

## Product datasheet for **RG216969**

### **ARNTL2 (NM\_020183) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	ARNTL2 (NM_020183) 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:**

>RG216969 representing NM\_020183  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCGCGGAAGAGGAGGCTGCGCGGGAGTAAAGTGTGAGAGAGGAGAACCAGTGCATTGCTCCTG  
 TGGTTTCCAGCCGCTGAGTCCAGGGACAAGACCAACAGCTATGGGGTCTTTCAGCTCACACATGACAGA  
 GTTCCACGAAAACGCAAAGGAAGTATTGAGACCCATCCAGTCAGGAATCATGACAGAAAAAGTGGT  
 GAAAAGCTTTCTCAGAATCCCCTTACCTATCTTCTTCAACAAGGATAGAAATATCAGCCTCCAGTGGCA  
 GCAGAGTGAAGATGGTGAACACCAAGTAAAAATGAAGGCCTTCAGAGAAGCTCATAGCCAAACTGAAAA  
 GCGGAGGAGAGATAAAATGAATAACCTGATTGAAGAACTGTCTGCAATGATCCCTCAGTGAACCCCATG  
 GCGCGTAAACTGGACAACTTACAGTTTAAAGAAATGGCTGTTCAACACTTGAGATCTTTAAAGGCTTGA  
 CAAATCTTATGTGGGAAGTAATTATAGACCATCATTTCTTCAGGATAATGAGCTCAGACATTTAATCCT  
 TAAGACTGCAGAAGGCTTCTATTTGTGGTTGGATGTGAAAGAGGAAAAATTCTCTTCGTTTCTAAGTCA  
 GTCTCCAAAATACTTAATTATGATCAGGCTAGTTTACTGAGCAAAAGCTTATTTGACTTCTTACATCCAA  
 AAGATGTTGCCAAAGTAAAGGAACAACCTTCTTCTTTGATATTTACCAAGAGAAAAAGCTAATAGATGC  
 CAAAAGTGGTTTGAAGTTCACAGTAATCTCCACGCTGGAAGGACACGTGTGATTCTGGCTCAAGACGA  
 TCTTTTTTCTGTCCGATAAAGAGTTGTAATACTCTGTCAAAGAAGAGCATGGATGCTTACCCAACCTCAA  
 AGAAGAAAGAGCACAGAAAAATCTATACTATCCATTGCACTGGTACTTGAGAAGCTGGCCTCCAAATAT  
 TGTTGGAATGGAAGAAGAAAGGAACAGTAAGAAAGACAACAGTAATTTTACCTGCCTTGTGGCCATTGGA  
 AGATTACAGCCATATATTGTTCCACAGAACAGTGGAGAGATTAATGTGAAACCACTGAATTTATAACCC  
 GGTTTGCAGTGAATGAAAAATTTGTCTATGTAGATCAAAGGCAACAGCGATTTTACTGATATCTGCCTCA  
 GGAACCTTTGGGAACCTTCTGTTATGAATATTTTCAATCAAGATGACCACAATAATTTGACTGACAAGCAC  
 AAAGCAGTTCTACAGAGTAAAGGAGAAAATACTTACAGATTCCTACAAATTCAGAGCAAAAGATGGCTCTT  
 TTGTAACCTTAAAAAGCCAATGGTTTAGTTTACAAAATCCTTGGACAAAAGAACTGGAATATATTGTATC  
 TGTCAACACTTTAGTTTGGGACATAGTGAAGCCTGGAGAAGCATCATTTTACCTTGTAGCTCTCAATCA  
 TCAGAAGAATCCTCTAGACAGTCTGTATGAGTGTACCTGGAATGTCTACTGGAACAGTACTTGGTGTG  
 GTAGTATTGGAACAGATATTGCAAATGAAATCTGGATTTACAGAGGTTACAGTCTTCTTACATCCTTGA  
 TGATTGAGTCCAACAGGTTAATGAAAGATACTCATACTGTAACCTGCAGGAGTATGCAATAAAGGAG  
 TTGTTTCCACCAAGTCTTCTGAAATGGGGGAGCTAGAGGCTACCAGGCAAAACCAGAGTACTGTTGCTG  
 TCCACAGCCATGAGCCACTCCTCAGTGTGGTGCACAGTTGGATTTTCGATGCCCTATGTGACAATGATGA  
 CACAGCCATGGCTGCATTTATGAATTACTTAGAAGCAGAGGGGGCCCTGGGAGACCTGGGGACTTCAGT  
 GACATCCAGTGGACCCTC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG216969 representing NM\_020183  
 Red=Cloning site Green=Tags(s)

MAEEEEAAAGGKVLREENQCIAPVVSSRVSPGTRPTAMGSFSSHMTFPRKRKGSDDSPSQSGIMTEKVV  
 EKLSQNPLTYLLSTRIEISASSGSRVEDGEHQVKMAFREHSQTEKRRRDKMNNLIEELSAMIPQCNPM  
 ARKLDKLTVLRMAVQHLRSLKGLTNSYVGSNYRPSFLQDNELRHLILKTAEGFLFVVGGERGKILFVSKS  
 VSKILNYDQASLTGQSLFDLHPKDVAKVKEQLSSFDISPREKLIDAKTGLQVHSNLHAGRTRVYSGSRR  
 SFFCRIKSCKISVKEEHGCLPNSKKKEHRKFYIHTCTGYLRSWPPNIVGMEERNSKKDNSNFTCLVAIG  
 RLQPYIIVPQNSGEINVKPTFEITRFVAVNGKFVYVDQRATAILGYLPQELLGTSCYEYFHQDDHNNLTDKH  
 KAVLQSKEKILTDSYKFRAKDGSFVTLKSQWFSFTNPWTKLEYIVSVNTLVLGHSEPEASFLPCCSSQS  
 SEESSRQSCMSVPGMSTGTVLGAGSIGTDIANEILDQLRQSSSYLDDSSPTGLMKDHTVNCRSMNSKE  
 LFPPSPSEMGELEATRQNSTVAVHSHEPLLSDGAQLDFDALCDNDDTAMAAFMNYLEAEGGLDGPDFS  
 DIQWTL

**TRTRPLE** - GFP Tag - V



<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_020183.5</a>
<b>RefSeq Size:</b>	1930 bp
<b>RefSeq ORF:</b>	1911 bp
<b>Locus ID:</b>	56938
<b>UniProt ID:</b>	<a href="#">Q8WYA1</a>
<b>Cytogenetics:</b>	12p11.23
<b>Domains:</b>	PAS, HLH
<b>Protein Families:</b>	Druggable Genome, Transcription Factors
<b>Gene Summary:</b>	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]