

## Product datasheet for RC216971

### AIRE (NM\_000658) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	AIRE (NM_000658) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	AIRE
Synonyms:	AIRE1; APECED; APS1; APSI; PGA1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC216971 representing NM_000658 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**C

ATGTGGTTGGTGTACAGTTCGGGGCCCTGGAACGCAGCAGCCTGCAAGAAACCGGTTTTCTCCCAA  
TAGGGATGGCCCCGGGGGTGTCTGTTGGAGACCAGATGGATGGGAACAGGTGGTCAGGGCAGAATTC  
AGGCCCTGGCAGCATGGGAGCAGGGCAGAGACTGGGGAGTTCAGGTACCCAGAGATGCTGCTGGGGAGC  
TGTTTTGGGAAGGAGGTGGCTCTCAGGAGGTGCTGCACCCAGCCAGTCTGCATGGGCGTCTCTTGCC  
TGTGCCAGAAGAATGAGGACGAGTGTCCGTGTGTCGGGACGGCGGGAGCTCATCTGCTGTGACGGCTG  
CCCTCGGGCCTTCCACCTGGCCTGCCTGTCCCCTCCGCTCCGGGAGATCCCCAGTGGGACCTGGAGGTGC  
TCCAGCTGCCTGCAGGAACAGTCCAGGAGGTGCAGCCCCGGGCAGAGGAGCCCCGGCCCCAGGAGCCAC  
CCGTGGAGACCCCGCTCCCCCGGGGCTTAGGTCCGGCGGGAGAGGAGGTAAGAGGTCCACCTGGGGAACC  
CCTAGCCGGCATGGACACGACTCTGTCTACAAGCACCTGCCGGCTCCGCCTTCTGCAGCCCCGCTGCCA  
GGGCTGGACTCCTCGGCCCTGCACCCCTACTGTGTGTGGGTCTGAGGGTCAGCAGAACCTGGCTCCTG  
GTGCGCCTTGGGGGTGTGCGGAGATGGTACGGACGTGCTGCGGTGACTCACTGCGCCGCTGCCTTCCA  
CTGGCGCTGCCACTTCCCAGCCGGCACCTCCCAGCCGGGACGGGCTGCGCTGCAGATCCTGCTCAGGA  
GACGTGACCCAGCCCTGTGGAGGGGTGCTGGCCCCAGCCCCGCGCCGCTGGCCCTGGGCTGCCA  
AGGATGACACTGCCAGTACAGGCCGCTCTGCACAGGGATGACCTGGAGTCCCTTCTGAGCGAGCACAC  
CTTCGATGGCATCCTGCAGTGGCCATCCAGAGCATGGCCCGTCCGGCGGCCCTTCCCCTCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC216971 representing NM\_000658  
Red=Cloning site Green=Tags(s)

MWL VYSSGAPGTQQPARNRVFFPIGMAPGGVCWRPDGWTGGQGRISGPGSMGAGQRLGSSGTQRCCWGS  
 CFGKEVALRRVLHPSVCMGVSLCQKNEDECAVCRDGGELICCDGCPRAFHACLSPPLREIPSGTWRC  
 SSCLQATVQEVQPRAEPRPQEPVETPLPPGLRSAGEEVRGPPGEPLAGMDTTLVYKHL PAPP SAAPLP  
 GLDSSALHPLL CVGPEGQQLAPGARCVCGDGDVLRCTHCAA AFHWRCHFPAGTSRPGTGLRCRSCSG  
 DVTPAPVEGVLAPSPARLAPGPAKDDTASHEPALHRDDLESLLSEHTFDGILQWAIQSMARPAAPFPS

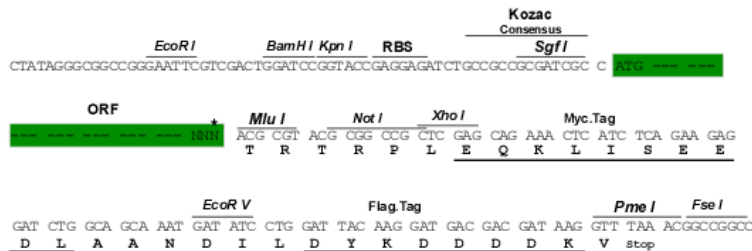
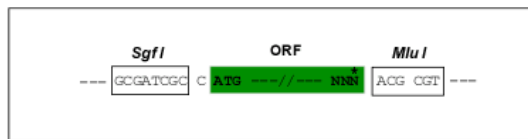
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja1278\\_g12.zip](https://cdn.origene.com/chromatograms/ja1278_g12.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\_000658

**ORF Size:** 1044 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\\_000658.2](#), [NP\\_000649.1](#)

**RefSeq Size:** 1545 bp

**RefSeq ORF:** 1046 bp

**Locus ID:** 326

**Cytogenetics:** 21q22.3

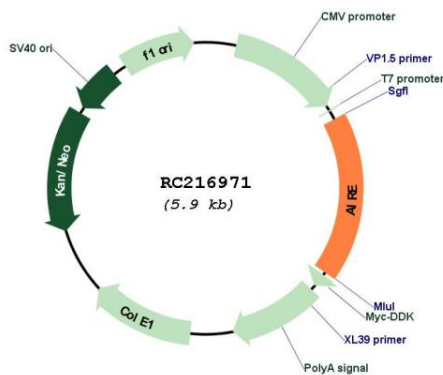
**Protein Families:** Druggable Genome

**Protein Pathways:** Primary immunodeficiency, Ubiquitin mediated proteolysis

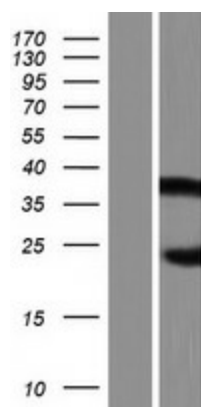
**MW:** 36.3 kDa

**Gene Summary:** This gene encodes a transcriptional regulator that forms nuclear bodies and interacts with the transcriptional coactivator CREB binding protein. The encoded protein plays an important role in immunity by regulating the expression of autoantigens and negative selection of autoreactive T-cells in the thymus. Mutations in this gene cause the rare autosomal-recessive systemic autoimmune disease termed autoimmune polyendocrinopathy with candidiasis and ectodermal dystrophy (APECED). [provided by RefSeq, Jun 2012]

## Product images:



Circular map for RC216971



Western blot validation of overexpression lysate (Cat# [LY424585]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216971 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).