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## Aiolos (D1C1E) Rabbit mAb (Alexa Fluor® 647 Conjugate)



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:Reactivity:Sensitivity:Source/Isotype:UniProt ID:Entrez-Gene Id:FC-FPH MEndogenousRabbit IgG#Q9UKT922806

Product Usage<br/>InformationApplicationDilutionFlow Cytometry (Fixed/Permeabilized)1:50

**Storage**Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity / Sensitivity

Aiolos (D1C1E) Rabbit mAb (Alexa Fluor® 647 Conjugate) recognizes endogenous levels of total Aiolos

protein.

Source / Purification Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to

residues surrounding Pro46 of human Aiolos protein.

**Product Description**This Cell Signaling Technology antibody is conjugated to Alexa Fluor<sup>®</sup> 647 fluorescent dye and tested inhouse for direct flow cytometric analysis in human cells. This antibody is expected to exhibit the same

species cross-reactivity as the unconjugated Aiolos (D1C1E) Rabbit mAb #15103.

Background

Aiolos is an Ikaros family transcription factor composed of several zinc fingers that mediate DNA binding and homodimerization or heterodimerization with other Ikaros family members (1). Multiple Aiolos isoforms are generated through alternative splicing of the portion of the transcript encoding the amino-terminal zinc fingers (2). Aiolos is expressed by lymphoid tissues, with highest expression levels seen in mature B and T cells (1). Ikaros family proteins control lymphocyte development by recruiting chromatin remodeling complexes to DNA (3). B cells from mice lacking Aiolos have a reduced threshold for activation, increased proliferation, and elevated levels of IgG and IgE. In addition, Aiolos null mice develop B cell lymphomas (4). In T cells, Aiolos contributes to Th17 cell differentiation by suppressing IL-2 expression (5). Aberrant expression of Aiolos in transformed epithelial cells promotes anchorage independence through downregulation of adhesion-related genes (6). Alterations in the *Aiolos* gene are observed in near haploid acute lymphoblastic leukemia, and the genetic locus containing Aiolos is linked to increased susceptibility to rheumatoid arthritis and systemic lupus erythematosus (7-9).

**Background References** 

- 1. Morgan, B. et al. (1997) EMBO J 16, 2004-13.
- 2. Liippo, J. et al. (2001) Eur J Immunol 31, 3469-74.
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- 4. Wang, J.H. et al. (1998) Immunity 9, 543-53
- 5. Quintana, F.J. et al. (2012) Nat Immunol 13, 770-7.
- 6. Li, X. et al. (2014) Cancer Cell 25, 575-89.
- 7. Holmfeldt, L. et al. (2013) Nat Genet 45, 242-52.
- 8. Kurreeman, F.A. et al. (2012) Am J Hum Genet 90, 524-32.
- 9. Lessard, C.J. et al. (2012) Am J Hum Genet 90, 648-60.

**Species Reactivity** Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Applications Key** FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster

X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse

GP: Guinea Pig Rab: rabbit All: all species expected

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