

Product datasheet for **SC112662**

Cryptochrome I (CRY1) (NM_004075) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cryptochrome I (CRY1) (NM_004075) Human Untagged Clone
Tag:	Tag Free
Symbol:	Cryptochrome I
Synonyms:	DSPD; PHLL1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC112662 sequence for NM_004075 edited (data generated by NextGen Sequencing)

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ATGGGGGTGAACGCCGTGCACTGGTTCGAAAGGGGCTCCGGCTCCACGACAACCCCGCC
CTGAAGNGTGCAATTCAGGGCGCCGACACCATCCGCTGCGTCTACATCCTGGACCCTGG
TTCGCCGGCTCCTCCAATGTGGGCATCAACAGGTGGCGATTTTGGCTTCAGTGTCTTGAG
GATCTTGATGCCAATCTACGAAAATTAACCTCCCGTCTGTTTGTGATTCGTGGACAACCA
GCAGATGTGTTTCCAGGCTTTTCAAGGAATGGAACATTACTAACTTTCAATTGAGTAT
GATTCTGAGCCCTTTGGAAAGGAACGAGACGCAGCTATTAAGAACTGGCAACTGAAGCT
GGAGTAGAAGTCATTGTAAGAATTTACATACATTATATGACCTAGACAAGATCATAGAA
CTCAATGGTGGACAACCGCCTCTAACTTATAAAAGATTCCAGACTCTCATCAGCAAAATG
GAACCACTAGAGATACCAGTAGAGACAATTACTTCAGAAGTGATAGAAAAGTGCACAACT
CCTCTGTCTGATGACCATGATGAGAAATATGGAGTCCCTTCACTGGAAGAGCTAGGTTTT
GATACAGATGGCTTATCCTCTGCAGTGTGGCCAGGCGGAGAACTGAAGCACTTACTCGT
TTGAAAGGCATTTGAAAGAAAAGCTTGGGTGGCAAATTTTGAAGACCTCGAATGAAT
GCGAATTCCTGCTTGAAGCCCTACTGGACTTAGTCCTTATCTCCGATTTGGTTGTTTG
TCATGTGCACTGTTTTACTTCAAACCTAACAGATCTCTACAAAAGGTAAGAAAGAACAGT
TCCCTCCCTTTCCCTTTATGGGCAACTGTTATGGCGTGAATTTTTCTATACAGCAGCA
ACAAAATATCCACGCTTTGATAAAATGGAAGGAAACCTATCTGTGTTGAGATTCCTTGG
GATAAAAATCCTGAGGCTTTAGCCAAAATGGGCGGAAGGCCGGACAGGCTTTCCATGGATT
GATGCCATCATGACACAGCTTCGTGAGGAGGTTGGATTCATCATCTAGCCAGGCATGCA
GTTGCTTGCTTCTGACACGAGGGGACCTGTGGATTAGTTGGGAAGAAGGAATGAAGGTA
TTTGAAGAATTATTGCTTGATGCAGATTGGAGCATAAATGCTGGAAGTTGGATGTGGTG
TCTTGTAGTTCCTTTTTTCAACAGTTTTTCACTGCTATTGCCCTGTTGGTTTTGGTAGG
AGAACAGATCCCAATGGAGACTATATCAGGCGTTATTTGCTGTCTAAGAGGCTTCCCT
GCAAAATATATCTATGATCCCTGGAATGCACCAGAAGGTATCCAAAAGGTAGCCAAATGT
TTGATAGGAGTTAATTATCCTAAACCAATGGTGAACCATGCTGAGGCAAGCCGTTTGAAT
ATCGAAAGGATGAAACAGATCTATCAGCAGCTTTCACGATATAGAGGACTAGGCTTCTG
GCATCAGTACCTTCTAATCCTAATGGGAATGGAGGCTTCATGGGATATTCTGCAGAAAAT
ATCCCAGTTGTAGCAGCAGTGGAAAGTTGCTCTCAAGGGAGTGGTATTTTACACTATGCT
CATGGCGACAGTCAGCAAACTCACCTGTTGAAGCAAGGAAGAAGCTCCATGGGCACTGGT
CTCAGTGGTGGGAAACGTCCTAGTCAGGAAGAGGACACACAGAGTATTGGTCCTAAAGTC
CAGAGACAGAGCACTAATTAG
    
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Clone variation with respect to NM_004075.3
68 a=>n;636 t=>c

