SANTA CRUZ BIOTECHNOLOGY, INC.

# Ikaros (E-20): sc-9861

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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 (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-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-9861 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-9861 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

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

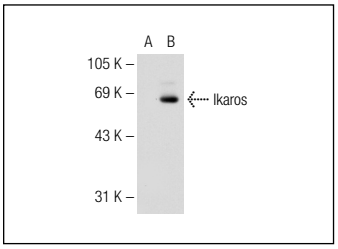
Molecular Weight of Ikaros: 50 kDa.

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

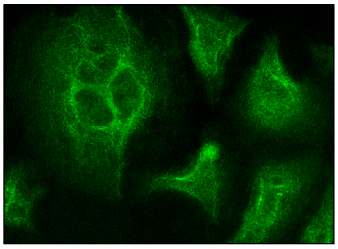
## RESEARCH USE

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

## DATA




Ikaros (E-20): sc-9861. Western blot analysis of Ikaros expression in non-transfected: sc-110760 (**A**) and human Ikaros transfected: sc-111057 (**B**) 293 whole cell lysates.



Ikaros (E-20): sc-9861. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

## 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. Liu, M., et al. 2004. Roles of USF, Ikaros and Sp proteins in the transcriptional regulation of the human reduced folate carrier B promoter. Biochem. J. 383: 249-257.
3. Bellavia, D., et al. 2007. Notch 3 and the Notch 3-upregulated RNA-binding protein HuD regulate Ikaros alternative splicing. EMBO J. 26: 1670-1680.
4. Mullighan, C.G., et al. 2008. Bcr-Abl1 lymphoblastic leukaemia is characterized by the deletion of Ikaros. Nature 453: 110-114.
5. Bottardi, S., et al. 2009. Ikaros and GATA-1 combinatorial effect is required for silencing of human γ-globin genes. Mol. Cell. Biol. 29: 1526-1537.
6. 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.
7. Alinikula, J., et al. 2010. Concerted action of Helios and Ikaros controls the expression of the inositol 5-phosphatase SHIP. Eur. J. Immunol. 40: 2599-2607.


## STORAGE

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