

Product datasheet for **MR224577**

Arntl2 (NM_172309) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	Arntl2
Synonyms:	4632430A05Rik; bHLHe6; BMAL2; CLIF; MOP9
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence: >MR224577 representing NM_172309
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGGAGTTTCCAAGGAAACGCAGAGGCAGAGATTCAGCCACTCCAGTCAGAATTCATGACAGACAA
 CAGTGGAAAGTCTTCCCAAGATCCCTTTGCCTCTCTTCTTTCAACAAGAACAGGAGTATCAGCGCCAG
 TGGCATCAGGGAAGCTCACAGCCAGATGGAAGCGTCGGAGAGACAAGATGAACCATCTGATTCAGAAA
 CTGTCTATCTATGATCCCTCCACACATCCCCACGGCCCAAACTGGACAAGCTCAGCGTCTTGAGGAGGG
 CGGTGCAGTACTTGAGGTCTCTGAGAGGCATGACAGAGCTTTACTTAGGAGAAAACCTCTAAACCTTCATT
 TATTCAGGATAAGGAACCTCAGTCACCTTAATCCTCAAGGCAGCAGAAGGCTTCCTGTTTGTGGTTGGATGC
 GAAAGAGGGAGAATTTTTACGTTTCTAAGTCTGTCTCCAAAACACTGCGTTATGATCAGGCTAGCTTGA
 TAGGACAGAATTTGTTTGAATCTTACACCCAAAAGACGTCGCCAAAGTAAAGGAACAATTTCTTGTA
 TGGTTACCAAGAGAGAAACCTATAGACACCAAAACCTCTCAGGTTTACAGTCACCCCTACACTGGCGA
 CCACGATGCATTCTGGCTCCAGACGATCTTCTCTTTAGAATGAAGAGCTGTACCGTCCCTGTCAAAG
 AAGAGCAGCCATGCTCGTCTCTCAAGAAGAAAGACCATAGAAAATTCACACCGTCCATTGCACTGG
 ATACTTGAGAAGCTGGCCTCTGAATGTTGTTGGCATGGAGAAAGAGTCGGGTGGTGGGAAGGACAGCGGT
 CCTCTTACCTGCCTTGTTGGCTATGGGACGGTTCATCCATACATTTGCCCTCAAAGAGTGGCAAGATCA
 ACGTGAGACCGGCTGAGTTTATACTCGCTTCGCAATGAACGGGAAATTCGTCTATGTTGACCAAGGGC
 AACGGCAATTTTAGGATACCTGCCTCAGGAACCTTTGGGAACCTTCATGTTATGAATATTTTCATCAGGAT
 GACCACAGTAGTTGACTGACAAGCACAAGCAGTTCTGCAGAGTAAGGAGAAAATACTTACAGACTCAT
 ACAAATTCAGAGTGAAGGATGGTGCCTTCGTGACTCTGAAGAGTGAAGTGGTTCAGCTTCACAAACCTTG
 GACCAAGAGCTGGAGTACATTGTGTCTGTCAACACATTGGTTTTGGGGCAGTGAGACCAGGCTGTCT
 TTGCTTCATTGCGGCGGCAGCAGCCAGTCTCCGAAGACTCATTAGACAATCTGCATCAATGTGCCCCG
 GTGTATCCACGGGACCGTCTTGGTGTGGGAGTATTGGAACAGATATTGCAAATGAGGTTCTGAGTTT
 ACAGAGATTACACTCTTATCCCAAGAGTGAAGCCCTTCAGAAGAAGTGAAGAGTGAAGTGAAGTGAAGTGA
 AATGGTGGGAATGCCTATGGGCTGCATCCACTAGGGAGCCTTTTGCAGTGAGCCCTTCTGAACACAGAGG
 TCCTGGAGGCTGCCAGGCAACACCAGAGCACTGAACCCGCCACCCTCACGGACCACTTCCCGGTGACAG
 TGCCACAGTGGGTTTTGATGTCCTGTGTGACAGTGAAGCATAGACATGGCTGCATTATGAATTACCTC
 GAAGCAGAGGGGGCTGGGTGACCTGGGACTTCAGTGACATCCAGTGGGCACTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR224577 representing NM_172309
 Red=Cloning site Green=Tags(s)

MEFPRKRRGRDSQPLQSEFMTDTTVESLPQNPFASLLSTRGVSAAPSGIREAHSQMEKRRRDKMNHILQK
 LSSMIPPHIPTAHKLDKLSVLRRVQYLRSLRGMTELYLGNSKPSFIQDKELSHLILKAAEGFLFVVG
 ERGRIFYVSKSVSKTLRYDQASLIGQNLFDLHPKDVAKVKEQLSCDGSPREKPIDTKTSQVYSHPYTGR
 PRMHSGSRRSFFFRMKSTVPVKEEQPCSSCSKKKDHKRFHTVHCTGYLRSWPLNVVGMEKESGGKDSG
 PLTCLVAMGRHPYIVPQKSGKINVRPAEFITRFAMNGKFVYVDQRATAILGYLPQELLGTSCYEYFHQD
 DHSSLTDKHKAVLQSKKILTDSYKFRVKDGAFTLSEWFSFTNPWTKELEYIVSVNTLVLRSETRLS
 LLHCGSSQSSEDSFRQSCINVPGVSTGTVLGAGSIGTDIANEVLQLRLHSSSPEDASPSEEVRRDCSV
 NGGNAYGPASTREPFVSPSETEVLEAARQHQSTEPAPHPGLPGDSAQLGFDVLCDSDSIDMAAFMNYL
 EAEGLGDPGDFSDIQWAL

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9043_h06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_172309

ORF Size: 1737 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_172309.2](#), [NP_758513.1](#)

RefSeq Size: 1740 bp

RefSeq ORF: 1740 bp

Locus ID: 272322

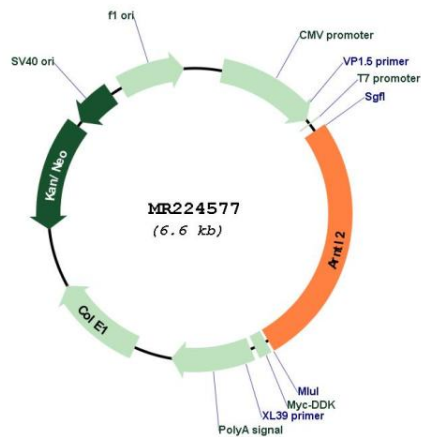
UniProt ID: [Q2VPD4](#)

Cytogenetics: 6 G3

MW: 64.8 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, Feb 2014]

Product images:



Circular map for MR224577