

Product datasheet for **RC204464**

BMAL1 (ARNTL) (NM_001030273) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BMAL1 (ARNTL) (NM_001030273) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BMAL1
Synonyms:	bHLHe5; BMAL1; BMAL1c; JAP3; MOP3; PASD3; TIC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC204464 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGATTAATATAGAAAGCATGGACACAGACAAAGATGACCCTCATGGAAGTTAGAATATACAGAACACC
 AAGGAAGGATAAAAAATGCAAGGAAGCTCACAGTCAGATTGAAAAGCGGCGTCGGGATAAAATGAACAG
 TTTTATAGATGAATTGGCTTCTTTGGTACCAACATGCAACGCAATGTCCAGGAAATTAGATAAACTTACT
 GTGCTAAGGATGGCTGTTGACACATGAAAAATTAAGAGGTGCCACCAATCCATACACAGAAGCAAACCT
 ACAAAACCAACTTTTCTATCAGACGATGAATTGAAACACCTCATTCTCAGGGCAGCAGATGGATTTTTGTT
 TGTCGTAGGATGTGACCGAGGGAAGATACTCTTTGTCTCAGAGTCTGTCTTCAAGATCCTCAACTACAGC
 CAGAATGATCTGATTGGTCAGAGTTTGTGACTACCTGCATCCTAAAGATATTGCCAAAGTCAAGGAGC
 AGCTCTCCTCCTCTGACACCGCACCCCGGAGCGGCTCATAGATGCAAAAAGTGGACTTCCAGTTAAAC
 AGATATAACCCCTGGGCCATCTCGATTATGTTCTGGAGCAGGACGTTCTTTCTTGTAGGATGAAGTGT
 AACAGGCCTTCAGTAAAGGTTGAAGACAAGGACTTCCCTCTACCTGCTCAAAGAAAAAGCAGATCGAA
 AAAGCTTCTGCACAATCCACAGCACAGGCTATTTGAAAAGCTGGCCACCCACAAAGATGGGGCTGGATGA
 AGACAACGAACCAGACAATGAGGGGTGTAACCTCAGCTGCCTCGTCAATTGGACGACTGCATTCTCAT
 GTAGTTCCACAACCAGTGAACGGGGAAATCAGGGTGAAATCTATGGAATATGTTTCTCGGCACCGGATAG
 ATGAAAAGTTTGTGTTTGTAGACCAGAGGGCAACAGCTATTTGGCATATTTACCACAAGAACTTCTAGG
 CACATCGTGTTATGAATATTTTACCAAGATGACATAGGACATCTGCAGAATGCATAGGCAAGTTTTTA
 CAGACGAGAGAAAAAATTACAATAATTGCTATAAATTTAAAATCAAAGATGGTTCTTTTATCACACTAC
 GGAGTCGATGGTTCAGTTTCATGAACCTTGGACCAAGGAAGTAGAATATATTGTCTCAACTAACACTGT
 TGTTTTAGCCAACGTCCTGGAAGGCGGGGACCCAACCTTCCACAGCTCACAGCATCCCCCACAGCATG
 GACAGCATGCTGCCCTCTGGAGAAGGTGGCCAAAGAGGACCCACCCCACTGTTCCAGGGATTCCAGGGG
 GAACCCGGGCTGGGGCAGGAAAAATAGGCCGAATGATTGCTGAGGAAATCATGGAATCCACAGGATAAG
 AGGGTCATCGCCTTCTAGCTGTGGCTCCAGCCATTGAACATCACGAGTACGCCTCCCCCTGATGCCTCT
 TCTCCAGGAGCAAGAAGATTTTAAATGGAGGGACTCCAGACATTCCTTCCAGTGGCCTACTATCAGGCC
 AGGCTCAGGAGAACCAGGTTATCCATATTCTGATAGTCTTCTATTCTTGGTGAAGACCCACATAGG
 TATAGACATGATTGACAACGACCAAGGATCAAGTAGTCCAGTAATGATGAGGCAGCAATGGCTGTCATC
 ATGAGCCTCTTGAAGCAGATGCTGGACTGGGTGGCCCTGTTGACTTTAGTGACTTGCCATGGCCGCTG

ACGCGTACGCGGCGGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC204464 protein sequence
 Red=Cloning site Green=Tags(s)

MINIESMDTDKDDPHGRLEYTEHQGRIKNAREAHSQIEKRRRDKMNSFIDELASLVPTCNAMSRKLDKLT
 VLRMAVQHMKTLRGATNPYTEANYKPTFLSDELKHLILRAADGFLFVVGCDRGKILFVSESVFKILNYS
 QNDLIGQSLFDYLHPKDIKVKELSSSDTAPRERLIDAKTGLPVKTDITPGPSRLCSGARRSFFCRMKC
 NRPSVKVEDKDFPSTCSKKKADRKSFCTIHSTGYLKSWPPTKMGLDEDNEPDNEGCNLSCLVAIGRLHSH
 VVPQPVNGEIRVKSMEYVSRHAIDGKVFVDQRATAILAYLPQELLGTSCYEYFHQDDIGHLAECHRQVL
 QTREKITTNCYKFKIKDGSFITLRSRWF S FMNPWTKEVEYIVSTNTVVLANVLEGGDPTFPQLTASPHSM
 DSMLPSGEGGPKRTHPTVPGIPGGTRAGAGKIGRMIAEEIMEIHRIRGSSPSSCGSSPLNITSTPPPDAS
 SPGGKKILNGGTPDIPSSGLLSGQAQENPGYPYSDSSSILGENPHIGIDMIDNDQSSSPSNDEAAMAVI
 MSLLLEADAGLGGPVDFSDLPWPL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6544_b12.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:

ACCN: NM_001030273

ORF Size: 1749 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](#)

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

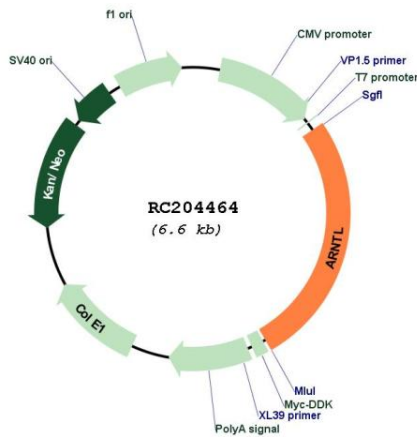
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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.

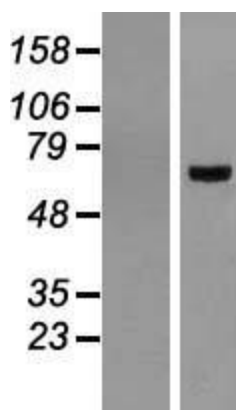
RefSeq: [NM_001030273.2](#)
RefSeq Size: 2879 bp
RefSeq ORF: 1749 bp
Locus ID: 406
UniProt ID: [O00327](#)
Cytogenetics: 11p15.3
Protein Families: Druggable Genome, Transcription Factors
Protein Pathways: Circadian rhythm - mammal
MW: 64.2 kDa

Gene Summary: The protein encoded by this gene is a basic helix-loop-helix protein that forms a heterodimer with CLOCK. This heterodimer 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. Defects in this gene have been linked to infertility, problems with gluconeogenesis and lipogenesis, and altered sleep patterns. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2014]

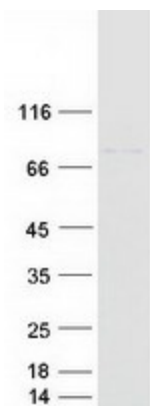
Product images:



Circular map for RC204464



Western blot validation of overexpression lysate (Cat# [LY422247]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204464 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ARNTL protein (Cat# [TP304464]). The protein was produced from HEK293T cells transfected with ARNTL cDNA clone (Cat# RC204464) using MegaTran 2.0 (Cat# [TT210002]).