

## Product datasheet for **RC234591**

### ARNTL2 (NM\_001248002) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ARNTL2 (NM_001248002) 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)



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**ORF Nucleotide Sequence:**

>RC234591 representing NM\_001248002  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCGCGGAAGAGGAGGCTGCGCGGGAGTAAAGTGTGAGAGAGGAGAACCAGTGCATTGCTCCTG  
 TGGTTCCAGCCGCTGAGTCCAGGGACAAGACCAACAGCTATGGGGTCTTTCAGCTCACACATGACAGA  
 GTTCCACGAAAACGCAAAGGAAGTATTAGACCCATCCAGTCAGGAATCATGACAGAAAAAGTGGT  
 GAAAAGCTTTCTCAGAATCCCCTTACCTATCTTCTTCAACAAGGATAGAAATATCAGCCTCCAGTGGCA  
 GCAGAGAAGCTCATAGCCAAACTGAAAAGCGGAGGAGAGATAAAATGAATAACCTGATTGAAGAAGTGC  
 TGAATGATCCCTCAGTGAACCCCATGGCGCTAAACTGGACAAACTTACAGTTTTAAGAAATGGCTGTT  
 CAACACTTGAGATCTTTAAAAGGCTTGACAAATCTTATGTGGGAAGTAATTATAGACCATCATTCTTC  
 AGGATAATGAGCTCAGACATTTAATCCTAAGACTGCAGAAGGCTTCTTATTTGGTGGATGTGAAAAG  
 AGGAAAAATCTCTCGTTTCTAAGTCACTCCAAAATACTTAATTATGATCAGGCTAGTTTGACTGGA  
 CAAAGCTATTTGACTTCTTACATCCAAAAGATGTTGCCAAAGTAAAGGAACAACCTTCTCTTTTGATA  
 TTTCCACCAAGAGAAAAGCTAATAGATGCCAAAAGTGGTTTGAAGTTCACAGTAATCTCCACGCTGGAAG  
 GACACGTGTGATTCTGGCTCAAGACGATCTTTTTCTGTGCGATAAAGAGTTGTAATACTCTGTCAAA  
 GAAGAGCATGGATGCTTACCAACTCAAAGAAGAAAGAGCACAGAAAAATCTATACTATCCATTGCACTG  
 GTTACTTGAGAAGCTGGCTCCAAATATTGTTGGAATGGAAGAAGAAAGAACAGTAAGAAAAGACAACAG  
 TAATTTTACCTGCCTTGTTGGCCATTGGAAGATTACAGCCATATATTGTTCCACAGAACAGTGGAGAGATT  
 AATGTGAAACCAACTGAATTTATAACCCGGTTTGCAGTGAATGAAAAATTTGTCTATGTAGATCAAAGGG  
 CAACAGCGATTTTAGGATATCTGCCTCAGGAACCTTTGGGAACCTTTGTTATGAATATTTTCATCAAGA  
 TGACCACAATAATTTGACTGACAAGCACAAAGCAGTTCTACAGAGTAAGGAGAAAAATACTTACAGATTCC  
 TACAAATTCAGAGCAAAAAGATGGCTCTTTTGTAACTTTAAAAAGCCAATGGTTTAGTTTACAAATCCTT  
 GGCAAAAAGAACTGGAATATATTGTATCTGTCAACACTTTAGTTTGGGACATAGTGAAGCTGGAGAAGC  
 ATCATTTTTACCTTGAGCTCTCAATCATCAGAAGAATCCTCTAGACAGTCTGTATGAGTGTACCTGGA  
 ATGTCTACTGGAACAGTACTTGGTGTGGTAGTATTGGAACAGATATTGCAAATGAAATCTGGATTTAC  
 AGAGGTTACAGTCTTCTCATACCTTGATGATTGAGTCCAACAGGTTAATGAAAGATACTCATACTGT  
 AAAGTGCAGGAGTATGTCAAATAAGGAGTTGTTCCACCAAGTCTTCTGAAATGGGGAGCTAGAGGCT  
 ACCAGGCAAAACAGAGTACTGTTGCTGTCCACAGCCATGAGCCACTCCTCAGTGTGGTGCACAGTTGG  
 ATTTTCGATGCCCTATGTGACAATGATGACACAGCCATGGCTGCATTTATGAATTACTTAGAAGCAGAGGG  
 GGGCTGGGAGACCTGGGGACTTCAGTGACATCCAGTGGACCCTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC234591 representing NM\_001248002  
 Red=Cloning site Green=Tags(s)

MAEEEEAAAGGKVLREENQCIAPVVSSRVSPGTRPTAMGSFSSHMTFPRKRKGSDDSPSQSGIMTEKVV  
 EKLSQNPLTYLLSTRIEISASSGSREAHSQTEKRRRDKMNNLIEELSAMIPQCNPMARKLDKLTVLRMAV  
 QHLRSLKGLTNSYVGSNYRPSFLQDNELRHLILKTAEGFLFVVGCEGKILFVSKSVSKILNYDQASLTG  
 QSLFDLHPKDVAKVKEQLSSFDISPREKLIDAKTGLQVHNSLHAGRTRVYSGSRRSFFCRIKSKISVK  
 EEHGCLPNSKKKEHRKFYTIHCTGYLRWPPNIVGMEEERNSSKDNSNFTCLVAIGRLQPYIVPQNSGEI  
 NVKPTFETRFAVNGKFVYVDQRATAILGYLPQELLGTSCYEYFHQDDHNNLTDKHKAVLQSKELITDS  
 YKFRAKDGSFVTLKSQWFSFTNPWTKELEYIVSVNTLVLGHSEPGASFLPCSSQSSESSRQSCMSVPG  
 MSTGTVLGAGSIGTDIANEILDQLRQSSSYLDDSSPTGLMKDHTVNCRSMNSKELFPPSPSEMGELEA  
 TRQNQSTVAVHSHEPLLSDGAQLDFDALCDNDDTAMAAFMMNYLEAEGGLGDPGDFSDIQWTL

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKVV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_001248002

ORF Size: 1866 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\\_001248002.2](#)

RefSeq Size: 7369 bp

RefSeq ORF: 1869 bp

Locus ID: 56938

UniProt ID: [Q8WYA1](#)

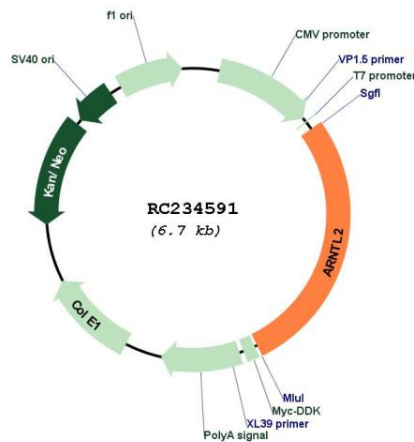
**Cytogenetics:** 12p11.23

**Protein Families:** Druggable Genome, Transcription Factors

**MW:** 69.7 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 RC234591