

Product datasheet for **RC207152**

Cryptochrome I (CRY1) (NM_004075) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cryptochrome I (CRY1) (NM_004075) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cryptochrome I
Synonyms:	DSPD; PHLL1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC207152 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGGTGAACGCCGTGCACTGGTTCCGAAAGGGCTCCGGCTCCACGACAACCCGCCCTGAAGGAGT
 GCATTCAGGGCGCGACACCATCCGCTGCGTCTACATCCTGGACCCTGGTTCGCGGCTCTCCAATGT
 GGGCATCAACAGGTGGCGATTTTGTCTCAGTGTCTTGAGGATCTTGATGCCAATCTACGAAAATTAAC
 TCCCGTCTGTTGTGATTCTGGACAACACGAGATGTGTTCCAGGCTTTCAAGGAATGGAACATTA
 CTAACATTTCAATTGAGTATGATTCTGAGCCCTTTGAAAGGAACGAGACGCAGCTATTAAGAACTGGC
 AACTGAAGCTGGAGTAGAAGTCATTGTAAGAATTCACATACATTATGACCTAGACAAGATCATAGAA
 CTAATGGTGGACAACCGCTCTAATTATAAAGATTCCAGACTCTCATAGCAAAATGGAACCACTAG
 AGATAACAGTAGAGACAATTACTTCAGAAGTATAGAAAAGTGCACAACCTCTGTCTGATGACCATGA
 TGAAAAATATGGAGTCCCTTCACTGGAAGAGCTAGGTTTTGATACAGATGGCTTATCCTCTCGAGTGG
 CCAGGCGGAGAACTGAAGCACTTACTCGTTTGGAAAGGCATTTGGAAAGAAAAGCTTGGGTGGCAATT
 TTGAAAGACCTCGAATGAATGCGAATCTCTGCTTGAAGCCCTACTGGACTTAGTCCTTATCTCCGATT
 TGGTTGTTGTGATGTCGACTGTTTACTTCAAACAAACAGATCTCTACAAAAGGTAAGAAGAACAGT
 TCCCTCCCTTTCCCTTATAGGCAACTGTTATGGCGTGAATTTTTCTATACAGCAGCAACAAATAATC
 CACGCTTTGATAAAAATGGAAGGAAACCCATCTGTGTTGAGATTCCTTGGGATAAAAATCCTGAGGCTTT
 AGCCAAATGGGCGGAAGGCCGACAGGCTTTCCATGGATTGATGCCATCATGACACAGCTTCGTGAGGAG
 GGTTGGATTCATCATCTAGCCAGGCATGCAGTTGCTTCTCTGACACGAGGGGACCTGTGGATAGTT
 GGAAGAAGGAATGAAGGATTTGAAGAATTATGCTTGATGCAGATTGGAGCATAAATGCTGGAAGTTG
 GATGTGGCTGTCTGTAGTTCTTTTTTCAACAGTTTTTCACTGCTATTGCCCTGTGGTTTTGGTAGG
 AGAACAGATCCCAATGGAGACTATATCAGGCGTTATTTGCCTGTCTAAGAGGCTTCCCTGCAAAATATA
 TCTATGATCCCTGGAATGCACCAGAAGGTATCCAAAAGGTAGCCAAATGTTTATAGGAGTTAATTATCC
 TAAACCAATGGTGAACCATGCTGAGGCAAGCCGTTTGAATATCGAAAGGATGAAACAGATCTATCAGCAG
 CTTTACGATATAGAGGACTAGGCTTCTGGCATCAGTACCTTCTAATCCTAATGGGAATGGAGGCTTCA
 TGGGATATTCTGCAGAAAATATCCAGGTTGTAGCAGCAGTGAAGTTGCTCTCAAGGGAGTGGATTTT
 ACATATGCTCATGGCGACAGTCAAGCAACTCACCTGTTGAAGCAAGGAAGAAGCTCCATGGGCACTGGT
 CTCAGTGGTGGAAACGTCCTAGTCAGGAAGAGGACACACAGAGTATTGGTCCTAAGTCCAGAGACAGA
 GCACTAAT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC207152 protein sequence
 Red=Cloning site Green=Tags(s)

