

# Recombinant Full Length Human CLOCK Protein, GST-tagged

**Cat. No.** CLOCK-6888HF    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Product Overview</b> | Recombinant Human full-length CLOCK(1 a.a. - 846 a.a.), fused with GST-tag at N-terminal, was expressed in wheat germ.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Source</b>           | In Vitro Cell Free System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>ProteinLength</b>    | 846 amino acids                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Description</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 in certain populations and with obesity and metabolic syndrome. Alternative splicing results in multiple transcript variants. |
| <b>Molecular Mass</b>   | 119.5 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>AA Sequence</b>      | MLFTVSCSKMSSIVDRDDSSIFDGLVEEDDKDKAKRVSRNKSEKKRRDQFNVLIKEL<br>GSMLPGNARKMDKSTVLQ KSIDFLRKHKETAQSDASEIRQDWKPTFISNEEFTQLM<br>LEALDGGFFLAIMTDGSIYVSESVTSLLEHLPSDLV DQSIFNFIPEGEHSEVYKILSTHL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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LESDSLTPPEYLKSKNQLEFCCHMLRGTDIPKEPSTYEYVKFIGNFKSLNSV SSSAHN  
 GFEGTIQRTHRPSYEDRVCFVATVRLATPQFIKEMCTVEEPNEEFTSRHSLEWKFLF  
 LDHRAPPIIGYL PFEVLGTSGYDYYHVDDLENLAKCHEHLMQYGKGKSCYYRFLTK  
 GQQWIWLQTHYYITYHQWNSRPEFIVCTHTV VSYAEVRAERRRELGIEESLPETAA  
 DKSQDSGSDNRINTVSLKEALERFDHSPTPSASSRSSRKSSHTAVSDPSS TPTKIPT  
 DTSTPPRQHLPAGEKMOVRRSSFSQSINSQSVGSSLTQPVMSQATNLPQPQMSQ  
 FQFSAQLGAMQH LKDQLEQRTRMIEANIHRQQEELRKIQEQLQMVHGQGLQMFLQ  
 QSNPGLNFGSVQLSSGNSSNIQQLAPINMQGQ VVPTNQIQSGMNTGHIGTTQHMIQ  
 QQTQSTSTQSQQNVLSGHSQQTSLPSQTQSTLTAPLYNTMVISQPAAGSM VQIPS  
 SMPQNSTQSAAVTTFTQDRQIRFSQGGQLVTKLVTPVACGAVMVPSTMLMGQVV  
 TAYPTFATQQQQSQT LSVTQQQQQQSSQEQLTSVQQPSQAQLTQPPQQFLQTS  
 RLLHGNPSTQLILSAAFPLQQSTFPQSHHQHQSSQ QQQLSRHRTDLSLPDPSKVQ  
 PQ

**Applications**

ELISA; WB-Re; AP; Array

**Notes**

Best use within three months from the date of receipt of this protein.

**Storage**

Store at -80 centigrade. Aliquot to avoid repeated freezing and thawing.

**Storage Buffer**

50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.

## GENE INFORMATION

**Gene Name**

CLOCK clock circadian regulator [ Homo sapiens (human) ]

**Official Symbol**

CLOCK

**Synonyms**

CLOCK; clock homolog (mouse); clock (mouse) homolog; circadian locomotor output cycles protein kaput; bHLHe8; KAT13D; KIAA0334; class E basic helix-loop-helix protein 8; circadian locomotor output cycles kaput protein

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|                |           |
|----------------|-----------|
| Gene ID        | 9575      |
| mRNA Refseq    | NM_004898 |
| Protein Refseq | NP_004889 |
| MIM            | 601851    |
| UniProt ID     | O15516    |

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