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_004075 unedited

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ATTTGTATACGACTCACTATAGGGCGGCCGCAATTCGGCACGAGGATTTTTTCTGTTC
CCCCTCTGCCGCCCTTCTCACGCCCCGGGTGAGGCAATTCTCTTGAAGCGAAGGTGT
CGGCTATGAGCCGGAGCCTCCTTCTTGAATTTCTCCGTGGAGGACCCGCGCGCCCCC
GGCATGGGGGTGAACGCCGTGCACTGGTTCGAAAGGGGCTCCGGCTCCACGACAACCC
GCCCTGAAGGAGTGCAATTCAGGGCGCCGACACCATCCGCTGCGTCTACATCCTGGACCC
TGGTTCGCCGGCTCCTCCAATGTGGGCATCAACAGGTGGCGATTTTGTTCAGTGTCTT
GAGGATCTTGATGCCAATCTACGAAAATTAACCTCCCGTCTGTTTGTGATTCGTGGACAA
CCAGCAGATGTGTTTCCAGGCTTTTCAAGGAATGGAACATTACTAACTTTCAATTGAG
TATGATTCTGAGCCCTTTGGAAAGGAACGAGACGCAGCTATTAAGAACTGGCAACTGAA
GCTGGAGTAGAAGTCATTGTAAGAATTTACATACATTATATGACCTAGACAAGATCATA
GAACTCAATGGTGGACAACCGCCTCTAACTTATAAAAGATTCCAGACTCTCATCAGCAAA
ATGGAACCACTAGAGATACCAGTAGAGACAATTACTTCAGAAGTGATAGAAAAGTGACACA
ACTCCTCTGTCTGATGACCATGATGAGAAATATGGGAGTCCCTTCACTGGAGAGCTANGTT
NTGAACAGATGGCTTNACTCTCTGCAGTGTGGCCAGGCGGAGAACTGNAGCACTTACTCGT
TTGGAAAAGCATTGAAAGAAAAGCTCGGTGGCAATTTTGAC
    
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3' Read Nucleotide Sequence:	>OriGene 3' read for NM_004075 unedited GCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTCATATTTGCATATACTTTAATAACAA GTTCAATTTAGTAATAAATGAACAAAGAAACAGAGACAGAGAAGTTAACACATGATACTT CCACAAGTTGGGTCTAAAAAGGTTTACATCAAAGTTTAAACATATACTGTCTGTGTTA ACAGAGGCTACAATACCAATTTGGATTACGCACATTATCTAAAACATTATTATCAAAGAG TGCAAAGTTAGATCAAACAACATCAAGAAAATTCTGCTCTAAAATTTTAAACGTCTTTTAA GAAAGCTAAAAACCTCCTTTTTTCCCCTGACTTCAAACCTTTGAGTTTTATATCAAAA TATCAATTTGTCAATTTTAACTTTACCATACATGAAAAATTATCAAAAATATATCGATGGG TCTATACTAATTGTGACTGTTTATATTTACATTAAAGCAAATTTCTTTGCCAAGTTCTTTA TATACAAATTACCAATTGTACTCTGTGAAATTCATTAAGTTAAAAACACAGAAATG TCATTAGAAACAACATATTTCAATATGTAAGTCTTTCCATCAATGAAGAATATTTTTAA ATAACTTAATTGAAAAGTATTGAACTCCCACCAATTTCCAGCTGCAACAGTATTCTCTCT GAATGTTTTCTAATTAGTCTGTCTCTGGACTTTANGACCAACTCTGTGTGTCTCT TTCCTGACTAGGACGTTTCCCACCACTGAGACCAGTGCCCATGGAGCTTCTTNCCTGCTT CACANNGTGAGTTGCTGACTGTCCCATGAGCATAGTAAAAACCACTCCCTTGAGAGCAC TTCCACTGCTGTACACCTGGGATATTTCTGCAGATATCCCATGAGCCTCATTCCATTAG ATANAGGTAAGCAAGACTATCCTTTATTGGAAGTGTGATGATTGTTATCTTTCA TTAACGCTGTACATGTACATGGTAGAAATACTCTAAACTTGCTN
Restriction Sites:	NotI-NotI
ACCN:	NM_004075
Insert Size:	2590 bp
OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery. 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
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:	<ol style="list-style-type: none"> 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_004075.2 , NP_004066.1

RefSeq Size: 2999 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

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]