ARG42282
anti-IKZF1 / Ikaros antibody [4E9] (PE)

Package: 50 tests
Store at: 4°C

Summary

Product Description	PE-conjugated Mouse Monoclonal antibody [4E9] recognizes IKZF1 / Ikaros
Tested Reactivity	Hu, Ms
Tested Application	FACS
Specificity	The mouse monoclonal antibody 4E9 recognizes Ikaros, a transcription factor (intracellular antigen) expressed broadly in hematopoietic progenitors and serving as a key regulator of lymphopoiesis.
Host	Mouse
Clonality	Monoclonal
Clone	4E9
Isotype	IgG1
Target Name	IKZF1 / Ikaros
Species	Human
Immunogen	Recombinant Human Ikaros (C-terminal part).
Conjugation	PE
Alternate Names	IK1; Hs.54452; LYF1; PPP1R92; LyF-1; Lymphoid transcription factor LyF-1; IKAROS; Ikaros family zinc finger protein 1; DNA-binding protein Ikaros; PRO0758; ZNFN1A1

Application Instructions

Application table

Application	Dilution
FACS	10 µl / 100 µl of whole blood or 10^6 cells

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

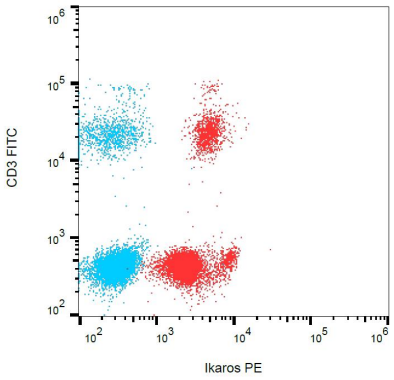
Properties

Form	Liquid
Purification	Purified
Buffer	PBS and 15 mM Sodium azide.
Preservative	15 mM Sodium azide
Storage instruction	Aliquot and store in the dark at 2-8°C. Keep protected from prolonged exposure to light. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	IKZF1
Gene Full Name	IKAROS family zinc finger 1 (Ikaros)
Background	This gene encodes a transcription factor that belongs to the family of zinc-finger DNA-binding proteins associated with chromatin remodeling. The expression of this protein is restricted to the fetal and adult hemo-lymphopoietic system, and it functions as a regulator of lymphocyte differentiation. Several alternatively spliced transcript variants encoding different isoforms have been described for this gene. Most isoforms share a common C-terminal domain, which contains two zinc finger motifs that are required for hetero- or homo-dimerization, and for interactions with other proteins. The isoforms, however, differ in the number of N-terminal zinc finger motifs that bind DNA and in nuclear localization signal presence, resulting in members with and without DNA-binding properties. Only a few isoforms contain the requisite three or more N-terminal zinc motifs that confer high affinity binding to a specific core DNA sequence element in the promoters of target genes. The non-DNA-binding isoforms are largely found in the cytoplasm, and are thought to function as dominant-negative factors. Overexpression of some dominant-negative isoforms have been associated with B-cell malignancies, such as acute lymphoblastic leukemia (ALL). [provided by RefSeq, May 2014]
Function	Transcription regulator of hematopoietic cell differentiation (PubMed:17934067). Binds gamma-satellite DNA (PubMed:17135265, PubMed:19141594). Plays a role in the development of lymphocytes, B- and T-cells. Binds and activates the enhancer (delta-A element) of the CD3-delta gene. Repressor of the TDT (fikzfterminal deoxynucleotidyltransferase) gene during thymocyte differentiation. Regulates transcription through association with both HDAC-dependent and HDAC-independent complexes. Targets the 2 chromatin-remodeling complexes, NuRD and BAF (SWI/SNF), in a single complex (PYR complex), to the beta-globin locus in adult erythrocytes. Increases normal apoptosis in adult erythroid cells. Confers early temporal competence to retinal progenitor cells (RPCs) (By similarity). Function is isoform-specific and is modulated by dominant-negative inactive isoforms (PubMed:17135265, PubMed:17934067). [UniProt]
Calculated Mw	58 kDa
PTM	Phosphorylation controls cell-cycle progression from late G(1) stage to S stage. Hyperphosphorylated during G2/M phase. Dephosphorylated state during late G(1) phase. Phosphorylation on Thr-140 is required for DNA and pericentromeric location during mitosis. CK2 is the main kinase, in vitro. GSK3 and CDK may also contribute to phosphorylation of the C-terminal serine and threonine residues. Phosphorylation on these C-terminal residues reduces the DNA-binding ability. Phosphorylation/dephosphorylation events on Ser-13 and Ser-295 regulate TDT expression during thymocyte differentiation. Dephosphorylation by protein phosphatase 1 regulates stability and pericentromeric heterochromatin location. Phosphorylated in both lymphoid and non-lymphoid tissues (By similarity). Phosphorylation at Ser-361 and Ser-364 downstream of SYK induces nuclear translocation. Sumoylated. Simulataneous sumoylation on the 2 sites results in a loss of both HDAC-dependent and HDAC-independent repression. Has no effect on pericentromeric heterochromatin location. Desumoylated by SENP1 (By similarity). Polyubiquitinated. [UniProt]
Cellular Localization	Nucleus. Note=In resting lymphocytes, distributed diffusely throughout the nucleus. Localizes to pericentromeric heterochromatin in proliferating cells. This localization requires DNA binding which is regulated by phosphorylation / dephosphorylation events. Isoform Ik2: Nucleus. Isoform Ik6: Cytoplasm. [UniProt]

Images



ARG42282 anti-IKZF1 / Ikaros antibody [4E9] (PE) FACS image

Flow Cytometry: Human peripheral blood leukocytes stained with ARG42282 anti-IKZF1 / Ikaros antibody [4E9] (PE) and anti-CD3 antibody (FITC).