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 KSIDFLRKHKEITAQSDASEIRQDWKPTFISNEEFTQLM LEALDGFFLAIMTDGSIIYVSESVTSLLEHLPSDLV DQSIFNFIPEGEHSEVYKILSTHL LESDSLTPEYLKSKNQLEFCCHMLRGTIDPKEPSTYEYVKFIGNFKSLNSV SSSAHN

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	GFEGTIQRTHRPSYEDRVCFVATVRLATPQFIKEMCTVEEPNEEFTSRHSLEWKFLF LDHRAPPIIGYL PFEVLGTSGYDYYHVDDLENLAKCHEHLMQYGKGKSCYYRFLTK GQQWIWLQTHYYITYHQWNSRPEFIVCTHTV VSYAEVRAERRRELGIEESLPETAA DKSQDSGSDNRINTVSLKEALERFDHSPTPSASSRSSRKSSHTAVSDPSS TPTKIPT DTSTPPRQHLPAHEKMVQRRSSFSSQSINSQSVGSSLTQPVMSQATNLPIPQGMSQ FQFSAQLGAMQH LKDQLEQRTRMIEANIHRQQEELRKIQEQLQMVHGQGLQMFLQ QSNPGLNFGSVQLSSGNSSNIQQLAPINMQGQ VVPTNQIQSGMNTGHIGTTQHMIQ QQTLQSTSTQSQQNVLSGHSQQTSLPSQTQSTLTAPLYNTMVISQPAAGSM VQIPS SMPQNSTQSAAVTTFTQDRQIRFSQGQQLVTKLVTAPVACGAVMVPSTMLMGQVV TAYPTFATQQQQSQT LSVTQQQQQQSSQEQQLTSVQQPSQAQLTQPPQQFLQTS RLLHGNPSTQLILSAAFPLQQSTFPQSHHQQHQSQQ QQQLSRHRTDSLPDPSKVQ 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 locomoter output cycles protein kaput; bHLHe8; KAT13D; KIAA0334; class E basic helix-loop-helix protein 8; circadian locomoter 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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