MGVNAVHWFRKGLRLHDNPALKECIQGADTIRCXYILDWPFAGSSNVGINRWRFLQCLELDANLRKLN
 SRLFVIRGQPADVFPRLFKEWNIKLSIEYDSEPFGKERDAAIKKLATEAGVEVIVRISHTLYDLDKIIE
 LGGQPPLTYKRFQTLISKMEPLIPVETITSEVIEKCTTPLSDDHDEKYGVPSLEELGFDTDGLSSAVW
 PGGETEALTRLERHLERKAWVANFERPRMNANLLASPTGLSPYLRFGLSCRLFYFKLTDLYKKVKKNS
 SPPLSLYGQLLWREFFYTAATNNPRFDKMEGNPICVQIPWDKNPEALAKWAEGRGFPWIDAIMTQLRQE
 GWIHHLARHAVACFLTRGDLWISWEEGMKVFEEILLDADWSINAGSMMWLSGSSFFQFFHCYCPVGFGR
 RTDPNGDYIRRYLPVLRGFPKAYIYDPWNAPEGIQKVAKCLIGVNYPKPMVNHAEASRLNIERMKIYQQ
 LSRYRGLGLLASVPSNPNNGGFMGYS AENIPGCSGSSGSCSQSGILHYAHGDSQQTHLLKQGRSSMGTG
 LSGGKRPSQEEDTQSIGPKVQRQSTN

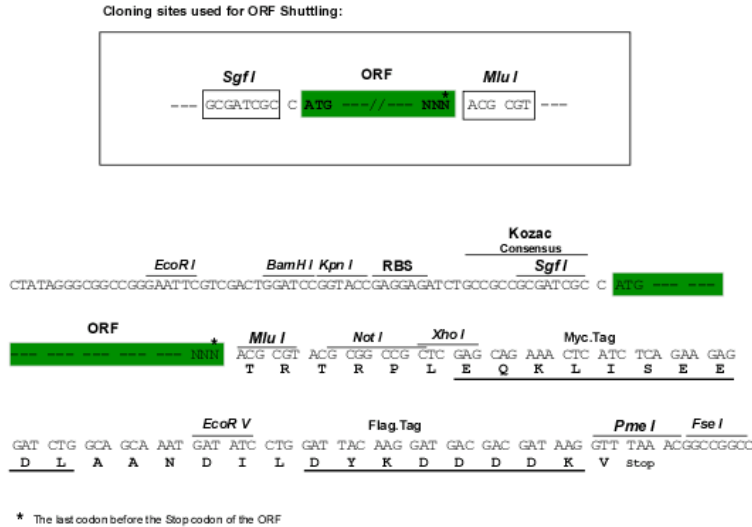
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6279_a05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004075

ORF Size: 1758 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_004075.5](#)

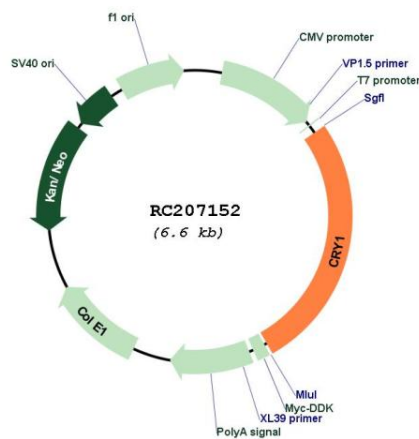
RefSeq Size: 3310 bp

RefSeq ORF: 1761 bp

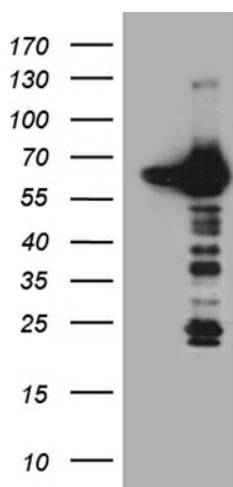
Locus ID: 1407
UniProt ID: [Q16526](#)
Cytogenetics: 12q23.3
Domains: FAD_binding_7, DNA_photolyase
Protein Families: Druggable Genome
Protein Pathways: Circadian rhythm - mammal
MW: 66.4 kDa

Gene Summary: This gene encodes a flavin adenine dinucleotide-binding protein that is a key component of the circadian core oscillator complex, which regulates the circadian clock. This gene is upregulated by CLOCK/ARNTL heterodimers but then represses this upregulation in a feedback loop using PER/CRY heterodimers to interact with CLOCK/ARNTL. Polymorphisms in this gene have been associated with altered sleep patterns. The encoded protein is widely conserved across plants and animals. Loss of the related gene in mouse results in a shortened circadian cycle in complete darkness. [provided by RefSeq, Jan 2014]

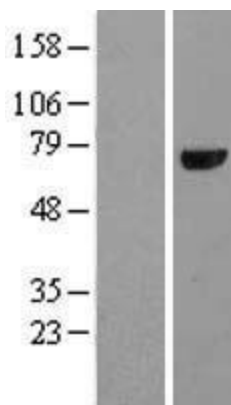
Product images:



Circular map for RC207152



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CRY1 (Cat# RC207152, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CRY1 (Cat# [TA809887])(1:2000). Positive lysates [LY418241] (100ug) and [LC418241] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY418241]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207152 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CRY1 protein (Cat# [TP307152]). The protein was produced from HEK293T cells transfected with CRY1 cDNA clone (Cat# RC207152) using MegaTran 2.0 (Cat# [TT210002]).