

# Ikaros (H-100): sc-13039

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Ikaros (H-100) is a rabbit polyclonal antibody raised against amino acids 1-100 of Ikaros of human 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-13039 X, 200 µg/0.1 ml.

## APPLICATIONS

Ikaros (H-100) is recommended for detection of Ikaros of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Ikaros (H-100) is also recommended for detection of Ikaros in additional species, including equine and canine.

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 (H-100) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

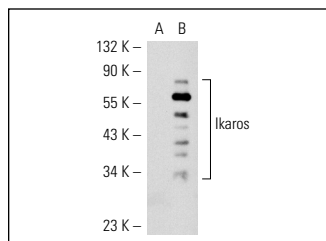
Molecular Weight of Ikaros: 50 kDa.

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

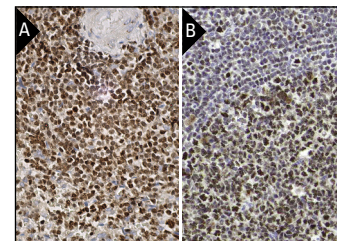
## STORAGE

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

## DATA



Ikaros (H-100): sc-13039. Western blot analysis of Ikaros expression in non-transfected: sc-110760 (A) and human Ikaros transfected: sc-111057 (B) 293 whole cell lysates.



Ikaros (H-100): sc-13039. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing nuclear staining of cells in white pulp (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear staining of follicle and non-follicle cells magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

## SELECT PRODUCT CITATIONS

1. Yamamoto, E., et al. 2005. Ikaros is expressed in human extravillous trophoblasts and involved in their migration and invasion. *Mol. Hum. Reprod.* 11: 825-831.
2. Yap, W.H., et al. 2005. STAT4 is a target of the hematopoietic zinc-finger transcription factor Ikaros in T cells. *FEBS Lett.* 579: 4470-4478.
3. Thomas, R.M., et al. 2010. Ikaros silences T-bet expression and interferon-γ production during T helper 2 differentiation. *J. Biol. Chem.* 285: 2545-2553.
4. Ma, S., et al. 2010. Ikaros and Aiolos inhibit pre-B-cell proliferation by directly suppressing c-Myc expression. *Mol. Cell. Biol.* 30: 4149-4158.
5. Zarnegar, M.A., et al. 2010. Cell-type-specific activation and repression of PU.1 by a complex of discrete, functionally specialized cis-regulatory elements. *Mol. Cell. Biol.* 30: 4922-4939.
6. Javierre, B.M., et al. 2011. Long-range epigenetic silencing associates with deregulation of Ikaros targets in colorectal cancer cells. *Mol. Cancer Res.* 9: 1139-1151.
7. Ren, Y.R., et al. 2012. Unbiased discovery of interactions at a control locus driving expression of the cancer-specific therapeutic and diagnostic target, mesothelin. *J. Proteome Res.* 11: 5301-5310.

## RESEARCH USE

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

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Try **Ikaros (E-2): sc-398265**, our highly recommended monoclonal alternative to Ikaros (H-100). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Ikaros (E-2): sc-398265**.