abcam

Product datasheet

Anti-Ikaros antibody [EPR13790] ab191394

KO VALIDATED Recombinant RabMAb

3 References 6 Images

Overview

Product name	Anti-Ikaros antibody [EPR13790]
Description	Rabbit monoclonal [EPR13790] to Ikaros
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	Jurkat, Daudi, Raji, Ramos and MOLT4 cell lysates; Human thymus and mouse spleen tissues; MOLT4 cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 59% PBS, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR13790

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab191394 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/130. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		1/10000 - 1/50000. Detects a band of approximately 50-70 kDa (predicted molecular weight: 58 kDa).
IHC-P		1/1400. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target

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).

Tissue specificity Abundantly expressed in thymus, spleen and peripheral blood Leukocytes and lymph nodes. Lower expression in bone marrow and small intestine.

Involvement in disease Defects in IKZF1 are frequent occurrences (28.6%) in acute lymphoblasic leukemia (ALL). Such alterations or deletions lead to poor prognosis for ALL.
Chromosomal aberrations involving IKZF1 are a cause of B-cell non-Hodgkin lymphomas (B-cell NHL). Translocation t(3;7)(q27;p12), with BCL6.

Sequence similarities Belongs to the Ikaros C2H2-type zinc-finger protein family.
Contains 6 C2H2-type zinc fingers.

Domain The N-terminal zinc-fingers 2 and 3 are required for DNA binding as well as for targeting IKFZ1 to pericentromeric heterochromatin.
The C-terminal zinc-finger domain is required for dimerization.

Post-translational modifications 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.
Polyubiquitinated.

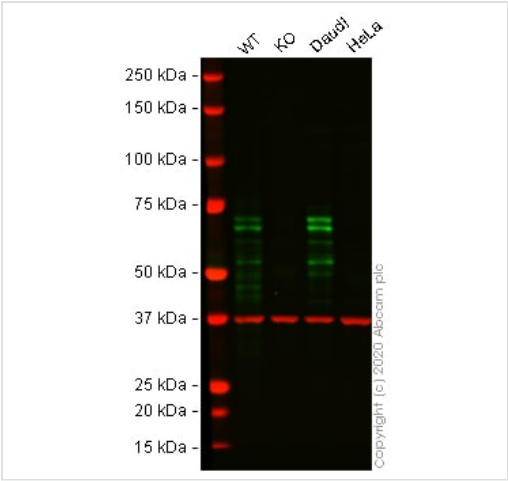
Cellular localization

Cytoplasm; Nucleus. 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 and Nucleus. 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 (By similarity).

Form

There are 7 isoforms produced by alternative splicing.

Images



Western blot - Anti-Ikaros antibody [EPR13790] (ab191394)

All lanes : Anti-Ikaros antibody [EPR13790] (ab191394) at 1/10000 dilution

Lane 1 : Wild-type Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate
Lane 2 : IKZF1 knockout Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate
Lane 3 : Daudi (Human Burkitt's lymphoma cell line) whole cell lysate
Lane 4 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lysates/proteins at 20 µg per lane.

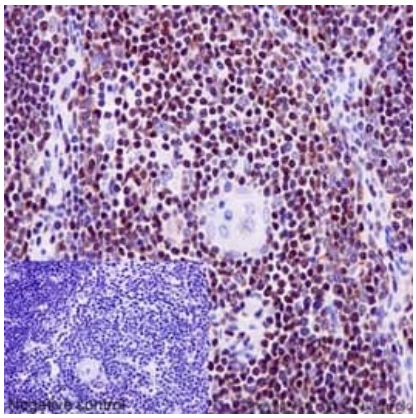
Performed under reducing conditions.

