

## Product datasheet for **RC238979**

### **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:	Myc-DDK
Symbol:	ARNTL
Synonyms:	bHLHe5; BMAL1; BMAL1c; JAP3; MOP3; PASD3; TIC
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>RC238979 representing NM\_001297724  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGATTAATATAGAAAGCATGGACACAGACAAAGATGACCCTCATGGAAGTTAGAATATACAGAACACC  
 AAGGAAGGATAAAAAATGCAAGGAAGCTCACAGTCAGATTGAAAAGCGGCGTCGGGATAAAATGAACAG  
 TTTTATAGATGAATTGGCTTCTTTGGTACCAACATGCAACGCAATGTCCAGGAAATTAGATAAACTTACT  
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 ACAACCAACTTTTCTATCAGACGATGAATTGAAACACCTCATTCTCAGGGCAGCAGATGGATTTTTGTT  
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 AGGCTCAGGAGAACCAGGTTATCCATATTCTGATAGTCTTCTATTCTTGGTGAAGACCCACATAGG  
 TATAGACATGATTGACAACGACCAAGGATCAAGTAGTCCAGTAATGATGAGGCAGCAATGGCTGTCATC  
 ATGAGCCTCTTGAAGCAGATGCTGGACTGGGTGGCCCTGTTGACTTTAGTGACTTGCCATGGCCGCTG

**ACGCGT**ACGCGGCGGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC238979 representing NM\_001297724  
 Red=Cloning site Green=Tags(s)

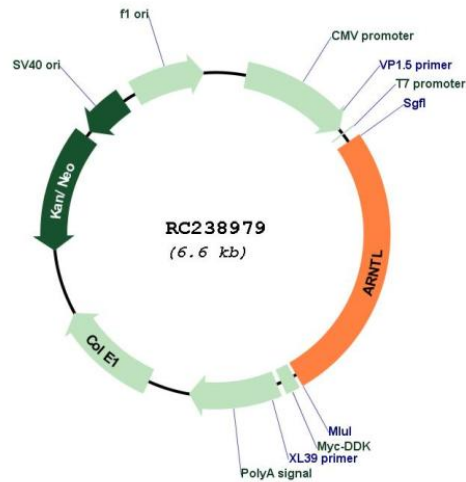
MINIESMDTDKDDPHGRLEYTEHQRIKNAREAHSQIEKRRRDKMNSFIDELASLVPTCNAMSRKLDKLT  
 VLKMAVQHMKTLRGATNPYTEANYKPTFLSDELKHLILRAADGFLFVVGCDRGKILFVSESVFKILNYS  
 QNDLIGQSLFDYLHPKDIKVKQLSSDTAPRERLIDAKTGLPVKTDITPGPSRLCSGARRSFFCRMKC  
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 QTREKITTNCYKFKIKDGSFITLRSRWF S FMNPWTKEVEYIVSTNTVVLANVLEGGDPTFPQLTASPHSM  
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 MSLLEADAGLGGPVDFSDLPWPL

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

**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>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<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]