

Aiolos (H-8): sc-515913

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. Aiolos, also known as zinc finger protein Ikaros 3 or ZNFN1A3, is a 509 amino acid nuclear protein. Aiolos plays an important role in lymphocyte differentiation regulation and, via this role, mutated Aiolos is implicated in leukemogenesis. Expressed in most tissues, Aiolos is predominantly found in spleen, thymus and peripheral blood leukocytes. Aiolos contains six C₂H₂-type zinc fingers, a motif commonly involved in nucleotide binding. Aiolos interacts with Ikaros family members, including Eos and Pegasus.

REFERENCES

1. Wang, J.H., et al. 1998. Aiolos regulates B cell activation and maturation to effector state. *Immunity* 9: 543-553.
2. Hosokawa, Y., et al. 1999. Human aiolos, an ikaros-related zinc finger DNA binding protein: cDNA cloning, tissue expression pattern, and chromosomal mapping. *Genomics* 61: 326-329.
3. Perdomo, J., et al. 2000. Eos and pegasus, two members of the Ikaros family of proteins with distinct DNA binding activities. *J. Biol. Chem.* 275: 38347-38354.
4. Liippo, J., et al. 2001. Both normal and leukemic B lymphocytes express multiple isoforms of the human Aiolos gene. *Eur. J. Immunol.* 31: 3469-3474.

CHROMOSOMAL LOCATION

Genetic locus: IKZF3 (human) mapping to 17q12.

SOURCE

Aiolos (H-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 85-104 within an internal region of Aiolos of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Aiolos (H-8) is available conjugated to agarose (sc-515913 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515913 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515913 PE), fluorescein (sc-515913 FITC), Alexa Fluor[®] 488 (sc-515913 AF488), Alexa Fluor[®] 546 (sc-515913 AF546), Alexa Fluor[®] 594 (sc-515913 AF594) or Alexa Fluor[®] 647 (sc-515913 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515913 AF680) or Alexa Fluor[®] 790 (sc-515913 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Aiolos (H-8) is recommended for detection of Aiolos isoforms 1-6 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Aiolos siRNA (h): sc-93817, Aiolos shRNA Plasmid (h): sc-93817-SH and Aiolos shRNA (h) Lentiviral Particles: sc-93817-V.

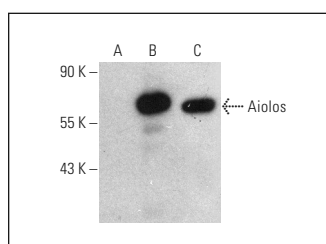
Molecular Weight of Aiolos: 58 kDa.

Positive Controls: Aiolos (h): 293T Lysate: sc-115233 or Raji whole cell lysate: sc-364236.

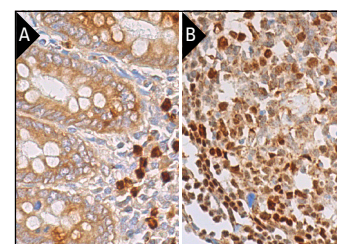
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BPHRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Aiolos (H-8): sc-515913. Western blot analysis of Aiolos expression in non-transfected 293T: sc-117752 (A), human Aiolos transfected 293T: sc-115233 (B) and Raji (C) whole cell lysates.



Aiolos (H-8): sc-515913. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells and nuclear and cytoplasmic staining of subset of Lymphoid cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear and cytoplasmic staining of cells in germinal center and cells in non-germinal center (B).

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.