

## Product datasheet for **RG207870**

### **BMAL1 (ARNTL) (NM\_001178) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	BMAL1 (ARNTL) (NM_001178) 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)



[View online »](#)

**ORF Nucleotide Sequence:**

>RG207870 representing NM\_001178  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCAGACCAGAGAATGGACATTTCTCAACCATCAGTGATTTTCATGTCCCCGGGCCCCACCGACCTGC  
 TTTCCAGCTCTCTTGGTACCAGTGGTGGATTGCAACCGCAAACGGAAAGGCAGCTCCACTGACTACCA  
 AGAAAAGCATGGACACAGACAAAGATGACCTCATGGAAGGTTAGAATATACAGAACCAAGGAAGGATA  
 AAAAATGCAAGGGAAGCTCACAGTCAGATTGAAAAGCGGCGTCGGGATAAAAATGAACAGTTTTATAGATG  
 AATTGGCTTCTTTGGTACCAACATGCAACGCAATGTCCAGGAAATAGATAAACTTACTGTGCTAAGGAT  
 GGCTGTTCCAGCACATGAAAACATTAAGAGGTGCCACCAATCCATACACAGAAGCAAACACTACAAACCACT  
 TTTCTATCAGACGATGAATTGAAACACCTATTCTCAGGGCAGCAGATGGATTTTTGTTTGTGCTAGGAT  
 GTGACCGAGGGAAGATACTCTTTGTCTCAGAGTCTGTCTTCAAGATCCTCAACTACAGCCAGAATGATCT  
 GATTGGTCAGAGTTTGTGTTGACTACCTGCATCCTAAAGATATTGCCAAAGTCAAGGAGCAGCTCTCTCC  
 TCTGACACCGCACCCCGGAGCGGCTCATAGATGCAAAAACCTGGACTTCCAGTAAAAACAGATATAACCC  
 CTGGGCCATCTCGATTATGTTCTGGAGCAGCAGCTTCTTTCTTGTAGGATGAAGTGTAACAGGCCCTTC  
 AGTAAAGGTTGAAGACAAGGACTTCCCCTCTACCTGCTCAAAGAAAAAGATCGAAAAAGCTTCTGCACA  
 ATCCACAGCACAGGCTATTTGAAAAGCTGGCCACCCACAAAGATGGGGCTGGATGAAGACAACGAACCG  
 ACAATGAGGGGTGAACCTCAGCTGCCTCGTCGCAATTGGACGACTGCATTCTCATGTAGTTCCACAACC  
 AGTGAACGGGGAATCAGGGTGAATCTATGGAATATGTTTCTCGGCACGCGATAGATGGAAGTTTGT  
 TTTGTAGACCAGAGGGCAACAGCTATTTGGCATATTTACCACAAGAATCTTAGGCACATCGTGTATG  
 AATATTTTACCAGATGACATAGGACATCTTGCAGAATGTCATAGGCAAGTTTTACAGACGAGAGAAAA  
 AATTACAATAATTGCTATAAATTTAAAATCAAAGATGGTTCTTTTATCACACTACGGAGTCGATGGTTC  
 AGTTTCATGAACCTTGGACCAAGGAAGTAGAATATATTGTTCTCAACTAACACTGTTGTTTTAGCCAACG  
 TCCTGGAAGGCGGGGACCCAACCTTCCCACAGCTCACAGCATCCCCCACAGCATGGACAGCATGCTGCC  
 CTCTGGAGAAGGTGGCCAAAGAGGACCCACCCACTGTTCCAGGGATTCCAGGGGGAACCCGGGCTGGG  
 GCAGGAAAAATAGGCCGAATGATTGCTGAGGAAATCATGGAAATCCACAGGATAAGAGGGTCATCGCCTT  
 CTAGCTGTGGCTCCAGCCATTGAACATCAGGATACGCTCCTCCCTGATGCCTTCTCCAGGAGGCAA  
 GAAGATTTTAAATGGAGGACTCCAGACATTCCTCCAGTGGCCTACTATCAGGCCAGGCTCAGGAGAAC  
 CCAGGTTATCCATATTCTGATAGTCTTCTATTCTTGGTGAACCCCCACATAGGTATAGACATGATTG  
 ACACCGACCAAGGATCAAGTAGTCCAGTAATGATGAGGCAGCAATGGCTGTATCATGAGCCTCTTGGA  
 AGCAGATGCTGGACTGGGTGGCCCTGTTGACTTTAGTGACTTGCCATGGCCGCTG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG207870 representing NM\_001178  
 Red=Cloning site Green=Tags(s)

MADQRMDISSTISDFMSPGPTDLLSSSLGTSVDCNRKRKGSSTDYQESMDTDKDDPHGRLEYTEHQGRI  
 KNAREAHSQIEKRRRDKMNSFIDELASLVPTCNAMSRKLDKLTVLRMAVQHMKTLRGATNPYTEANYKPT  
 FLSDDDELKHLILRAADGFLFVVGCDRGKILFVSESVFKILNYSQNDLIGQSLFDYLHPKDIAKVKEQLSS  
 SDTAPRERLIDAKTGLPVKTDITPGPSRLCSGARRSFFCRMKCNRPSVKVEDKDFPSTCSKKKDRKSFCT  
 IHSTGYLKSWPPTKMGLDEDNEPDNEGCNLSCLVAIGRLHSHVVPQPVNGEIRVKSMEEYVSRHAIDGKFFV  
 FVDQRATAILAYLPQELLGTSCYEYFHQDDIGHLAECHRQVLQTREKITTNCYKFKIKDGSFITLRSRW  
 SFMNPWTKVEEYIVSTNTVVLANVLEGGDPTFPQLTASPHSMDSMLPSGEGGPKRTHPTVPGIPGGTRAG  
 AGKIGRMIAEEIMEIHRIRGSSPSSCGSSPLNITSTPPDASSPGGKILNNGGTPDIPSSGLLSGQAQEN  
 PGYPYSDSSSILGENPHIGIDMIDNDQGSSSPSNDEAAMAVIMSLLEADAGLGGPVDFSDLPWPL

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001178

**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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_001178.5](#)

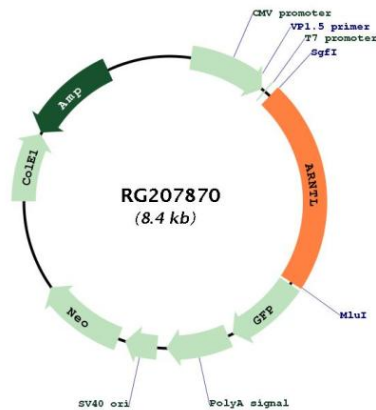
**RefSeq Size:** 2812 bp

**RefSeq ORF:** 1878 bp

**Locus ID:** 406

UniProt ID:	<u>O00327</u>
Cytogenetics:	11p15.3
Domains:	PAS, HLH, PAC
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 RG207870