

## Product datasheet for **RC234524**

### ARNTL2 (NM\_001248003) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ARNTL2 (NM_001248003) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ARNTL2
Synonyms:	bHLHe6; BMAL2; CLIF; MOP9; PASD9
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC234524 representing NM\_001248003  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCGCGGAAGAGGAGGCTGCGGCGGGAGGTGAGGTTGCCGGTGGCGAGGCGACGGCCCCAGGTAAG  
 TGTTGAGAGAGGAGAACCAGTGCATTGCTCCTGTGGTTTTCCAGCCGCGTGAGTCCAGGGACAAGACCAAC  
 AGCTATGGGGTCTTTACGCTCACACATGACAGAGTTTCCACGAAAACGCAAAGGAAGTATTGACACCCA  
 TCCAAGAAGCTCATAGCCAAACTGAAAAGCGGAGGAGAGATAAAATGAATAACCTGATTGAAGAACTGT  
 CTGCAATGATCCCTCAGTGAACCCCAATGGCGCGTAAACTGGACAACTTACAGTTTTAAGAATGGCTGT  
 TCAACACTTGAGATCTTTAAAAGGCTTGACAAAATCTTATGTGGGAAGTAATTATAGACCATCATTTCTT  
 CAGGATAATGAGCTCAGACATTTAATCCTAAGACTGCAGAAGGCTTCTATTTGTGGTTGGATGTGAAA  
 GAGGAAAAATCTCTTCGTTTCTAAGTCAGTCTCCAAAATACTTAATTATGATCAGGCTAGTTTGACTGG  
 ACAAGCTTATTTGACTTCTTACATCCAAAAGATGTTGCCAAAGTAAAGGAACAACCTTTCTCTTTTGT  
 ATTTACCAAGAGAAAAGCTAATAGATGCCAAAAGTGGTTTGCAAGTTCACAGTAATCTCCACGCTGGAA  
 GGACACGTGTGATTCTGGCTCAAGACGATCTTTTTCTGTCCGATAAAGAGTTGAAAACTCTGTGCAA  
 AGAAGAGCATGGATGCTTACCCAACCAAGAAGAAAGAGCACAGAAAATCTATACTATCCATTGCACT  
 GGTACTTGAGAAGCTGGCCTCCAAATATTGTTGGAATGGAAGAAGAAAGAACAGTAAGAAAGACAACA  
 GTAATTTTACCTGCTTGTGGCCATTGGAAGATTACAGCCATATATTGTTCCACAGAACAGTGGAGAGAT  
 TAATGTGAAACCAACTGAATTTAACCCTGTTGCGAGTGAATGGAAAATTTGTCTATGTAGATCAAAGG  
 GCAACAGCGATTTTAGGATATCTGCCTCAGGAACCTTTGGGAACCTCTTGTATGAATATTTTCATCAAG  
 ATGACCACAATAATTTGACTGACAAGCACAAGCAGTTCTACAGAGTAAGGAGAAAAACTTACAGATTC  
 CTACAAAATTCAGAGCAAAGATGGCTCTTTTGTAACTTTAAAAAGCCAATGGTTTAGTTTACAAAATCCT  
 TGGACAAAAGAACTGGAATATATTGTATCTGTCAACACTTTAGTTTTGGGACATAGTGAGCCTGGAGAAG  
 CATCATTTTTACCTTGTAGCTCTCAATCATCAGAAGAATCCTCTAGACAGTCTGTATGAGTGTACCTGG  
 AATGTCTACTGGAACAGTACTTGGTGTGGTAGTATTGGAACAGATATTGCAAAATGAAATCTGGATTTA  
 CAGAGGTTACAGTCTTCTCATACTTGTGATTCGAGTCCAACAGGTTTAAAGAAAGATACTCATACTG  
 TAAACTGCAGGAGTATGTCAAATAGGAGTTGTTCCACCAAGTCTTCTGAAATGGGGGAGCTAGAGGC  
 TACCAGGCAAACAGAGTACTGTTGCTGTCCACAGCCATGAGCCACTCCTCAGTATGGTGACAGTTG  
 GATTTTCGATGCCCTATGTGACAATGATGACACAGCCATGGCTGCATTTATGAATTACTTAGAAGCAGAGG  
 GGGCCTGGGAGACCCTGGGGACTTCAGTGACATCCAGTGGACCTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC234524 representing NM\_001248003  
 Red=Cloning site Green=Tags(s)

MAEEEEAAAGGEVAGGEATAPGKVLREENQCIAPVSSRVSPGTRPTAMGSFSSHMTFPRKRKGSDDP  
 SQEAHSQTEKRRRDKMNNLIEELSAMIPQCNPMARKLDKLTVLRMAVQHLRSLKGLTNSYVGSNYRPSFL  
 QDNELRHLILKTAEGFLFVVGCEKILFVSKSVSKILNYDQASLTGQSLFDLHPKDVAKVKEQLSSFD  
 ISPREKLIDAKTGLQVHSNLHAGRTRVYSGSRRSFFCRIKSKISVKEEHGCLPNSKKKEHRKFYTIHCT  
 GYLRSWPPNIVGMEEERNSKKDNSNFTCLVAIGRLQPYIVPQNSGEINVKPTFETITRFVNGKFVYVDQR  
 ATAILGYLPQELLGTSCYEYFHQDDHNNLTDKHKAVLQSKEKILTDSYKFRAKDGSFVTLKQWFSFTNP  
 WTKELEYIVSVNTLVLGHSEPGEASFPCSSQSSEESSRQSCMSVPGMSTGTVLGAGSIGTDIANEILD  
 QRLQSSSYLDDSSPTGLMKDHTVNCRSMSNKELFPPSPSEMGELEATRQNSTVAVHSHEPLLSDGAQL  
 DFDALCDNDDTAMAAFMNYLEAEGGLGDPGDFSDIQWTL

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_001248003

**ORF Size:** 1797 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\\_001248003.2](#)

**RefSeq Size:** 7300 bp

**RefSeq ORF:** 1800 bp

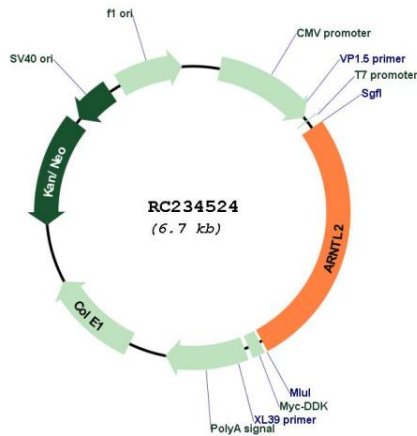
**Locus ID:** 56938

**UniProt ID:** [Q8WYA1](#)

**Cytogenetics:** 12p11.23  
**Protein Families:** Druggable Genome, Transcription Factors  
**MW:** 66.9 kDa  
**Gene Summary:**

This gene encodes a basic helix-loop-helix transcription factor belonging to the PAS (PER, ARNT, SIM) superfamily. The PAS proteins play important roles in adaptation to low atmospheric and cellular oxygen levels, exposure to certain environmental pollutants, and diurnal oscillations in light and temperature. This protein forms a transcriptionally active heterodimer with the circadian CLOCK protein, the structurally related MOP4, and hypoxia-inducible factors, such as HIF1alpha. Consistent with its role as a biologically relevant partner of circadian and hypoxia factors, this protein is coexpressed in regions of the brain such as the thalamus, hypothalamus, and amygdala. Alternatively spliced transcript variants encoding different isoforms have been described for this gene. [provided by RefSeq, Oct 2011]

**Product images:**



Circular map for RC234524