

Product datasheet for **RG234591**

ARNTL2 (NM_001248002) Human Tagged ORF Clone

Product data:

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



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ORF Nucleotide Sequence:

>RG234591 representing NM_001248002
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGCGGAAGAGGAGGCTGCGCGGGAGTAAAGTGTGAGAGAGGAGAACCAGTGCATTGCTCCTG
 TGGTTTCCAGCCGCGTGTAGTCCAGGGACAAGACCAACAGCTATGGGGTCTTTCAGCTCACACATGACAGA
 GTTTCCACGAAAACGCAAAGGAAGTATTGATCAGACCCATCCAGTCAAGAAATCATGACAGAAAAAGTGGT
 GAAAAGCTTTCTCAGAATCCCCTTACCTATCTTCTTTCAACAAGGATAGAAAATACAGCCTCCAGTGGCA
 GCAGAGAAGCTCATAGCCAAACTGAAAAGCGGAGGAGAGATAAAATGAATAACCTGATTGAAGAACTGTC
 TGCAATGATCCCTCAGTGAACCCCATGGCGCGTAAACTGGACAAACTTACAGTTTTAAGAAATGGCTGTT
 CAACACTTGAGATCTTTAAAAGGCTTGACAAATCTTATGTGGGAAGTAATTATAGACCATCATTCTTCTC
 AGGATAATGAGCTCAGACATTTAATCCTTAAGACTGCAGAAGGCTTCTTATTTGGTGGATGTGAAAAG
 AGGAAAAATTCTCTCGTTTCTAAGTCACTCCAAAATACTTAATTATGATCAGGCTAGTTTGACTGGA
 CAAAGCTATTTGACTTCTTACATCCAAAAGATGTTGCCAAAGTAAAGGAACAACCTTCTCTTTTGATA
 TTTCCACCAAGAGAAAAGCTAATAGATGCCAAAAGTGGTTTGAAGTTCACAGTAATCTCCACGCTGGAAG
 GACACGTGTGATTCTGGCTCAAGACGATCTTTTTCTGTGCGATAAAGAGTTGTAATACTCTGTCAAA
 GAAGAGCATGGATGCTTACCCAACCTCAAAGAAGAAAGAGCACAGAAAAATCTATACTATCCATTGCACTG
 GTTACTTGAGAAGCTGGCCTCCAAATATTGTTGGAATGGAAGAAGAAAGAACAGTAAGAAAAGACAACAG
 TAATTTTACCTGCCTTGTGGCATTGGAAGATTACAGCCATATATTGTTCCACAGAACAGTGGAGAGATT
 AATGTGAAACCAACTGAATTTATAACCCGGTTTGCAAGTGAATGGAATAATTTGTCTATGATGATCAAAGG
 CAACACGATTTTAGGATATCTGCCTCAGGAACCTTTGGGAACCTTCTGTTATGAATATTTTCATCAAGA
 TGACCACAATAATTTGACTGACAAGCACAAAGCAGTTCTACAGAGTAAGGAGAAAAATACTTACAGATTCC
 TACAAATTCAGAGCAAAAAGATGGCTCTTTTGTAACTTTAAAAAGCCAATGGTTTAGTTTACAAATCCTT
 GGACAAAAGAACTGGAATATATTGTATCTGTCAACACTTTAGTTTGGGACATAGTGAAGCTGGAGAAGC
 ATCATTTTTACCTTGTAGCTCTCAATCATCAGAAGAATCCTCTAGACAGTCTGTATGAGTGTACCTGGA
 ATGTCTACTGGAACAGTACTTGGTGTGGTAGTATTGGAACAGATATTGCAAATGAAATCTGGATTAC
 AGAGGTTACAGTCTTCTCATACCTTGATGATTCGAGTCCAACAGGTTAATGAAAGATACTCATACTGT
 AAAGTGCAGGAGTATGTCAAATAAGGAGTTGTTCCACCAAGTCTTCTGAAATGGGGAGCTAGAGGCT
 ACCAGGCAAAACAGAGTACTGTTGCTGTCCACAGCCATGAGCCACTCCTCAGTGTGGTGCACAGTTGG
 ATTTTCGATGCCCTATGTGACAATGATGACACAGCCATGGCTGCATTTATGAATTACTTAGAAGCAGAGGG
 GGGCCTGGGAGACCTGGGGACTTCAGTGACATCCAGTGGACCCTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG234591 representing NM_001248002
 Red=Cloning site Green=Tags(s)

MAAEEEEAAAGGKVLREENQCIAPVVSSRVSPGTRPTAMGSFSSHMTFPRKRKGSDDPSQSGIMTEKVV
 EKLSQNPLTYLLSTRIEISASSGSREAHSQTEKRRRDKMNNLIEELSAMIPQCNPMARKLDKLTVLRMAV
 QHLRSLKGLTNSYVGSNYRPSFLQDNELRHLILKTAEGFLFVVGCCERKILFVSKSVSKILNYDQASLTG
 QSLFDLHPKDVAKVKEQLSSFDISPREKLIDAKTGLQVHSNLHAGRTRVYSGRRSFFCRIKSKISVK
 EEHGCLPNSKKKEHRKFYTIHCTGYLRSWPPNIVGMEERNSSKDNSNFTCLVAIGRLQPYIVPQNSGEI
 NVKPTFEITRFVNGKFVYVDQRATAILGYLPQELLGTSCYEYFHQDDHNNLTDKHKAVLQSKEKILTDS
 YKFRAKDGSFVTLKSQWFSFTNPWTKELEYIVSVNTLVLGHSEPGASFLPCSSQSSESSRQSCMSVPG
 MSTGTVLGAGSIGTDIANEILDQLRQSSSYLDDSSPTGLMKDTHTVNCRSMSNKELFPPSPSEMGELEA
 TRQNQSTVAVHSHEPLLSDGAQLDFDALCDNDDTAMAAFMYLEAEGGLGDPGDFSDIQWTL

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-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

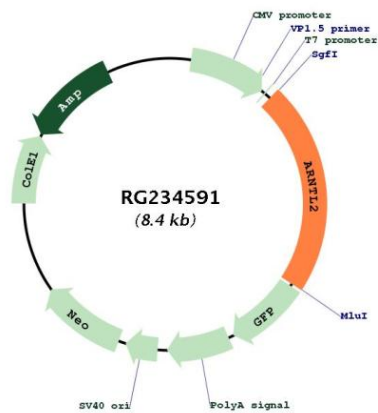
UniProt ID: [Q8WYA1](#)

Cytogenetics: 12p11.23

Protein Families: Druggable Genome, Transcription Factors

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 RG234591