

Recombinant Human CLOCK, GST-tagged

Cat. No. CLOCK-75H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CLOCK(1 a.a. - 846 a.a.), fused with GST-tag at N-terminal, was expressed in wheat germ.
Species	Human
Source	Wheat Germ
Description	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.
Molecular Mass	119.5 kDa
AA Sequence	MLFTVSCSKMSSIVDRDDSSIFDGLVEEDDKDKAKRVSRNKSEKKRRDQFNVLIKEL GSMLPGNARKMDKSTVLQ KSIDFLRKHKETAQSDASEIRQDWKPTFISNEEFTQLM LEALDGGFFLAIMTDGSIYVSESVTSLLEHLPSDLV DQSIFNFIPEGEHSEVYKILSTHL LESDSLTPPEYLKSKNQLEFCCHMLRGTIDPKEPSTYEYVKFIGNFKSLNSV SSSAHN

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GFEGTIQRTHRPSYEDRVCFVATVRLATPQFIKEMCTVEEPNEEFTSRHSLEWKFLF
LDHRAPPIIGYL PFEVLGTSGYDYYHVDDLENLAKCHEHLMQYGKGKSCYYRFLTK
GQQWIWLQTHYYITYHQWNSRPEFIVCTHTV VSYAEVRAERRRELGIEESLPETAA
DKSQDSGSDNRINTVSLKEALERFDHSPTPSASSRSSRKSSHTAVSDPSS TPTKIPT
DTSTPPRQHPLPAHEKMVQRRSSFSSQSINSQSVGSSLTQPVMSQATNLPIPQGMSQ
FQFSAQLGAMQH LKDQLEQRTRMIEANIHRQQEELRKIQEQLQMVHGQGLQMFLLQ
QSNPGLNFGSVQLSSGNSSNIQQLAPINMQGQ VVPTNQIQSGMNTGHIGTTQHMIQ
QQTLQSTSTQSQQNVLSGHSQQTSLPSQTQSTLTAPLYNTMVISQPAAGSM VQIPS
SMPQNSTQSAAVTTFTQDRQIRFSQGQQLVTKLVTAPVACGAVMVPSTMLMGQVV
TAYPTFATQQQQSQT LSVTQQQQQQSSQEQLTSVQQPSQAQLTQPPQQFLQTS
RLLHGNPSTQLILSAAFPLQQSTFPQSHHQHQSSQQ QQQLSRHRTDSLDPDSKVQ
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°C. 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
Chromosome Location	4q12
Pathway	BMAL1:CLOCK,NPAS2 activates circadian gene expression; Chromatin modifying enzymes; Circadian Clock
Function	DNA binding; RNA polymerase II core promoter proximal region sequence-specific DNA binding; chromatin DNA binding

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