

Product datasheet for **RG217474**

BMAL1 (ARNTL) (NM_001030272) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BMAL1 (ARNTL) (NM_001030272) 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:

>RG217474 representing NM_001030272
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCAGACCAGAGAATGGACATTTCTCAACCATCAGTATTTTCATGTCCCCGGGCCCCACCGACCTGC
 TTTCCAGCTCTCTTGGTACCAGTGGTGTGGATTGCAACCGCAAACGGAAAGGCAGCTCCACTGACTACCA
 AGAAAAGCATGGACACAGACAAAGATGACCTCATGGAAGGTTAGAATATACAGAACCAAGGAAGGATA
 AAAAATGCAAGGGAAGCTCACAGTCAGATTGAAAAGCGGCGTCGGGATAAAAATGAACAGTTTTATAGATG
 AATTGGCTTCTTTGGTACCAACATGCAACGCAATGTCCAGGAAATAGATAAACTTACTGTGCTAAGGAT
 GGCTGTTCCAGCACATGAAAACATTAAGAGGTGCCACCAATCCATACACAGAAGCAAACACAAAACCACT
 TTTCTATCAGACGATGAATTGAAACACCTATTCTCAGGGCAGCAGATGGATTTTTGTTTGTGCTAGGAT
 GTGACCGAGGGAAGATACTCTTTGTCTCAGAGTCTGTCTTCAAGATCCTCAACTACAGCCAGAATGATCT
 GATTGGTCAGAGTTTGTGTTGACTACCTGCATCCTAAAGATATTGCCAAAGTCAAGGAGCAGCTCTCTCC
 TCTGACACCGCACCCCGGAGCGGCTCATAGATGCAAAAACCTGGACTTCCAGTAAAAACAGATATAACCC
 CTGGGCCATCTCGATTATGTTCTGGAGCAGCAGCTTCTTTCTTGTAGGATGAAGTGTAAACAGGCCCTC
 AGTAAAGGTTGAAGACAAGGACTTCCCCTCTACCTGCTCAAAGAAAAAGATCGAAAAAGCTTCTGCACA
 ATCCACAGCACAGGCTATTTGAAAAGCTGGCCACCCACAAAGATGGGGCTGGATGAAGACAACGAACCG
 ACAATGAGGGGTGAACCTCAGCTGCCTCGTCGCAATTGGACGACTGCATTTCTCATGTAGTTCCACAACC
 AGTGAACGGGGAATCAGGGTGAATCTATGGAATATGTTTCTCGGCACGCGATAGATGGAAGTTTGT
 TTTGTAGACCAGAGGGCAACAGCTATTTGGCATATTTACCACAAGAATCTTAGGCACATCGTGTATG
 AATATTTTCAACAAGATGACATAGGACATCTTGCAGAATGTCATAGGCAAGTTTTACAGACGAGAGAAAA
 AATTACAATAATTGCTATAAATTTAAAATCAAAGATGGTTCTTTTATCACACTACGGAGTCGATGGTTC
 AGTTTCATGAACCTTGGACCAAGGAAGTAGAATATATTGTCTCAACTAACACTGTTGTTTTAGCCAACG
 TCCTGGAAGGCGGGGACCCAACCTTCCCACAGCTCACAGCATCCCCCACAGCATGGACAGCATGCTGCC
 CTCTGGAGAAGGTGGCCAAAGAGGACCCACCCACTGTTCCAGGGATTCCAGGGGGAACCCGGGCTGGG
 GCAGGAAAAATAGGCCGAATGATTGCTGAGGAAATCATGGAAATCCACAGGATAAGAGGGTCATCGCCTT
 CTAGCTGTGGCTCCAGCCATTGAACATCACGAGTACGCTCCCCCTGATGCCTTCTCCAGGAGGCAA
 GAAGATTTTAAATGGAGGACTCCAGACATTCTTCCAGTGGCCTACTATCAGGCCAGGCTCAGGAGAAC
 CCAGGTTATCCATATTCTGATAGTCTTCTATTCTTGGTGAACCCCCACATAGGTATAGACATGATTG
 ACACCGACCAAGGATCAAGTAGTCCAGTAATGATGAGGCAGCAATGGCTGTATCATGAGCCTCTTGGA
 AGCAGATGCTGGACTGGGTGGCCCTGTTGACTTTAGTGACTTGCCATGGCCGCTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG217474 representing NM_001030272
 Red=Cloning site Green=Tags(s)

MADQRMDISSTISDFMSPGPTDLLSSSLGTSGVDCNRKRKGSSTDYQESMDTDKDDPHGRLEYTEHQGRI
 KNAREAHSQIEKRRRDKMNSFIDELASLVPTCNAMSRKLDKLTVLRMAVQHMKTLRGATNPYTEANYKPT
 FLSDDDELKHLILRAADGFLFVVGCDRGKILFVSESVFKILNYSQNDLIGQSLFDYLHPKDIAKVKEQLSS
 SDTAPRERLIDAKTGLPVKTDITPGPSRLCSGARRSFFCRMKCNRPVSVKVEDKDFPSTCSKKKDRKSFCT
 IHSTGYLKSWPPTKMGLDEDNEPDNEGCNLSCLVAIGRLHSHVVPQPVNGEIRVKSMEEYVSRHAIDGKFV
 FVDQRATAILAYLPQELLGTSCYEYFHQDDIGHLAECHRQVLQTRKITTNCYKFKIKDGSFITLRSRW
 SFMNPWTKVEEYIVSTNTVVLANVLEGGDPTFPQLTASPHSMDSMLPSGEGGPKRTHPTVPGIPGGTRAG
 AGKIGRMIAEEIMEIHRIRGSSPSSCGSSPLNITSTPPDASSPGGKILNNGGTPDIPSSGLLSGQAQEN
 PGYPYSDSSSILGENPHIGIDMIDNDQGSSSPSNDEAAMAVIMSLLEADAGLGGPVDFSDLPWPL

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001030272

ORF Size: 1875 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_001030272.2](#)

RefSeq Size: 2757 bp

RefSeq ORF: 1878 bp

Locus ID: 406

UniProt ID: [O00327](#)

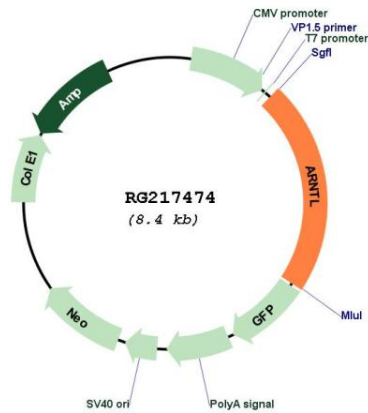
Cytogenetics: 11p15.3

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 RG217474