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Product datasheet for MC228254

Aire (NM_001271551) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aire (NM_001271551) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Aire
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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Fully Sequenced ORF:

>MC228254 representing NM_001271551
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCAGGTGGGGATGGAATGCTACGCCGTCTGCTGAGGCTGCACCGCACCGAGATCGCGGTGGCCATAG
ACAGTGCCTTTCCGCTGCTGCATGCTCTAGCCGACCACGACGTGGTCCCTGAGGACAAGTTCCAGGAGAC
GCTCCGTCTGAAGGAGAAGGAAGGCTGCCCCCAGGCCTTCCACGCCCTGCTGTCCTGGCTCCTGACCCGG
GACAGTGGGGCCATCCTGGATTTCTGGAGGATTCTCTTTAAGGACTACAATCTGGAGCGGTACAGCCGCC
TGCATAGCATCCTGGACGGCTTCCCAAAAGATGTGGACCTAAACCAGTCCCGGAAAGGGAGAAAGCCCCT
TGCTGGTCCCAAGGCCGCGGTACTGCCACCCAGACCCCCCACCAAGAGAAAAGCACTGGAGGAGCCTCGA
GCCACCCCACCAGCAACTCTGGCCTCAAAGAGCGTCTCCAGCCCAGGCTCCCACCTGAAGACTAAGCCCC
CTAAGAAGCCAGATGGCAACTTGGAGTCACAGCACCTTCCTCTTGGAAACGGAATTCAGACCATGGCAGC
TTCTGTCCAGAGAGCTGTGACCGTGGCCTCTGGGGATGTTCCAGGAACCCGAGGGGCCGTGGAAGGGATC
CTTATCCAGCAGGTGTTTGAGTCAGGAAGATCCAAGAAGTGCATTCAGGTTGGGGGAGAGTTTTATACAC
CCAACAAGTTCGAAGACCCCAGTGGCAATTTGAAGAACAAGGCCCGGAGTGGTAGCAGCCTAAAGCCAGT
GGTCCGAGCCAAGGGAGCCCAGGGTAGAGATGAGCAGAAAGTGGGCCAGCAGTGTGGGGTTCCTCCCCTT
CCATCCCTCCCCAGTGAGCCCCAGGTTAACCAGAACGAGGATGAGTGTGCCGTGTGCCACGACGGAGGTG
AGCTCATCTGTTGTGACGGCTGTCCCCGGGCCTTCCACCTGGCTTGCCTGTCCCCACCTCTGCAGGAGAT
CCCCAGTGGCCTCTGGAGATGCTCCTGCTGCCTCCAGGGCAGAGTCCAACAGAACCTGTCCCAGCCTGAG
GTGTCCAGGCCCCCGGAGCTACCTGCAGAGACCCCGATCCTCGTGGGACTGAGGTCAGCTTCAGAGAAAA
CCAGGGGCCCATCCAGGGAGCTCAAAGCCAGCTCTGATGCTGCTGTCACATATGTGAACCTGCTGGCCCC
GCACCCTGCAGCTCCTCTGCTGGAGCCTTCAGCACTGTGCCCTCTACTGAGTGCTGGGAATGAGGGGCGG
CCAGGTCCAGCACCAAGCGCGCGATGCAGTGTGTGTGGCGATGGCACCGAGGTGTTGCGGTGTGCACACT
GTGCCGCTGCCTTCCACTGGCGCTGCCACTTCCCGACGGCCGCCGCCCGGCCGGGGACCAATCTCCGCTG
CAAATCCTGCTCTGCAGACTCGACTCCCACGCCAGGCACACCGGGCGAAGCTGTACCCACCTCTGGGCCC
CGTCCAGCACCTGGGCTTGCCAAGGTAGGGGACGACTCTGCTAGTCACGACCCTGTTCTACATAGGGACG
ACCTGGAGTCCCTCCTCAATGAGCACTCATTTGACGGCATCCTGCAGTGGGCCATCCAGAGCATGTCACG
CCCGCTGGCCGAGACACCACCCTTCTCTTCCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001271551

Insert Size: 1644 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation: Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.

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).

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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_001271551.1, NP_001258480.1
RefSeq Size:	1978 bp
RefSeq ORF:	1644 bp
Locus ID:	11634
UniProt ID:	Q9Z0E3
Cytogenetics:	10 39.72 cM
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 thimic B-cells, allows the presentation of licensing-dependent endogenous self-anitgen 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 resitant to innate inflammatory stimuli (PubMed:23993652). [UniProtKB/Swiss-Prot Function] Transcript Variant: This variant (4) uses two alternate in-frame splice sites in the coding region compared to variant 1. PubMed ID 10550218 supports this variant and calls it Aire 1d. It encodes isoform 4 which is shorter than isoform 1.

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