

Product datasheet for **MR230220**

Aire (NM_001271552) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aire (NM_001271552) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Aire
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>MR230220 representing NM_001271552
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCAGGTGGGGATGGAATGCTACGCCGTCTGCTGAGGCTGCACCCGACCGAGATCGCGGTGGCCATAG
 ACAGTGCCTTTCCGCTGCTGCATGCTCTAGCCGACCACGACGTGGTCCCTGAGGACAAGTCCAGGAGAC
 GCTCCGCTCTGAAGGAGAAGGAAGGCTGCCCCAGGCCTTCCACGCCCTGCTGTCTGGCTCTGACCCGG
 GACAGTGGGGCCATCCTGGATTCTGGAGGATTCTTTAAGGACTACAATCTGGAGCGGTACAGCCGCC
 TGCATAGCATCCTGGACGGCTTCCAAAAGATGTGGACCTAAACCAGTCCCGAAAGGGAGAAAGCCCT
 TGCTGGTCCCAAGGCCGCGTACTGCCACCCAGACCCCAAGAGAAAAGCACTGGAGGAGCTCGA
 GCCACCCACCAGCAACTCTGGCTCAAAGAGCGTCTCCAGCCAGGCTCCACCTGAAGACTAAGCCCC
 CTAGAAGCCAGATGGCAACTTGGAGTACAGCACCTTCTCTTGAAACGGAATTCAGACCATGGCAGC
 TTCTGTCCAGAGAGCTGTGACCGTGGCCTCTGGGGATGTTCCAGGAACCCGAGGGCCGTGGAAGGGATC
 TTATCCAGCAGGTGTTGAGTCAGGAAGATCCAAGAAGTGCATTAGGTTGGGGGAGAGTTTTATACAC
 CCAACAAGTTCGAAGACCCAGTGGCAATTTGAAGAACAAGGCCGGAGTGGTAGCAGCCTAAAGCCAGT
 GGTCCGAGCCAAGGGAGCCAGGCTACTATACCTGGTAGAGATGAGCAGAAAAGTGGGCCAGCAGTGTGGG
 GTTCTCCCTTCCATCCCTCCCAAGTGAAGCCAGGTTAACCAGAAGAACGAGGATGAGTGTGCCGTGT
 GCCACGACGGAGGTGAGCTCATCTGTTGTGACGGCTGTCCCGGGCCTTCCACCTGGCTTGCCTGTCCCC
 ACCTCTGCAGGAGATCCCAAGTGGCCTCTGGAGATGCTCCTGCTCCAGGGCAGAGTCCAACAGAAC
 CTGTCCAGCCTGAGGTGTCCAGGCCCGGAGCTACCTGCAGAGACCCGGGTCCAGCACCAAGCGCGC
 GATGCAGTGTGTGGCGATGGCACCCGAGGTGTTGCGGTGTGCACACTGTGCCGTGCTCCACTGGCG
 CTGCCACTTCCCGACGGCCGCGCCCGGGGACCAATCTCCGCTGCAAATCCTGCTCTGCAGACTCG
 ACTCCACGCCAGGCACACCGGGCGAAGCTGTACCCACCTCTGGGCCCGTCCAGCACCTGGGCTTGCCA
 AGGTAGGGGACGACTCTGCTAGTCACGACCCTGTTCTACATAGGGACGACCTGGAGTCCCTCCTCAATGA
 GCACTCATTTGACGGCATCCTGCAGTGGCCATCCAGAGCATGTCAGCCCGCTGGCCGAGACACCACC
 TTCTCTTCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR230220 representing NM_001271552
 Red=Cloning site Green=Tags(s)

MAGGDGMLRRLRLHRTEIAVAIDSAFPLLLHALADHDVVPEDKQFETLRLKEKEGCPQAFHALLSWLLTR
 DSGAILDWIRLFDYNLERYSLHSILDGFPKVDLNLQSRKGRKPLAGPKAAVLP RPPTKRKALEEPR
 ATPPATLASKSVSSPGSHLKT KPPKPDGNLESQHLPLNGIQTMAASVQRAVTVASGDVPGTRGAVEGI
 LIQQVFESGRSKKCIQVGGEFYTPNKFEDPSGNLKNKARSGLKPVVRAKGAQVTIPGRDEQKVGQCCG
 VPPLPSLPSEPVNQNEDECAVCHDGGELICCDGCPRAFHLACLSPPLQEIPSGLRWCSCCLQGRVQQN
 LSQPEVSRPELPAETPGPAPSARCSVCGDGEVLRCAHCAAHFHWRCHFPTAAARP GTNL RCKSCSADS
 TPTPGTPGEAVPTSGPRPAPGLAKVGDDSAHDPVLRDDLESLLNEHSFDGILQWAIQMSRPLAETPP
 FSS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-Mlul

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_001271552.1](#), [NP_001258481.1](#)

RefSeq Size: 1816 bp

RefSeq ORF: 1482 bp

Locus ID: 11634

UniProt ID: [Q9Z0E3](#)

Cytogenetics: 10 39.72 cM

MW: 53.4 kDa

Gene Summary: Transcription factor playing an essential role to promote self-tolerance in the thymus by regulating the expression of a wide array of self-antigens that have the commonality of being tissue-restricted in their expression pattern in the periphery, called tissue restricted antigens (TRA) (Probable). Binds to G-doublets in an A/T-rich environment; the preferred motif is a tandem repeat of 5'-ATTGGTTA-3' combined with a 5'-TTATTA-3' box. Binds to nucleosomes (By similarity). Binds to chromatin and interacts selectively with histone H3 that is not methylated at 'Lys-4', not phosphorylated at 'Thr-3' and not methylated at 'Arg-2'. Functions as a sensor of histone H3 modifications that are important for the epigenetic regulation of gene expression. Mainly expressed by medullary thymic epithelial cells (mTECs), induces the expression of thousands of tissue-restricted proteins, which are presented on major histocompatibility complex class I (MHC-I) and MHC-II molecules to developing T-cells percolating through the thymic medulla (By similarity). Also induces self-tolerance through other mechanisms such as the regulation of the mTEC differentiation program (PubMed:19015306). Controls the medullary accumulation of thymic dendritic cells and the development of regulatory T-cell through the regulation of XCL1 expression (PubMed:21300913). Regulates the production of CCR4 and CCR7 ligands in medullary thymic epithelial cells and alters the coordinated maturation and migration of thymocytes (PubMed:19923453). In thymic B-cells, allows the presentation of licensing-dependent endogenous self-antigen for negative selection (PubMed:26070482). In secondary lymphoid organs, induces functional inactivation of CD4(+) T-cells. Expressed by a distinct bone marrow-derived population, induces self-tolerance through a mechanism that does not require regulatory T-cells and is resistant to innate inflammatory stimuli (PubMed:23993652). [UniProtKB/Swiss-Prot Function]