

DESCRIPTION

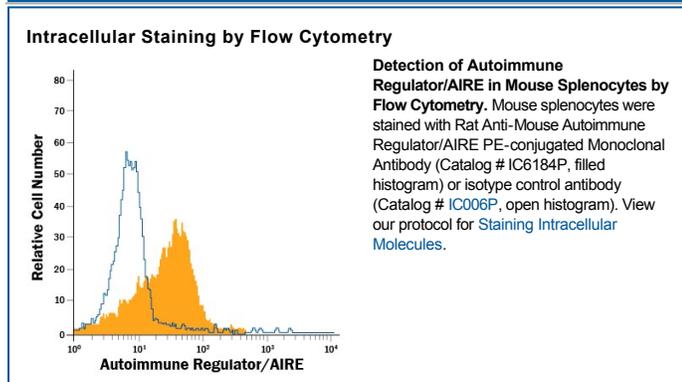
Species Reactivity	Mouse
Specificity	Detects mouse AIRE in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human AIRE is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 609930
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse AIRE Ser476-Ser552 (predicted) Accession # Q9Z0E3
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	10 μ L/10 ⁶ cells	See Below

DATA



PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Autoimmune Regulator (AIRE) is an approximately 60 kDa nuclear and cytosolic protein that is required for the development of T cell tolerance. It regulates the expression of self-antigens by both thymic epithelial cells and extrathymic cell types. Genes known to be regulated by AIRE include FABP2, Proinsulin, Oxytocin, MCP-2, S100A8 and Cytochrome p450. The genes, referred to as TRAs, represent non-thymic, tissue-specific molecules that could serve as autoantigens at a later date. Their expression in the thymus (and select extrathymic sites) allows for the identification and elimination of potentially autoreactive T cell clones. While some mouse and human molecules are identical in their regulation by AIRE, possibly not all are, and this leads to subtle differences in the autoimmune syndromes seen in human and mouse that are attributable to AIRE absence or mutation. AIRE regulates gene transcription through interactions with DNA, histone H3, and the nuclear matrix. It contains one HSR domain that is involved in dimerization (aa 1-106), a nuclear localization sequence (aa 114-134), one SAND domain involved in DNA binding (aa 182-282), and two PHD zinc finger domains that mediate protein-protein interactions (aa 298-345 and aa 433-475). Alternate splicing of mouse AIRE generates at least eleven isoforms. Within aa 476-552, mouse AIRE shares 91% and 64% aa sequence identity with rat and human AIRE, respectively.