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Product datasheet for RC207337

CRY2 (NM_021117) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CRY2 (NM_021117) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CRY2
Synonyms:	HCRY2; PHLL2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC207337 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGGCGACTGTGGCGACGGCGGCAGCTGTGGCCCCGGCGCCAGCGCCCGGCACGGACAGCGCCTCTT
CGGTGCACTGGTTCCGCAAAGGGCTGCGACTCCACGACAACCCGGCGTTGCTGGCGGCCGTGCGCGGGGC
GCGCTGCGTGCGCTGCGTTTACATTCTCGACCCGTGGTTCGCGGCCTCCTCCTCAGTCGGGATCAACCGA
TGGAGGTTCCTACTTCAGTCTCTGGAAGATTTGGACACAAGTTTAAGGAAACTGAACTCCCGCCTGTTTG
TAGTCCGGGGACAGCCAGCCGACGTGTTCCCAAGGCTGTTCAAGGAATGGGGAGTGACCCGCTTGACCTT
TGAATATGACTCTGAACCCTTTGGGAAAGAACGGGATGCAGCCATCATGAAGATGGCCAAGGAGGCTGGT
GTGGAAGTAGTGACGGAGAATTCTCATACCCTCTATGACCTGGACAGGATCATTGAGCTGAATGGGCAGA
AGCCACCCCTTACATACAAGCGCTTTCAGGCCATCATCAGCCGCATGGAGCTGCCCAAGAAGCCAGTGGG
CTTGGTGACCAGCCAGCAGATGGAGAGCTGCAGGGCCGAGATCCAGGAGAACCACGACGAGACCTACGGC
GTGCCCTCCCTGGAGGAGCTGGGGTTCCCCACTGAAGGACTTGGTCCAGCTGTCTGGCAGGGAGGAGAGA
CAGAAGCTCTGGCCCGCCTGGATAAGCACTTGGAACGGAAGGCCTGGGTTGCCAACTATGAGAGACCCCG
AATGAACGCCAACTCCCTCCTGGCCAGCCCCACAGGCCTCAGCCCCTACCTGCGCTTTGGTTGTCTCTCC
TGCCGCCTCTTCTACTACCGCCTGTGGGACCTGTATAAAAAGGTGAAGCGGAACAGCACACCTCCCCTCT
CCCTATTTGGGCAACTCCTATGGCGAGAGTTCTTCTACACGGCAGCTACCAACAACCCCAGGTTTGACCG
CATGGAGGGGAACCCCATCTGCATCCAGATCCCCTGGGACCGCAATCCTGAGGCCCTGGCCAAGTGGGCT
GAGGGCAAGACAGGCTTCCCTTGGATTGATGCCATCATGACCCAACTGAGGCAGGAGGGCTGGATCCACC
ACCTGGCCCGGCATGCCGTGGCCTGCTTCCTGACCCGCGGGGACCTCTGGGTCAGCTGGGAGAGCGGGGT
CCGGGTATTTGATGAGCTGCTCCTGGATGCAGATTTCAGCGTGAACGCAGGCAGCTGGATGTGGCTGTCC
TGCAGTGCTTTCTTCCAGCAGTTCTTCCACTGCTACTGCCCTGTGGGCTTTGGCCGTCGCACGGACCCCA
GTGGGGACTACATCAGGCGATACCTGCCCAAATTGAAAGCGTTCCCCTCTCGATACATCTATGAGCCCTG
GAATGCCCCAGAGTCAATTCAGAAGGCAGCCAAGTGCATCATTGGTGTGGACTACCCACGGCCCATCGTC
AACCATGCCGAGACCAGCCGGCTTAACATTGAACGAATGAAGCAGATTTACCAGCAGCTTTCGCGCTACC
GGGGACTCTGTCTACTGGCATCTGTCCCTTCCTGTGTGGAAGACCTCAGTCACCCTGTGGCAGAGCCCAG
CTCGAGCCAGGCTGGCAGCATGAGCAGTGCAGGCCCAAGACCACTACCCAGTGGCCCAGCATCCCCCAAA
CGCAAGCTGGAAGCAGCCGAGGAACCACCTGGTGAAGAACTCAGCAAACGGGCCCGGGTGGCAGAGTTGC
CAACCCCAGAGCTGCCGAGCAAGGATGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC207337 protein sequence
Red=Cloning site Green=Tags(s)

