGTACATG
 CTGCGAGGNAACATAGACCCAAAGGAGCCATCTACCTATGAATATGNNTAATTATAGGN
 AAATTNCANATCTTTAACA

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_004898 unedited
 AGCTTGGACCGCCTCCAATTTANGATCGGTTTTTTTTCTTTTTTTTTTAAAGCTGGAA
 GGTGTTTCTATTTGGTTTCTTTAAATGCTCTAGATTTGGGATTTTAACTAACAGCTTTGG
 CTATAGAAATGAAGAACAGACACTGCTGAATCTTCAATTTGAATGCTCAAGTTTCATGGGG
 CAGGGTGGGGGGCGGGATCGCTTTGCAACCCATTTTTTGAAGAATGCGGAGGAAAACATT
 TCTTCCAGAGGCCAGTGGTGCTAGCTACCTCGGCCCGTGCCCGCTGCGCGCTGCCCCGT
 CTCTGCGTACCCTGTTCTTTCTCCTCACTCCCCCTTGACCCCTCCTCTCCCCCCCCTCCC
 CCCCCCCCCCGTCCCCCCCCCCCCCCCCCGCCCTCCACCTCCCCCGCTGTGCTT
 TCCCTCGCCTTGACCCCTCTTCCAATCTTCCCTCCGATTTCCCTCCCCACCCCCCCC
 CTGCTCCCCTCCTCGCCTCCCCGTCTCTCCCTCCCGTCCGCTCCCCCCTCCCCCTCC
 TTGGCCCCCGTCCCCTGTCTCCTCCGCTCGCTAGTGCTCTCCCGCCCTCCCCCTCCCC
 CCCCCCCCCCCCCCCCCCCCCCCCCACGGTCTTTCGGGGTGGCTTTTCTCCCCGTCCC
 GCTCTATCCCACCCCTCCCCGTCCTTGGCGCCCTCCTGCTCCGCTTCTCGCCGCCCC
 CCTTACCTCCTCGCCCTGCGCCGCCCCCGCCCTCCCCCCCCGTTGCCCCCGCCCC
 GCCCATGCCGTGCCGTCCCGCAGCTTTCCTTTACCGATCCCCCCCCACGTACGTG
 TCGCGCTGCGCTGCCGAGCCCCGAGCGCTCCTATCTACTTACCCCGCGCCCCC
 TCCCCACACCCCCCGACC

Restriction Sites:

NotI-NotI

ACCN:

NM_004898

Insert Size:

4700 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:

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_004898.2](#), [NP_004889.1](#)

RefSeq Size: 5801 bp

RefSeq ORF: 2541 bp

Locus ID: 9575

UniProt ID: [O15516](#)

Cytogenetics: 4q12

Domains: PAS, HLH, PAC

Protein Families: Druggable Genome, Transcription Factors

Protein Pathways: Circadian rhythm - mammal

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]

Transcript Variant: This variant (2) differs in the 5' UTR compared to variant 1. Both variants 1 and 2 encode the same protein. 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.