

Product datasheet for **RC211966**

ARNT2 (NM_014862) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ARNT2 (NM_014862) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ARNT2
Synonyms:	bHLHe1; WEDAS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC211966 representing NM_014862
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCAACCCCGCGCGGTCAACCCTCCGAAATGGCTTCAGACATACCTGGATCTGTGACGTTGCCCG
 TTGCCCCATGGCGGCCACCGGACAGGTGAGGATGGCGGGGCCATGCCTGCCCGTGGAGGAAAGCGGCG
 TTCGGAATGGACTTCGATGATGAAGATGGTGAAGGCCCAAGTAAATTTCAAGAGAGAATCATAGTGAA
 ATCGAAAGGCGCAGACGGAAACAAGATGACTCAGTACATCACGGAGCTCTCCGACATGGTCCCCACATGCA
 GCGCACTGGCTCGGAAGCCAGACAAGCTCACCATCCTCCGCATGGCCGTCTCGCACATGAAGTCCATGAG
 GGGTACAGGGAACAAGTCCACCGATGGCGCGTACAAGCCTTCTCTCACAGAGCAGGAACTGAAGCAT
 CTCATCCTTGAAGCAGCTGATGGATTTCTGTTTGGTGGCTGCTGAGACAGGGCAGTGATTTATGTGT
 CTGACTCCGTCAACCCTGTTCTGAACCAGCCCCAGTCAGAGTGGTTTGGGAGCACACTGTATGAACAGGT
 GCATCCTGATGACGTGGAGAAGCTGAGAGAGCAACTGTGCACCTCAGAAAACCAATGACAGGCCGGATC
 TTGGACCTGAAGACTGGGACGGTCAAGAAAGAAGGGCAGCAGTCATCCATGAGGATGTGCATGGGCTCGC
 GCGGCTTTTCATCTGCAGGATGAGGTGTGAAATGCTCCTTTGGACCACCTTCTCTAAACAGAATAAC
 CACCATGAGGAAAAGGTTTCAAGGATGGCCTTGGCCCTGTGAAAGAAGGAGAAGCCCAATATGCTGTGGTC
 CACTGTACAGGATACATCAAGGCCTGGCCACCAGCAGGAATGACCATACCTGAAGAAGACGCTGATGTGG
 GACAAGGCAGTAAATATTGCCTCGTGGCAATGGGAGACTCCAGGTGACCAGCTCTCCTGTATGCATGGA
 CATGAATGGGATGTCCGTGCCACAGAGTTCTTATCCCGCATAACTCCGATGGAATCATCACATTTGTG
 GATCCAAGATGTATCAGTGTGATTGGCTACCAACCCAGGATCTTCTGGGAAAGGACATTTTGAATTCT
 GCCACCCTGAGGATCAAAGCCATCTGCGTGAGAGCTTCCAGCAGGTGGTTAAGCTGAAAGGCCAAGTCCT
 GTCGGTCATGTATCGATTCGCACCAAGAACCAGGAGTGGATGTTGATCCGCACCAGCAGCTTCACATTC
 CAGAATCCCTATTCTGATGAGATTGAGTACATCATCTGCACCAACACCAACGTCAGCAACTTCAGCAAC
 AGCAGGCAGAATTGGAAGTGCACCAAGAGAGATGGATTGTCATCGTATGACTTATCCAGGTCCCCGTCCC
 CAACCTACCAGCCGGTTCATGAGGCCGGGAAGTCCGTGAAAAGGCGGATGCAATCTTCTCCAGGAA
 AGAGATCCTCGGTTTGTGAAATGTTTGCAGGAATTAGTGCATCGGAGAAGAAGATGATGAGCTCAGCCT
 CTGCAGCAGGAACCCAGCAGATCTACTCCAAGGAAGCCATTTCCCTCTGGACTCCGGGAAGGCCTT
 CAGCTCTTCAGTGGTTCATGTGCCTGGAGTGAATGATATTCAGTCTCTTCTCCACGGCCAGAACATG
 TCCAAATCTCCCGCAGCTAAACCAGAGTCAGGTGGCATGGACAGGGAGTCGTCCGCCCTTCCGGGAC
 AGCAAATCCCATCTCAGTCCAGCAAGACTCAGTCATCTCCCTTTGGGATTGGAACGAGCCACACCTACCC
 GGCAGACCCCTCTTCTACAGCCCCCTCTCCAGCCCAGCTACCTCCTCGCAAGTGGGAATGGCTACTCC
 AGTCTTGGCAACAGGACTCCAGGGTTTCGTGAAAGTGGACAAAGTAGCGGGCAGTTCCAAGGGCGGCCCT
 CGGAAGTCTGGTTCGAGTGGCAAAGCCAGCACCATGGCCAGCAGAGCGGTGAGCAGCACTCCCACCAGCA
 GCCCGTTCAGACTGAAGTGTCCAGGACATGCTGCCCATGCCAGGAGATCCAACCCAGGGGACTGGCAAC
 TATAACATCGAAGACTTTGCCGACCTGGCATGTTCCACCGTTTTCTGAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC211966 representing NM_014862
Red=Cloning site Green=Tags(s)

