

Product datasheet for **RG207152**

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:	TurboGFP
Symbol:	Cryptochrome I
Synonyms:	DSPD; PHLL1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG207152 representing NM_004075
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGGTGAACGCCGTGCACTGGTTCGAAAGGGCTCCGGCTCCACGACAACCCGCCCTGAAGGAGT
 GCATTCAGGGCGCGACACCATCCGCTGCGTCTACATCCTGGACCCTGGTTCGCGCGCTCTCCAATGT
 GGGCATCAACAGGTGGCGATTTTGTCTCAGTGTCTTGAGGATCTTGATGCCAATCTACGAAAATTAAC
 TCCCGTCTGTTGTGATTCTGGACAACACGAGATGTGTTCCAGGCTTTCAAGGAATGGAACATTA
 CTAACATTTCAATTGAGTATGATTCTGAGCCCTTTGAAAGGAACGAGACGCAGCTATTAAGAACTGGC
 AACTGAAGCTGGAGTAGAAGTCATTGTAAGAATTTACATACATTATATGACCTAGACAAGATCATAGAA
 CTAATGGTGGACAACCGCTCTAACTATAAAAGATTCCAGACTCTCATAGCAAAATGGAACCACTAG
 AGATACCAGTAGAGACAATTACTTCAGAAGTGATAGAAAAGTGCACAACCTCTGTCTGATGACCATGA
 TGAGAAAATATGGAGTCCCTTCACTGGAAGAGCTAGGTTTTGATACAGATGGCTTATCCTCTCGAGTGG
 CCAGGCGGAGAACTGAAGCACTTACTCGTTTGGAAAGGCATTTGGAAAGAAAAGCTTGGGTGGCAAATT
 TTGAAAGACCTCGAATGAATGCGAATTTCTGCTTGAAGCCCTACTGGACTTAGTCCTTATCTCCGATT
 TGGTTGTTGTGATGTCGACTGTTTACTTCAAACAAACAGATCTCTACAAAAGGTAAGAAGAACAGT
 TCCCTCCCTTTCCCTTATAGGCAACTGTTATGGCGTGAATTTTTCTATACAGCAGCAACAAATAATC
 CACGCTTTGATAAAAATGGAAGGAAACCCATCTGTGTTGAGATTCCTTGGGATAAAAATCCTGAGGCTTT
 AGCCAAATGGGCGGAAGGCCGACAGGCTTTCCATGGATTGATGCCATCATGACACAGCTTCGTGAGGAG
 GGTTGGATTCATCATCTAGCCAGGCATGCAGTTGCTTCTGCTGACACGAGGGGACCTGTGGATTAGTT
 GGAAGAAGGAATGAAGTATTTGAAGAATTATGCTTGATGCAGATTGGAGCATAAATGCTGGAAGTTG
 GATGTGGCTGTCTGTAGTTCTTTTTTCAACAGTTTTTCACTGCTATTGCCCTGTTGGTTTTGGTAGG
 AGAACAGATCCCAATGGAGACTATATCAGGCGTTATTTGCTGTCTAAGAGGCTTCCCTGCAAAATATA
 TCTATGATCCCTGGAATGCACCAGAAGGTATCCAAAAGGTAGCCAAATGTTTATAGGAGTTAATTATCC
 TAAACCAATGGTGAACCATGCTGAGGCAAGCCGTTTGAATATCGAAAGGATGAAACAGATCTATCAGCAG
 CTTTACGATATAGAGGACTAGGCTTCTGGCATCAGTACCTTCTAATCCTAATGGGAATGGAGGCTTCA
 TGGGATATTCTGCAGAAAATATCCAGGTTGTAGCAGCAGTGAAGTTGCTCTCAAGGGAGTGGTATTTT
 AACTATGCTCATGGCGACAGTCAAGCAACTCACCTGTTGAAGCAAGGAAGAAGCTCCATGGGCACTGGT
 CTCAGTGGTGGAAACGTCCTAGTCAGGAAGAGGACACACAGAGTATTGGTCTAAAGTCCAGAGACAGA
 GCACTAAT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG207152 representing NM_004075
 Red=Cloning site Green=Tags(s)

MGVNAVHWFRKGLRLHDPALKECIQGADTIRCVYILDWPFAGSSNVGINRWRFLQLQLEDLDANLRKLN
 SRLFVIRGQPADVFPRLFKEWNIKLSIEYDSEPFGKERDAAIKKLATEAGVEVIVRISHTLYDLDKIIE
 LGGQPPPTYKRFQTLISKMEPLEIPVETITSEVIEKCTTPLSDDHDEKYGVPSLEELGFDTDLSSAVW
 PGGETEALTRLERHLERKAWVANFERPRMNANSLASPTGLSPYLRFGLSCLRFYFKLTDLTKKVKKNS
 SPPLSLYGQLLWREFFYATANNPRFDKMEGNPVCVQIPWDKNPEALAKWAEGRTPWIDAIMTQLRQE
 GWIHHLARHAVACFLTRGDLWISWEEGMKVFEEELLDADWSINAGSWMWLSGSSFFQFFHCYCPVGFGR
 RTDPNGDYIRRYLPVLRGFPKAYIYDPWNAPEGIQKVAKCLIGVNYPKPMVNHAEASRLNIERMKQIYQQ
 LSRYRGLLLASVPSNPNGGFMGYSANIPGCSGSSGSCSQSGILHYAHGDSQTHLLKQGRSSMGTG
 LSGGKRPSQEEDTQSIGPKVQRQSTN

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-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.

RefSeq: [NM_004075.2](#), [NP_004066.1](#)

RefSeq Size: 2999 bp

RefSeq ORF: 1761 bp

Locus ID: 1407

UniProt ID: [Q16526](#)

Cytogenetics: 12q23.3

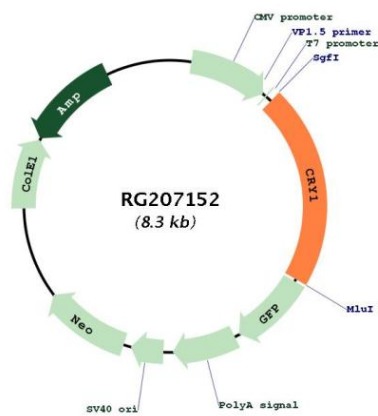
Domains: FAD_binding_7, DNA_photolyase

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]

Product images:



Circular map for RG207152