

Ikaros (M-20): sc-9859

BACKGROUND

Ikaros family members, including Ikaros and Helios, are nuclear factors that colocalize with DNA replication machinery components in higher-order chromatin structures and respond to signaling events, such as T cell activation. Helios and Ikaros bind to similar DNA sequences, and they function as hemopoietic-specific transcription factors. Members of the Ikaros family contain zinc-finger domains that are involved in DNA-binding and in the formation of homodimers and heterodimers between Ikaros family members. Expression of Ikaros is primarily detected in the thymus and spleen, where it is essential for regulating T-cell specific gene transcription and for the differentiation and commitment of early hemopoietic progenitors to the B and T lymphoid lineages. Similarly, Helios expression is detected primarily in T cells and in the earliest embryonic hemopoietic precursors and in adult stem cells. Ikaros and Helios also appear to regulate cell cycle entry by inducing transcriptional repression under varying conditions and, thereby, mediate T cell activation and IL-2 mediated signaling events.

REFERENCES

1. Georgopoulos, K., et al. 1992. Ikaros, an early lymphoid-specific transcription factor and a putative mediator for T cell commitment. *Science* 258: 808-812.
2. Molnar, A., et al. 1994. The Ikaros gene encodes a family of functionally diverse zinc finger DNA-binding proteins. *Mol. Cell. Biol.* 14: 8292-8303.
3. Sun, L., et al. 1996. Zinc finger-mediated protein interactions modulate Ikaros activity, a molecular control of lymphocyte development. *EMBO J.* 15: 5358-5369.

CHROMOSOMAL LOCATION

Genetic locus: IKZF1 (human) mapping to 7p12.2; Ikzf1 (mouse) mapping to 11 A1.

SOURCE

Ikaros (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Ikaros of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9859 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-9859 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Ikaros (M-20) is recommended for detection of all Ikaros isoforms of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

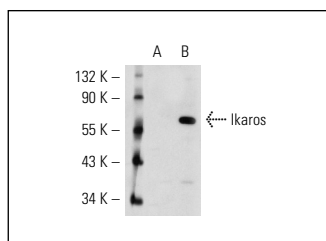
Suitable for use as control antibody for Ikaros siRNA (h): sc-35640, Ikaros siRNA (m): sc-35641, Ikaros shRNA Plasmid (h): sc-35640-SH, Ikaros shRNA Plasmid (m): sc-35641-SH, Ikaros shRNA (h) Lentiviral Particles: sc-35640-V and Ikaros shRNA (m) Lentiviral Particles: sc-35641-V.

Ikaros (M-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Ikaros: 50 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, Ikaros (h): 293 Lysate: sc-111057, or U-937 nuclear extract: sc-2156

DATA



Ikaros (M-20): sc-9859. Western blot analysis of Ikaros expression in non-transfected: sc-110760 (A) and human Ikaros transfected: sc-111057 (B) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Payne, K.J., et al. 2001. Cutting edge: predominant expression of a novel Ikaros isoform in normal human hemopoiesis. *J. Immunol.* 167: 1867-1870.
2. Caballero, R., et al. 2007. Combinatorial effects of splice variants modulate function of Aiolos. *J. Cell Sci.* 120: 2619-2630.
3. Cho, S.J., et al. 2008. Ikaros negatively regulates inducible nitric oxide synthase expression in macrophages: involvement of Ikaros phosphorylation by casein kinase 2. *Cell. Mol. Life Sci.* 65: 3290-3303.
4. Quirion, M.R., et al. 2009. Cutting edge: Ikaros is a regulator of Th2 cell differentiation. *J. Immunol.* 182: 741-745.
5. Umetsu, S.E., et al. 2009. Ikaros is a regulator of IL-10 expression in CD4⁺ T cells. *J. Immunol.* 183: 5518-5525.


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