

## Product datasheet for **MG224577**

### Arntl2 (NM\_172309) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Arntl2 (NM_172309) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Arntl2
Synonyms:	4632430A05Rik; bHLHe6; BMAL2; CLIF; MOP9
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG224577 representing NM\_172309  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGAGTTTCCAAGGAAACGCAGAGGCAGAGATCCCAGCCACTCCAGTCAGAATTCATGACAGACACAA  
 CAGTGGAAAGTCTTCCCCAGAATCCCTTTGCCTCTCTTCTTCAACAAGAACAGGAGTATCAGCGCCAG  
 TGGCATCAGGGAAGCTCACAGCCAGATGGAAAAGCGTCGGAGAGACAAGATGAACCATCTGATTCAGAAA  
 CTGTCTATCTATGATCCCTCCACACATCCCCACGGCCACAAAAGTGGACAAGCTCAGCGTCTTGAGGAGGG  
 CGGTGCAGTACTTGAGGTCTCTGAGAGGCATGACAGAGCTTTACTTAGGAGAAAAGTCTAAACCTTCATT  
 TATTCAGGATAAGGAACTCAGTCACTTAATCCTCAAGGCAGCAGAAGGCTTCTGTTTGTGGTTGGATGC  
 GAAAGAGGGAGAATTTTTACGTTTCTAAGTCTGTCTCCAAAACACTGCGTTATGATCAGGCTAGCTTGA  
 TAGGACAGAATTTGTTTACTTCTACACCCAAAAGACGTCGCCAAAGTAAAGGAACAACCTTTCTGTGA  
 TGGTTCACCAAGAGAGAAACCTATAGACACAAAACCTCTCAGGTTTACAGTCACCCCTACACTGGGCGA  
 CCACGCATGCATTCTGGCTCCAGACGATCTTTCTCTTTAGAATGAAGAGCTGTACCGTCCCTGTCAAAG  
 AAGAGCAGCCATGCTCGTCTGCTCAAAGAAGAAAGACCATAGAAAATCCACACCGTCCATTGCACTGG  
 ATACTTGAGAAGCTGGCCTCTGAATGTTGTTGGCATGGAGAAAGAGTCCGGTGGTGGGAAGGACAGCGGT  
 CCTTTACCTGCCTGTGGCTATGGGACGGTGCATCCATACATTGTCCCTCAAAGAGTGGCAAGATCA  
 ACGTGAGACCGGCTGAGTTCATAACTCGCTTCGCAATGAACGGGAAATTCGTTATGTTGACCAAAGGGC  
 AACGGCAATTTTAGGATACCTGCCTCAGGAACCTTTGGAACTTCATGTTATGAATTTTATCAGGAT  
 GACCACAGTAGTTGACTGACAAGCACAAGCAGTCTGCAGAGTAAGGAGAAAACTTACAGACTCAT  
 ACAAAATCAGAGTGAAGGATGGTGCCTTCGTGACTCTGAAGAGTGAAGTGGTTGAGTTCACAAACCTTG  
 GACCAAAGAGCTGGAGTACATTGTGTCTGTCAACACATTGGTTTTGGGGCGCAGTGAGACCAGGCTGTCT  
 TTGCTTATTGCGGGCGGAGCAGCCAGTCTCCGAAGACTCATTTAGACAATCCTGCATCAATGTGCCCG  
 GTGATCCACGGGACCGTCTTGGTGTGGGAGTATTGGAACAGATATTGCAAATGAGGTTCTGAGTTT  
 ACAGAGATTACACTCTTCATCCCCAGAAGATGCAAGCCCTTCAGAAGAAGTGAAGAGTACTGCAGTGTA  
 AATGGTGGGAATGCCTATGGGCTGCATCCACTAGGGAGCCTTTTGCAGTGAAGCCTTCTGAAACAGAGG  
 TCCTGGAGGCTGCCAGGCAACACCAGAGCACTGAACCCGCCACCCTCACGGACACTTCCCGGTGACAG  
 TGCCAGCTGGGTTTTGATGCTGTGTGACAGTACAGCATAGACATGGCTGCATTATGAATTACCTC  
 GAAGCAGAGGGGGCCTGGGTGACCCTGGGACTTCAGTGACATCCAGTGGGCACTC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG224577 representing NM\_172309  
 Red=Cloning site Green=Tags(s)

MEFPRRRGRDSQPLQSEFMTDTTVESLPQNPFAALLSTRTGVSAPSGIREAHSQMEKRRRDKMNHLIQK  
 LSSMIPPHIPTAHKLDKLSVLRRAVQYLRSLRGMTELYLGENSKPSFIQDKELSHLILKAAEGFLFVVG  
 ERGRIFYVSKSVSKTLRYDQASLIGQNLDFLHPKDVAKVKEQLSCDGSPPREKPIDTKTSQVYSHPYTGR  
 PRMHSGSRRSFFFRMKSCVVPVKEEQPCSSCSKDKHRKFHTVHCTGYLRSWPLNVVGMKESSGGKDSG  
 PLTCLVAMGRLHPYIVPQKSGKINVRPAEFITRFAMNGKFVYVDQRATAILGYLPQELLGTSCYEYFHQD  
 DHSSLTDKHKAVLQSKEKILTDSYKFRVKDGFVTLKSEWFSFTNPWTKELEYIVSVNLTVLGRSETRLS  
 LLHCGSSQSSSEDFRQSCINVGVSTGTVLGAGSIGTDIANEVLSLQRLHSSSPEDASPSEVRDDCSV  
 NNGNAYGPASTREPFVAVSPSETEVLEAARQHQSTEPAHPHGPLPGDSAQLGFDVLCDSIDMAAFMNYL  
 EAEGLGDPGDFSDIQWAL

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI



<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_172309.2</a> , <a href="#">NP_758513.1</a>
<b>RefSeq Size:</b>	1740 bp
<b>RefSeq ORF:</b>	1740 bp
<b>Locus ID:</b>	272322
<b>UniProt ID:</b>	<a href="#">Q2VPD4</a>
<b>Cytogenetics:</b>	6 G3
<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 Hif1 alpha. 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, Feb 2014]