

Rabbit anti-Human, Mouse AIRE Polyclonal Antibody | anti-AIRE antibody

AIRE Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA323739	Rabbit	Human, Mouse	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

AIRE; Polyclonal Antibody; AIRE Antibody; AIRE_HUMAN; AIRE1; APECED; APECED protein; APS1; APSI; Autoimmune polyendocrinopathy candidiasis ectodermal dystrophy protein; Autoimmune regulator; Autoimmune regulator protein; PGA1; anti-AIRE antibody

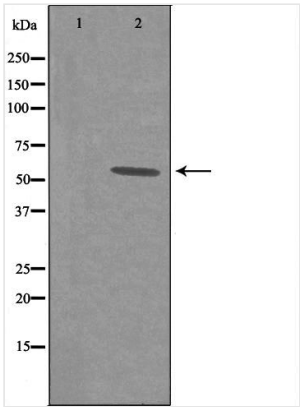
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Isotype	IgG
Specificity	AIRE antibody detects endogenous levels of total AIRE
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	545
Applicable Applications for anti-AIRE antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide
Subcellular Location	Nucleus. Cytoplasm. Associated with tubular structures and in discrete nuclear dots resembling ND10 nuclear bodies. May shuttle between nucleus and cytoplasm.
Tissue Specificity	Widely expressed. Expressed at higher level in thymus (medullary epithelial cells and monocyte-dendritic cells), pancreas, adrenal cortex and testis. Expressed at lower level in the spleen, fetal liver and lymph nodes. In secondary lymphoid organs, expressed in a discrete population of bone marrow-derived tolerogenic antigen presenting cells (APCs) called extrathymic AIRE expressing cells (eTAC)(at protein level) (PubMed:23993652). Isoform 2 and isoform 3 seem to be less frequently expressed than isoform 1, if at all.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IF (Immunofluorescence)

AAA323739 staining HeLa cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.



WB (Western Blot)

Western blot analysis of extracts from 293 cells, using AIRE antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-AIRE antibody

Function: 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) (PubMed:26084028). 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 (PubMed:26084028). Also induces self-tolerance through other mechanisms such as the regulation of the mTEC differentiation program. Controls the medullary accumulation of thymic dendritic cells and the development of regulatory T-cell through the regulation of XCL1 expression. Regulates the production of CCR4 and CCR7 ligands in medullary thymic epithelial cells and alters the coordinated maturation and migration of thymocytes. In thimic B-cells, allows the presentation of licensing-dependent endogenous self-anitgen for negative selection. 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 (By similarity).

Subunit Structure: Homodimer and homotetramer. Interacts with CREBBP. Interacts preferentially with histone H3 that is not methylated at 'Lys-4'. Binds with lower affinity to histone H3 that is monomethylated at 'Lys-4'. Trimethylation of histone H3 at 'Lys-4' or phosphorylation at 'Thr-3' abolish the interaction. Binds with lower affinity to histone H3 that is acetylated at 'Lys-4', or that is acetylated at 'Lys-9' or trimethylated at 'Lys-9'. Binds histone H3 that is dimethylated at 'Arg-2' with very low affinity.

Post-translational Modifications: Phosphorylated. Phosphorylation could trigger oligomerization.

Similarity: The L-X-X-L-L repeats may be implicated in binding to nuclear receptors.The HSR domain is required for localization on tubular structures (N-terminal part) and for homodimerization.Interacts via the first PHD domain with the N-terminus of histone H3 that is not methylated at 'Lys-4'. Disruption of the first PHD domain has been shown to lead to reduced transcriptional activity and to localization of the protein mainly in the cytoplasm in small granules. While the PHD zinc fingers are necessary for the transactivation capacity of the protein, other regions also modulate this function.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4557291
NCBI GeneID	326
NCBI Accession #	NP_000374.1
NCBI GenBank Nucleotide #	NM_000383.3
UniProt Accession #	O43918; O43922; O43932; O75745; B2RP50

Molecular Weight	Observed: 60 kD Predicted: 58 kDa
NCBI Official Full Name	autoimmune regulator
NCBI Official Synonym Full Names	autoimmune regulator
NCBI Official Symbol	AIRE
NCBI Official Synonym Symbols	APS1; APSI; PGA1; AIRE1; APECED
NCBI Protein Information	autoimmune regulator
UniProt Protein Name	Autoimmune regulator
UniProt Gene Name	AIRE
UniProt Synonym Gene Names	APECED; APECED protein

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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