Predicted band size: 58 kDa
Observed band size: 50-70 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab191394 observed at 50-70 kDa. Red - loading control **ab8245** (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab191394 was shown to react with Ikaros in wild-type Jurkat cells in western blot with loss of signal observed in IKZF1 knockout sample. Wild-type and IKZF1 knockout Jurkat cell lysates were subjected to

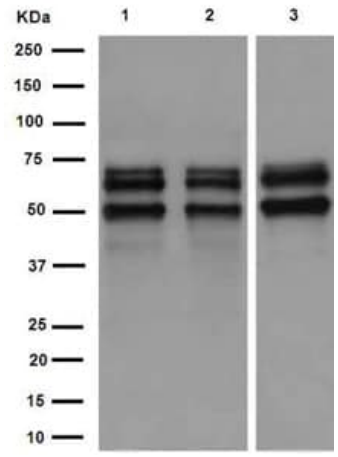
SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with ab191394 and **ab8245** (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 10000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ikaros antibody [EPR13790] (ab191394)

Immunohistochemical analysis of paraffin-embedded Human thymus tissue labeling Ikaros with ab191394 at 1/1400 dilution followed by pre-diluted HRP Polymer for Rabbit IgG secondary antibody and counter-stained with Hematoxylin.
Inset: Negative control: using PBS instead of primary antibody.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-Ikaros antibody [EPR13790] (ab191394)

All lanes : Anti-Ikaros antibody [EPR13790] (ab191394) at 1/10000 dilution

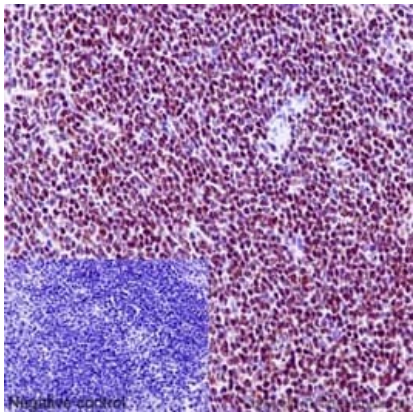
Lane 1 : Raji cell lysate
Lane 2 : Ramos cell lysate
Lane 3 : MOLT4 cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 58 kDa

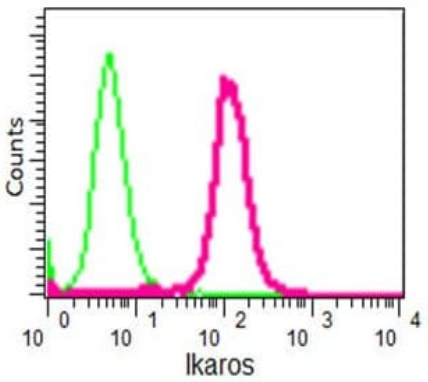
Based on the sequence analysis, ab191394 recognizes seven isoforms with the predicted MWs of 58KDa, 48KDa, 48KDa, 43KDa, 41KDa, 32KDa and 53KDa, respectively.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ikaros antibody [EPR13790] (ab191394)

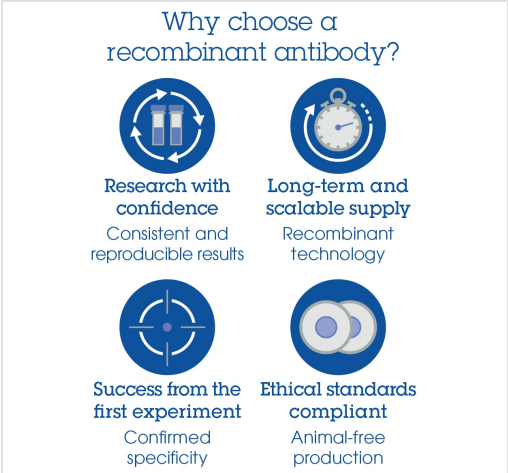
Immunohistochemical analysis of paraffin-embedded Mouse spleen tissue labeling Ikaros with ab191394 at 1/1400 dilution followed by pre-diluted HRP Polymer for Rabbit IgG secondary antibody and counter-stained with Hematoxylin.
Inset: Negative control: using PBS instead of primary antibody.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Ikaros antibody [EPR13790] (ab191394)

Intracellular flow cytometric analysis of MOLT4 cells (paraformaldehyde-fixed, 2%)labeling Ikaros with ab191394 at 1/130 dilution (red) or a rabbit IgG (negative) (green), followed by Goat anti rabbit IgG (FITC) secondary at 1/150 dilution.



Anti-Ikaros antibody [EPR13790] (ab191394)

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors