

## Product datasheet for **RG238979**

### **BMAL1 (ARNTL) (NM\_001297724) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	BMAL1 (ARNTL) (NM_001297724) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ARNTL
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:**

>RG238979 representing NM\_001297724.  
 Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGATTAATATAGAAAAGCATGGACACAGACAAAAGATGACCCTCATGGAAGGTTAGAAATACAGAACAC
CAAGGAAGGATAAAAAATGCAAGGGAAGCTCACAGTCAGATTGAAAAGCGGCGTCGGGATAAAATGAAC
AGTTTTATAGATGAATTGGCTTCTTTGGTACCAACATGCAACGCAATGTCCAGGAAATTAGATAAATT
ACTGTGCTAAGGATGGCTGTTTCAGCACATGAAAACATTAAAGAGGTGCCACCAATCCATACACAGAAGCA
AACTACAAACCAACTTTTCTATCAGACGATGAATTGAAACACCTCATTCTCAGGGCAGCAGATGGATTT
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ATGAAGTGAACAGGCCCTCAGTAAAGGTTGAAGACAAGGACTTCCCCTCTACCTGCTCAAAGAAAAA
GCAGATCGAAAAAGCTTCTGCACAATCCACAGCACAGGCTATTTGAAAAGCTGGCCACCCACAAAGATG
GGGCTGGATGAAGACAACGAACCAGACAATGAGGGGTGTAACTCAGCTGCCTCGTCGCAATTGGACGA
CTGCATTTCTATGTAGTTCCACAACAGTGAACGGGAAATCAGGGTAAAATCTATGGAATATGTTTCT
CGGCACGCGATAGATGGAAAGTTTGTGTTTGTAGACCAGAGGGCAACAGCTATTTTGGCATATTTACCA
CAAGAACTTCTAGGCACATCGTGTATGAATATTTTCCCAAGATGACATAGGACATCTTGCAGAATGT
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TCTTTTATCACACTACGGAGTCGATGGTTCAGTTTCATGAACCTTGGACCAAGGAAGTAGAATATATT
GTCTCAACTAACACTGTTGTTTTAGCCAACGTCCTGGAAGCGGGGACCCAACTTCCCACAGTCACA
GCATCCCCCACAGCATGGACAGCATGCTGCCCTCTGGAGAAGGTGGCCCAAAGAGGACCCACCCACT
GTTCCAGGGATTCCAGGGGAACCCGGGCTGGGCGAGAAAAATAGGCCGAATGATTGCTGAGGAAATC
ATGAAATCCACAGGATAAGAGGGTCATCGCCTTCTAGCTGTGGCTCCAGCCATTGAACATCACGAGT
ACGCCTCCCCCTGATGCCTCTTCTCCAGGAGGCAAGAAGATTTTAAATGGAGGGACTCCAGACATTCCT
TCCAGTGGCTACTATCAGGCCAGGCTCAGGAGAACCCAGGTTATCCATATTCTGATAGTTCTTCTATT
CTTGGTGAGAACCCACATAGGTATAGACATGATTGACAACGACCAAGGATCAAGTAGTCCAGTAAT
GATGAGGCAGCAATGGCTGTATCATGAGCCTCTTGAAGCAGATGCTGGACTGGGTGGCCTGTTGAC
TTTAGTGACTIONGATGGCCGCTG
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTAAAC
```

**Protein Sequence:**

>Peptide sequence encoded by RG238979  
 Blue=ORF Red=Cloning site Green=Tag(s)

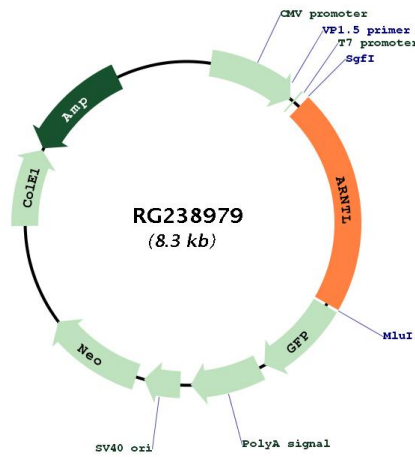
```
MINIESMDTDKDDPHRLEYTEHQRIKNAREAHSQIEKRRRDKMNSFIDELASLVPTCNAMSRKLDKL
TVLRMAVQHMKTLRGATNPYTEANYKPTFLSDDLKHLILRAADGFLFVVGCDRGKILFVSESVFKILN
YSQNDLIGQSLFDYLHPKDIKVKQLSSSDTAPRERLIDAKTGLPVKTDITPGPSRLCSGARRSFFCR
MKCNRPVSVKVEDKDFPSTCSKKADRKSFCTIHSTGYLKSWPPTKMGLDEDNEPDNEGCNLSCLVAIGR
LHSHVVPQPVNGEIRVKSMEYVSRHAIDGKVFVDQRATAILAYLPQELLTSCYEFHQDDIGHLAEC
HRQVLQTRKITTNCYKFKIKDGSFITLRSRWF SFMNPWTKEVEYIVSTNTVVLANVLEGGDPTFPQLT
ASPHMSMSMLPSGEGPKRTHPTVPGIPGGTRAGAGKIGRMIAEEIMEIHRIRGSSPSSCGSSPLNITS
TPPPDASSPGGKILNNGTDPDIPSSGLLSGQAQENPGYPYSDSSSILGENPHIGIDMIDNDQGSSSPSN
DEAAMAVIMSLLEADAGLGGPVDVFDLPWPL
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPSGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIIRSNAIVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
```

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:


**Plasmid Map:**


ACCN: NM\_001297724

ORF Size: 1749 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>RefSeq:</b>	<a href="#">NM_001297724.1</a> , <a href="#">NP_001284653.1</a>
<b>RefSeq Size:</b>	2875 bp
<b>RefSeq ORF:</b>	1752 bp
<b>Locus ID:</b>	406
<b>UniProt ID:</b>	<a href="#">O00327</a>
<b>Cytogenetics:</b>	11p15.3
<b>Protein Families:</b>	Druggable Genome, Transcription Factors
<b>Protein Pathways:</b>	Circadian rhythm - mammal
<b>MW:</b>	64.7 kDa
<b>Gene Summary:</b>	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]