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Anti-Ikaros/IKZF1 Antibody Picoband™ (monoclonal, 5F12H7)

Catalog # ABO16611

Product Information

Application	WB
Primary Accession	Q13422
Host	Mouse
Isotype	IgG1
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-Ikaros/IKZF1 Antibody Picoband™ (monoclonal, 5F12H7) . Tested in WB applications. This antibody reacts with Human.
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500 □g/ml.

Additional Information

Gene ID	10320
Other Names	DNA-binding protein Ikaros, Ikaros family zinc finger protein 1, Lymphoid transcription factor LyF-1, IKZF1, IK1, IKAROS, LYF1, ZNFN1A1
Calculated MW	57528
Application Details	Western blot, 0.25-0.5 □g/ml, Human
Source	Eukaryota
Contents	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Clone Names	Clone: 5F12H7
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Ikaros, different from the related mouse sequence by five amino acids.
Purification	Immunogen affinity purified.
Storage	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.

Protein Information

Name	IKZF1

Synonyms	IK1, IKAROS, LYF1, ZNFN1A1
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 (PubMed:10204490). Increases normal apoptosis in adult erythroid cells (By similarity). 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). Recognized by CRBN and is targeted for degradation by DCX (DDB1-CUL4-X-box) E3 protein ligase complex (PubMed:41565821).
Cellular Location	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 Ik6]: Cytoplasm.
Tissue Location	Abundantly expressed in thymus, spleen and peripheral blood Leukocytes and lymph nodes. Lower expression in bone marrow and small intestine.

Background

DNA-binding protein Ikaros is a protein that in humans is encoded by the IKZF1 gene. 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.

Images

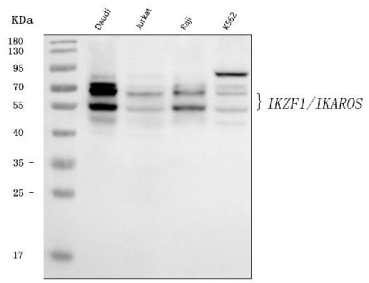


Figure 1. Western blot analysis of Ikaros/IKZF1 using anti-Ikaros/IKZF1 antibody (M00531-3).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Daudi whole cell lysates,
Lane 2: human Jurkat whole cell lysates,
Lane 3: human Raji whole cell lysates,
Lane 4: human K562 whole cell lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes.
Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse

anti-Ikaros/IKZF1 antigen affinity purified monoclonal antibody (Catalog # M00531-3) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for Ikaros/IKZF1 at approximately 55-65 kDa. The expected band size for Ikaros/IKZF1 is at 58 kDa.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.