

Product datasheet for **RG234501**

ARNTL2 (NM_001248004) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ARNTL2 (NM_001248004) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ARNTL2
Synonyms:	bHLHe6; BMAL2; CLIF; MOP9; PASD9
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG234501 representing NM_001248004
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGCGGAAGAGGAGGCTGCGCGGGAGTAAAGTGTGAGAGAGGAGAACCAGTGCATTGCTCCTG
 TGGTTTCCAGCCGCGTGAAGTCCAGGGACAAGACCAACAGCTATGGGGTCTTTCAGCTCACACATGACAGA
 GTTCCACGAAAACGCAAAGGAAGTGAATCAGACCCATCCCAAGAAGCTCATAGCCAAACTGAAAAGCGG
 AGGAGAGATAAAATGAATAACCTGATTGAAGAAGTGTCTGCAATGATCCCTCAGTGAACCCCATGGCGC
 GTAACCTGGACAACTTACAGTTTTAAGAATGGCTGTTCAACACTTGAGATCTTTAAAAGGCTTGACAAA
 TTCTTATGTGGGAAGTAATTATAGACCATCATTCTTCAGGATAATGAGCTCAGACATTTAATCCTTAAG
 ACTGCAGAAGGCTTCTTATTTGTGGTGGATGTGAAAGAGGAAAAATTCTCTCGTTTCTAAGTCAGTCT
 CCAAAATACTTAATTATGATCAGGCTAGTTTGACTGGACAAAGCTTATTTGACTTCTTACATCCAAAAGA
 TGTTGCCAAAGTAAAGGAACAACCTTCTCTTTTGATATTTACCAAGAGAAAAGCTAATAGATGCCAAA
 ACTGGTTTGCAAGTTCACAGTAATCTCCACGCTGGAAGGACACGTGTGTATTCTGGCTCAAGACGATCTT
 TTTTCTGTGCGGATAAAGAGTTGTAATCTCTGTCAAAGAAGAGCATGGATGCTTACCCAACTCAAAGAA
 GAAAGAGCACAGAAAATTCTATACTATCCATTGCACTGGTTACTTGAGAAGCTGGCCTCCAAATATTGTT
 GGAATGGAAGAAGAAAGGAACAGTAAGAAAAGACAACAGTAATTTTACCTGCCTTGTGGCCATTGGAAGAT
 TACAGCCATATATTGTTCCACAGAACAGTGGAGAGATTAATGTGAAACCAACTGAATTTATAACCCGGTT
 TGCAGTGAATGAAAAATTTGCTATGTAGATCAAAGGGCAACAGCGATTTTAGGATATCTGCCTCAGGAA
 CTTTTGGGAAGTCTTGTATGAATATTTTTCATCAAGTACACAAATAATTTGACTGACAAGCACAAAG
 CAGTTCTACAGAGTAAGGAGAAAATACTTACAGATTCCTACAAATTCAGAGCAAAGAGTGGCTCTTTTGT
 AACTTTAAAAGCCAATGGTTTAGTTTTCACAAATCCTTGACAAAAGAACTGGAATATATTGTATCTGTG
 AACACTTTAGTTTGGGACATAGTGGCCTGGAGAAGCATCATTTTTACCTTGTAGCTCTCAATCATCAG
 AAGAATCTCTAGACAGTCTGTATGAGTGTACCTGGAATGTCTACTGGAACAGTACTTGGTGTGGTAG
 TATTGGAACAGATATTGCAAATGAAATCTGGATTTACAGAGGTTACAGTCTTCTTACATCTTGTATGAT
 TCGAGTCCACAGGTTAATGAAAGATACTCATACTGTAACCTGCAGGAGTATGTCAAATAAGGAGTTGT
 TTCCACCAAGTCTTCTGAAATGGGGGAGCTAGAGGCTACCAGGCAAACCAGAGTACTGTTGCTGTCCA
 CAGCCATGAGCCACTCTCAGTATGGTGCACAGTTGGATTTTCGATGCCCTATGTGACAATGATGACACA
 GCCATGGCTGCATTTATGAATTACTTAGAAGCAGAGGGGGCCTGGGAGACCCTGGGACTTCAGTGACA
 TCCAGTGACCCTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG234501 representing NM_001248004
 Red=Cloning site Green=Tags(s)

MAAEEEEAAAGGKVLREENQCIAPVVSSRVSPGTRPTAMGSFSSHMTEFPRKRKGSDDPSQEAHSQTEKR
 RRDKMNNLIEELSAMIPQCNPMLKLDKLTVLRMAVQHLRSLKGLTNSYVGSNYRPSFLQDNELRHLILK
 TAEGFLFVVGCEKILFVSKSVKILNYDQASLTGQSLFDFLHPKDVAKYKEQLSSFDISPKEIDAK
 TGLQVHNSLHAGRTRVYSGSRRSFFCRIKSKISVKEEHGCLPNSKKKEHRKFYTIHCTGYLRSWPPNIV
 GMEERNKSKDNSNFTCLVAIGRLQPYIVPQNSGEINVKPTFETIRFAVNGKFVYVDQRATAILGYPQE
 LLGTSCYEYFHQDDHNNLTDKHKAVLQSKKILTDSYKFRAKDGSFVTLKSQWFSFTNPWTKLEYIVSV
 NTLVLGHSEPGASFLPCSSQSSESSRQSCMSVPGMSTGTVLGAGSIGTDIANEILDQLRQSSSYLDD
 SSPTGLMKDHTVNCRSMSKELFPPSPSEMGELEATRQNSTVAVHSHEPLLSDGAQLDFDALCDNDDT
 AMAAFMNYLEAEGGLGDPGDFSDIQWTL

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_001248004

ORF Size: 1764 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_001248004.2](#)

RefSeq Size: 7267 bp

RefSeq ORF: 1767 bp

Locus ID: 56938

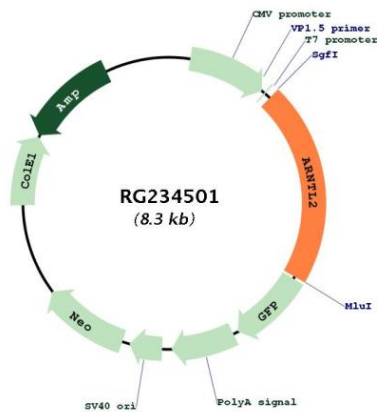
UniProt ID: [Q8WYA1](#)

Cytogenetics: 12p11.23

Protein Families: Druggable Genome, Transcription Factors

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 RG234501