MATPAAVNPPEMASDIPGSVTLVPVMAATGQVRMAGAMPARGGKRRSGMDFDDEDGEGPSKFSRENHSE
 IERRRRNKMTQYITELSDMVPTCSALARKPKDLTILRMAVSHMKSMRGTGNKSTDGAYKPSFLEQELKH
 LILEAADGFLFVAAETGRVIYVSDSVTPVLNQPQSEWFGSTLYEQVHPDDVEKLREQLCTSENSMTGRI
 LDLKTGTVKKEGQQSSMRMCMGSRRSFICRMRCGNAPLDHLPLNRITTMKRFRNGLGPVKEGEAQYAVV
 HCTGYIKAWPPAGMTIPEEDADVGGQSKYCLVAIGRLQVTSSPVCMDMNGMSVPTTEFLSRHNSDGIITFV
 DPRCISVIGYQPQDLLGKDILEFCHPEDQSHLRESFQQVVKLKQVLSVMYRFRTKNREWMLIRTSSFTF
 QNPYSDEIEYIICTNTNVKQLQQQAELEVHQRDGLSSYDLSQVVPNLPAGVHEAGKSVEKADAIQSFE
 RDRPFAEMFAGISASEKKMSSASAAGTQQIYSQGSPPSGHSGKAFSSSVVHVPGVNDIQSSSSTGQNM
 SQISRQLNQSQVAWTGSRPPFPGQQIPSSQSKTQSSPFGIGTSHTYPADPSSYSPLSSPATSSPSGNAYS
 SLANRTPGFAESGQSSGQFQGRPSEVWSQWQSQHGGQSSGEGHSHQPGQTEVFQDMLPMPGDPTQGTGN
 YNIEDFADLGMFPPFSE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6204_h12.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

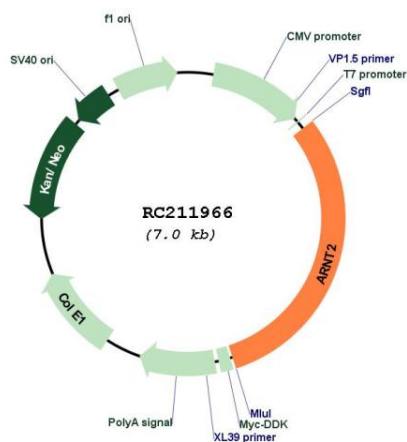
ACCN: NM_014862

ORF Size: 2151 bp

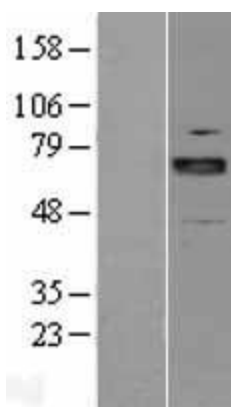
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

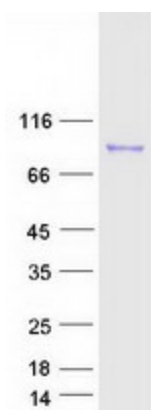
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open 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:	<u>NM_014862.3</u> , <u>NP_055677.3</u>
RefSeq Size:	6576 bp
RefSeq ORF:	2154 bp
Locus ID:	9915
UniProt ID:	<u>Q9HBZ2</u>
Cytogenetics:	15q25.1
Domains:	PAS, HLH, PAC
Protein Families:	Druggable Genome, Transcription Factors
Protein Pathways:	Pathways in cancer, Renal cell carcinoma
MW:	78.5 kDa
Gene Summary:	This gene encodes a member of the basic-helix-loop-helix-Per-Arnt-Sim (bHLH-PAS) superfamily of transcription factors. The encoded protein acts as a partner for several sensor proteins of the bHLH-PAS family, forming heterodimers with the sensor proteins that bind regulatory DNA sequences in genes responsive to developmental and environmental stimuli. Under hypoxic conditions, the encoded protein complexes with hypoxia-inducible factor 1alpha in the nucleus and this complex binds to hypoxia-responsive elements in enhancers and promoters of oxygen-responsive genes. A highly similar protein in mouse forms functional complexes with both aryl hydrocarbon receptors and Single-minded proteins, suggesting additional roles for the encoded protein in the metabolism of xenobiotic compounds and the regulation of neurogenesis, respectively. [provided by RefSeq, Dec 2013]

Product images:


Circular map for RC211966



Western blot validation of overexpression lysate (Cat# [LY402381]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211966 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ARNT2 protein (Cat# [TP311966]). The protein was produced from HEK293T cells transfected with ARNT2 cDNA clone (Cat# RC211966) using MegaTran 2.0 (Cat# [TT210002]).