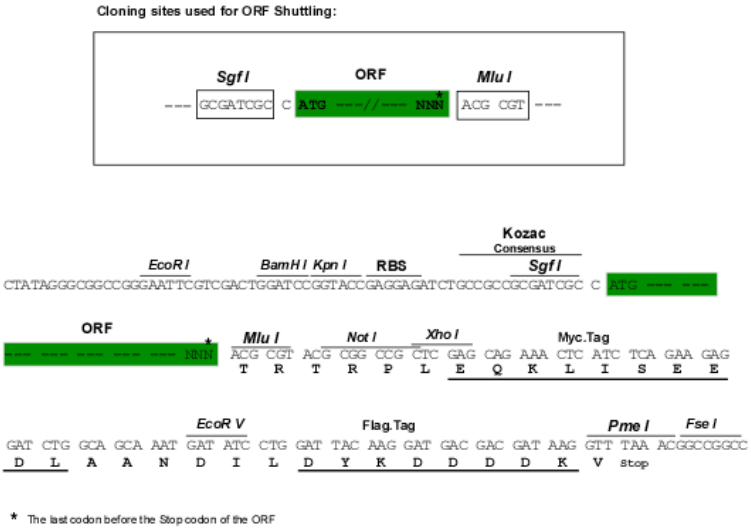
MAATVATAAAVAPAPAPGTDSASSVHWFRKGLRLHDNPALLAAVRGARCVRCVYILDPWFAASSSVGINR
WRFLLQSLEDLDTSLRKLNSRLFVVRGQPADVFPRLFKEWGVTRLTFEYDSEPFGKERDAAIMKMAKEAG
VEVVTENSHTLYDLDRIIELNGQKPPLTYKRFQAIISRMELPKKPVGLVTSQQMESCRAEIQENHDETYG
VPSLEELGFPTEGLGPAVWQGGETEALARLDKHLERKAWVANYERPRMNANSLLASPTGLSPYLRFGCLS
CRLFYYRLWDLYKKVKRNSTPPLSLFGQLLWREFFYTAATNNPRFDRMEGNPICIQIPWDRNPEALAKWA
EGKTGFPWIDAIMTQLRQEGWIHHLARHAVACFLTRGDLWVSWESGVRVFDELLLDADFSVNAGSWMWLS
CSAFFQQFFHCYCPVGFGRRTDPSGDYIRRYLPKLKAFPSRYIYEPWNAPESIQKAAKCIIGVDYPRPIV
NHAETSRLNIERMKQIYQQLSRYRGLCLLASVPSCVEDLSHPVAEPSSSQAGSMSSAGPRPLPSGPASPK
RKLEAAEEPPGEELSKRARVAELPTPELPSKDA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6023_e04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_021117

ORF Size: 1779 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_021117.5

RefSeq Size: 4204 bp

RefSeq ORF: 1782 bp

Locus ID: 1408

UniProt ID: Q49AN0

Cytogenetics: 11p11.2

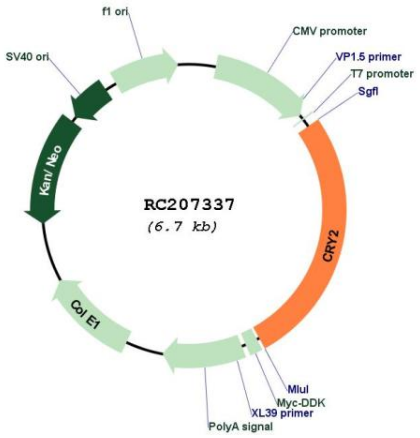
Protein Families: Druggable Genome

Protein Pathways: Circadian rhythm - mammal

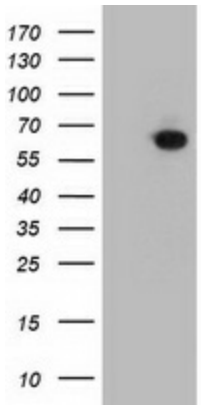
MW: 66.9 kDa

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. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Feb 2014]

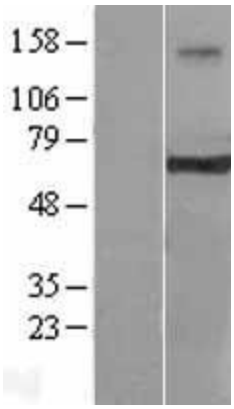
Product images:



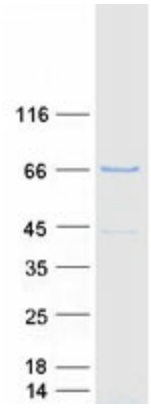
Circular map for RC207337



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CRY2 (Cat# RC207337, 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-CRY2(Cat# [TA502905]). Positive lysates [LY432326] (100ug) and [LC432326] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY412078]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207337 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CRY2 protein (Cat# [TP307337]). The protein was produced from HEK293T cells transfected with CRY2 cDNA clone (Cat# RC207337) using MegaTran 2.0 (Cat# [TT210002]).