

Product datasheet for **RG204464**

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:	TurboGFP
Symbol:	BMAL1
Synonyms:	bHLHe5; BMAL1; BMAL1c; JAP3; MOP3; PASD3; TIC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG204464 representing NM_001030273
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGATTAATATAGAAAGCATGGACACAGACAAAGATGACCCTCATGGAAGTTAGAATATACAGAACACC
 AAGGAAGGATAAAAAATGCAAGGAAGCTCACAGTCAGATTGAAAAGCGGCGTCGGGATAAAATGAACAG
 TTTTATAGATGAATTGGCTTCTTTGGTACCAACATGCAACGCAATGTCCAGGAAATTAGATAAACTTACT
 GTGCTAAGGATGGCTGTTGACACATGAAAAATTAAGAGGTGCCACCAATCCATACACAGAAGCAAACCT
 ACAACCAACTTTTCTATCAGACGATGAATTGAAACACCTCATTCTCAGGGCAGCAGATGGATTTTTGTT
 TGTCGTAGGATGTGACCGAGGGAAGATACTCTTTGTCTCAGAGTCTGTCTTCAAGATCCTCAACTACAGC
 CAGAATGATCTGATTGGTCAGAGTTTGTGACTACCTGCATCCTAAAGATATTGCCAAAGTCAAGGAGC
 AGCTCTCCTCCTCTGACACCGCACCCCGGAGCGGCTCATAGATGCAAAAAGTGGACTTCCAGTTAAAC
 AGATATAACCCCTGGGCCATCTCGATTATGTTCTGGAGCAGACGTTCTTTCTTCTGTAGGATGAAGTGT
 AACAGGCCTTCAGTAAAGGTTGAAGACAAGGACTTCCCTCTACCTGCTCAAAGAAAAAGCAGATCGAA
 AAAGCTTCTGCACAATCCACAGCACAGGCTATTTGAAAAGCTGGCCACCCACAAAGATGGGGCTGGATGA
 AGACAACGAACCAGACAATGAGGGGTGTAACTCAGCTGCCTCGTCAATTGGACGACTGCATTCTCAT
 GTAGTTCCACAACCAGTGAACGGGAAATCAGGGTGAATCTATGGAATATGTTTCTCGGCACCGGATAG
 ATGAAAAGTTTGTGTTTGTAGACCAGAGGGCAACAGCTATTTGGCATATTTACCACAAGAACTTCTAGG
 CACATCGTGTTATGAATATTTTACCAAGATGACATAGGACATCTGCAGAATGCATAGGCAAGTTTTA
 CAGACGAGAGAAAAAATACAATAATTGCTATAAATTTAAAATCAAAGATGGTCTTTTATCACACTAC
 GGAGTCGATGGTTCAGTTTCATGAACCTTGACCAAGGAAGTAGAATATATTGTCTCAACTAACACTGT
 TGTGTTTAGCCAACGTCTGGAAGGCGGGACCCAACTTCCACAGCTCACAGCATCCCCCACAGCATG
 GACAGCATGCTGCCCTCTGGAGAAGGTGGCCAAAGAGGACCCACCCACTGTTCCAGGGATTCCAGGGG
 GAACCCGGGCTGGGGCAGGAAAAATAGGCCGAATGATTGCTGAGGAAATCATGGAATCCACAGGATAAG
 AGGGTCATCGCCTTCTAGCTGTGGCTCCAGCCATTGAACATCACGAGTACGCCTCCCCCTGATGCCTCT
 TCTCCAGGAGCAAGAAGATTTTAAATGGAGGGACTCCAGACATTCCTTCCAGTGGCCTACTATCAGGCC
 AGGCTCAGGAGAACCAGGTTATCCATATTCTGATAGTCTTCTATTCTTGGTGAAGACCCACATAGG
 TATAGACATGATTGACAACGACCAAGGATCAAGTAGTCCCAGTAATGATGAGGCAGCAATGGCTGTCATC
 ATGAGCCTCTTGAAGCAGATGCTGGACTGGGTGGCCCTGTTGACTTTAGTGACTTGCCATGGCCGCTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG204464 representing NM_001030273
 Red=Cloning site Green=Tags(s)

MINIESMDTDKDDPHGRLEYTEHQRIKNAREAHSQIEKRRRDKMNSFIDELASLVPTCNAMSRKLDKLT
 VLRMAVQHMKTLRGATNPYTEANYKPTFLSDELKHLILRAADGFLFVVGCDRGKILFVSESVFKILNYS
 QNDLIGQSLFDYLHPKDIKVKELSSSDTAPRERLIDAKTGLPVKTDITPGPSRLCSGARRSFFCRMKC
 NRPSVKVEDKDFPSTCSKKKADRKSFCITIHSTGYLKSWPPTKMGLDEDNEPDNEGCNLSCLVAIGRLHSH
 VVPQPVNGEIRVKSMEYVSRHAIDGKVFVVDQRATAILAYLPQELLGTSCYEYFHQDDIGHLAECHRQVL
 QTREKITTNCYKFKIKDGSFITLRSRWF S F M N P W T K E V E Y I V S T N T V V L A N V L E G D P T F P Q L T A S P H S M
 DSMLPSGEGGPKRTHPTVPGIPGGTRAGAGKIGRMIAEEIMEIHRIRGSSPSSCGSSPLNITSTPPPDAS
 SPGGKKILNGGTPDIPSSGLLSGQAQENPGYPYSDSSSILGENPHIGIDMIDNDQGSSSPSNDEAAMAVI
 MSLLLEADAGLGGPVDFSDLPWPL

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

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_001030273.1](#), [NP_001025444.1](#)

RefSeq Size: 2828 bp

RefSeq ORF: 1749 bp

Locus ID: 406

UniProt ID: [O00327](#)

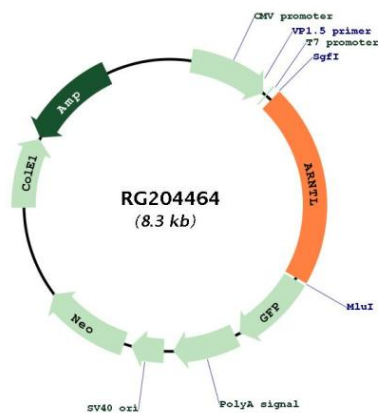
Cytogenetics: 11p15.3

Protein Families: Druggable Genome, Transcription Factors

Protein Pathways: Circadian rhythm - mammal

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 RG204464